

The Semantics of Kwakwaka Object Case

By

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Abstract

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In this dissertation, I investigate factors underlying the distribution of object case in K^{wak}wala, an endangered Northern Wakashan language of British Columbia, Canada. K^{wak}wala has two types of objects, instrumental (=s) and accusative (=ǰ). To account for their distribution, I develop a semantic theory of object case that is grounded in event structure. The first central claim of this theory is that instrumental case marks internal arguments which participate in *initiating* subevents (*Co-initiators*), while accusative case marks internal arguments which participate in *non-initiating* subevents (*Non-initiators*). Concomitantly, any internal argument which participates in both the *initiating* and *non-initiating* subevents of an event can undergo instrumental/accusative case alternation. The second central claim of this theory is that instrumental case adds semantic value, while accusative case is a meaningless default.

Supporting evidence for these claims comes from field data. On the one hand, object case realization is constrained by verb meaning, as shown by the existence of correlations between particular semantic verb classes and particular case frames. On the other hand, evidence that case realization is determined by event structure comes from data showing that modifying event structure affects case realization. Three types of event structure modification which license case alternation include the Direct Manipulation Alternation, the Caused Motion Alternation, and semantic incorporation with the affixal verb *-(g)ila* ‘make’. The event-structural basis of object case is also revealed in the vicinity of weak verbs (Ritter & Rosen 1996) where the semantic value of object case is communicated independently of lexical entailments.

This analysis allows us to see how K^{wak}wala’s object case system manifests a wider cross-linguistic tendency for languages to grammaticalize a link between object-encoding and event structure. I illustrate this by showing that K^{wak}wala’s object case system is semantically the mirror image of the object case system in Finnish, in which the *final* bound of events is grammaticalized as an interpretable accusative case (Leino 1982, Heinämäki 1984, 1994, Kratzer 2004). Taking an even wider view, K^{wak}wala fits squarely within the event-structural typology proposed in Ritter & Rosen (2000), where languages are divided according to whether they grammaticalize the *initial* or *final* bound of events. K^{wak}wala’s object case system thereby fits into existing cross-linguistic patterns while also expanding our notions of what a possible case system looks like.

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Abbreviations

K^wak^wala data

-	Affix boundary
=	Clitic boundary
~	Reduplicant boundary
1	First person singular
1OBJ	First person object, instrumental or accusative
1EXCL	First person plural exclusive
1EXCL.OBJ	First person plural exclusive object, instrumental or accusative
1INCL	First person plural inclusive
1INCL.OBJ	First person plural inclusive object, instrumental or accusative
1POSS	Possessed by first person
1EXCL.POSS	Possessed by first person plural exclusive
1INCL.POSS	Possessed by first person plural inclusive
2	Second person
2OBJ	Second person object, instrumental or accusative
2POSS	Possessed by second person
3DIST	Third person distal
3POSS	Possessed by third person
3MED	Third person medial
3PROX	Third person proximal
3REFL.POSS	Possessed by third person, coreferent with subject or topic
A	Default vowel, miscellaneous functions
ABIL	Ability modal
ACC	Accusative case
ACC.PASS	Accusative passive, voice suffix targeting accusative-marked arguments
APPOS	Appositive
AUG	Augmentative
AUX	Auxiliary
be.1	First person copula
be.2	Second person copula
be.3DIST	Third person distal copula
be.3MED	Third person medial copula
be.3PROX	Third person proximal copula
BEC	Become operator, momentaneous aspect, inchoative; I list the base form for this suffix as <i>-xʔid</i> , though it has the following realizations: (i) on stems with no lexical suffixes <i>-xʔid</i> , <i>-xʔi</i> , <i>-ʔid</i> , <i>-ʔi</i> ; on stems with lexical suffixes <i>-d</i> , <i>-nd</i> , <i>-ud</i> (<i>-xʔid</i> , <i>-d</i> , <i>-nd</i> , <i>ud</i>)
BEC.SOUND	Become operator, momentaneous aspect, inchoative; used for describing events involving emissions of sound
CAUSE	Causative
COND	Conditional
CONN	Connector; used as an enclitic host or separator after the first person enclitic
CONT	Continuative aspect
CONJ	Conjunction

DET	Determiner, existential deictic category (Black 2011)
DIM	Diminutive
DIM.PL	Diminutive plural
DIST.PAST	Distant past tense
DO	Dummy verbal root
EMBED	Embedding vowel
EXCLAM	Exclamatory
FUT	Future tense
GRAD.ADV	Gradual advancement
HORT	Hortative
HYP	Hypothetical
INDEF	Indefinite root
INST	Instrumental case
INST.PASS	Instrumental passive, voice suffix targeting instrumental-marked arguments
INVIS	Invisible; I use this as a blanket gloss for the following more specific deictic categories: third person distal invisible (=eʔ, =aʔ, =a); third person medial invisible (=aǰ, =aǰ); third person proximal invisible (=ga)
IMP	Imperative
JF	Judged form
LOC	Locative root
LOC.PASS	Locative passive
MEANS	Means case, an inherent instrumental case assigned to the complement of a covert preposition
MOD	Modal
NEG	Negation
NEG.EXIST	Negative existential
NMZ	Nominalizer
O.POSS	Oblique possessor, marks third person Agents in passives
OST	Ostensive determiner (Black 2011)
PASS	Passive
PEJ	Pejorative
PL	Plural
PART	Participle, result nominalizer
PREP	Preposition
QUES	Question
REC.PAST	Recent past tense
RECIP	Reciprocal
REDUP	Reduplicant
REPORT	Reportative
STAT	Stativizer
VER	Verum focus (Littell 2016)
VF	Volunteered form
VIS	Visible; I use this as a blanket gloss for the following more specific deictic categories: third person distal visible (—); third person medial visible (=ǰ, =iǰ, =q); third person proximal visible (=i)x, =(i)k
WH	Generic wh element

Finnish data

1	First person
3	Third person
ACC	Accusative case
M	Masculine
PART	Partitive case
PL	Plural
PST	Past tense
SG	Singular

Nuu-chah-nulth data

∅	Dummy root
3.IND	Third person, indicative mood
PL	Plural

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Prologue: Language and Territory

K^wak^wala is the language of the K^wak^wəkəw^wak^w, the ‘K^wak^wala-speaking peoples’, an indigenous people of coastal British Columbia. The language is also known as Bak^wəmkala, from the root *bk^w*- which means ‘person’, specifically a First Nations person from the Northwest coast cultural area. Some may know the language as ‘Kwakiutl’, though this word properly only refers to the tribe at Fort Rupert (K^waguʔ).

The traditional territory of the K^wak^wəkəw^wak^w encompasses the lands and waters within a broad area of coastal British Columbia, including the northwestern part of Vancouver Island from the Scott Islands in the northwest to Cape Mudge near Campbell River, the adjacent mainland of British Columbia northward to Smith sound, and the islands around Johnstone Strait and Queen Charlotte Strait.

The intergenerational transmission of K^wak^wala was disrupted by the residential school system. This was a system of religious schools, sponsored by the Canadian government, that was created with the purpose of separating Aboriginal children from their families in order to weaken cultural and linguistic ties and assimilate Aboriginal peoples to settler culture. Many K^wak^wəkəw^wak^w children attended St. Michael’s Residential School in Alert Bay which operated from the 1920s to the 1970s, where speaking K^wak^wala was strictly prohibited and subject to punishment. Though a great deal of damage was done, the language and culture did not disappear.

Today K^wak^wala is spoken as a first language by fewer than 200 K^wak^wəkəw^wak^w (First Peoples’ Cultural Council 2014), but an increasing number of people are learning to speak the language as adults. K^wak^wala is also being taught in regional high schools to younger learners, and community interest in revitalizing the language is strong in some areas, and appears to be growing. As part of this trend, a dedicated group of indigenous community members are actively pursuing certificates and degrees in native education with the goal of advancing revitalization efforts. There is hope for the future of the language, but lots of hard work ahead.

I entered this world in the autumn of 2009, when I enrolled in a field methods class at the University of British Columbia taught by Henry Davis. The language we were working on that year was K^wak^wala. At the time, I didn’t know anything in particular about the language or its people. I didn’t foresee how much learning about these things would open my mind and change my life.

Something my K^wak^wəkəw^wak^w teachers and friends have taught me is that in order to understand what K^wak^wala words refer to, you have to be acquainted with the land, the waters, and the relationships that exist and evolve within K^wak^wəkəw^wak^w territory. Then, when taken as a whole, the lexical resources of the K^wak^wala language can be seen to represent the total set of ontological categories that divide the K^wak^wəkəw^wak^w universe. In this sense, words, and pieces of words, can be seen as encapsulating culture and history. Understanding and documenting words, and pieces of words, is therefore very important.

This dissertation takes as one of its core assumptions the idea that grammar is very important too. If K^wak^wala words refer to the places, people, and relationship that carve up the K^wak^wəkəw^wak^w universe, then K^wak^wala grammar is like a living web which weaves these ideas into strands of thought about this universe. This creative web allows for the history and culture within words to be put together in *infinitely new ways*, thereby continually making these ideas relevant to the present moment. This dissertation aims to try and untangle one part of this web, to understand how it weaves so it can be woven anew.

Reading Notes

Readers who would like a non-technical introduction to the content of the dissertation are encouraged to read Appendix A, “A plain language overview of The Semantics of Kwakwaka Object Case”, prior to reading the rest of the dissertation. This essay has been written with the intention of being accessible to readers without background in linguistics.

Other than Appendix A which may be read first, the dissertation is best read from beginning to end.

Kwakwaka examples in Appendix A are written in two orthographies: U'mista and NAPA (University of Victoria variety). Throughout the rest of the dissertation, Kwakwaka examples are written in the NAPA (University of Victoria variety) orthography only. An orthography chart is provided in Appendix B comparing these orthographies as well as four additional orthographies which have been used to represent Kwakwaka in past works.

Terms which have been coined within the dissertation (e.g. *Co-initiator*) are defined in the Glossary. Terms which appear in the Glossary are introduced in **bold** at the point(s) where they first appear in the text.

1

Introduction

1.1 The puzzle

K^wak^wala has two object case markers, =s ‘instrumental’ and =x̣ ‘accusative’. When we take into account the relationship between (i) these two case markers, (ii) particular verbs, and (iii) particular internal semantic arguments of verbs, we find that there are three kinds of relations instantiated within the language.

The first kind of relation is one in which a verb takes a semantic argument in the instrumental case (=s), as exemplified in (1). I’ll refer to this type of relation as **strict-instrumental**.

(1) Strict-instrumental (=s) relations

- a. kəlx^wʔidsa dala
kəlx^w-x̣ʔid =s=a dala
buy-BEC =INST=DET money
‘to buy with money (INST)’
- b. bəwsən nəmuk^w
bəw =s=ən nəmuk^w
leave =INST=1POSS friend
‘to leave my friend (INST)’
- c. maýuλasa babağ^wəm
maýuλa =s=a babağ^wəm
give.birth =INST=DET little.boy
‘to give birth to a little boy (INST)’
- d. ʔiʔkilasa cəxquləm
ʔiʔkila =s=a cəxquləm
heal/bless =INST=DET illness
‘to heal from an illness (INST)’
- e. ʔiʔkilasa wałdəm
ʔiʔkila =s=a wałdəm
heal/bless =INST=DET word
‘to bless with words (INST)’
- f. ġəlsa λiña
ġəlsa =s=a λiña
paint =INST=DET eulachon.grease
‘to paint with eulachon grease (INST)’

- g. kə̀ləlasa lolinuḥ
 kə̀l-la =s=a lolinuḥ
 scared-CONT =INST=DET ghost
 ‘to be scared of ghosts (INST)’

The second kind of relation is one in which a verb takes an argument in the accusative case (=ḫ), as in (2). I’ll refer to this type of relation as **strict-accusative**.¹

(2) Strict-accusative (=ḫ) relations

- a. túsʔidḫa kʷənikʷ
 tús-xʔid =ḫ=a kʷənikʷ=ḫ
 cut-BEC =ACC=DET bread=VIS
 ‘to cut bread (ACC)’
- b. ləmxʷʔidḫa ǰəmdzəkʷ
 ləmxʷ-xʔid =ḫ=a ǰəmdzəkʷ
 dry-BEC =ACC=DET salmonberry
 ‘to dry salmonberries (ACC)’
- c. məxʔidḫada təxəla
 məx-xʔid =ḫ=a=da təxəla
 punch-BEC =ACC=DET=OST door
 ‘to punch the door (ACC)’
- d. ǰəlsaḫa gukʷ
 ǰəlsa =ḫ=a gukʷ
 paint =ACC=DET house
 i. ‘to paint (on) a house (ACC)’
 ii. ‘to paint a house-image (ACC)’
- e. ʔiʔkilaḫa cədaq
 ʔiʔkila =ḫ=a cədaq
 heal/bless =ACC=DET woman
 ‘to heal/bless a woman (ACC)’
- f. duqʷəlaḫa bədi
 duqʷ-la =ḫ=a bədi
 see-CONT =ACC=DET cougar
 ‘to see a cougar (ACC)’

¹ We will in fact see in Chapter 5 that many apparently strict relations are not strict in particular semantic environments. Part of the problem to solve, then, is how to explain the conditions under which these otherwise strict mappings may be violated.

The third kind of relation, shown in (3), is one in which a verb allows the same semantic argument to appear in either case. I will refer to a relation of this sort as an **alternating instrumental-accusative** relation, or an **alternating** relation for short.

(3) Alternating instrumental-accusative {=s, =x̃} relations

- a. $\dot{g}i\check{x}^w\dot{\gamma}id\{sa, \check{x}a\} \dot{g}^wi\check{l}\dot{g}^wela$
 $\dot{g}i\check{x}^w-x\dot{\gamma}id \quad \{=s=a, =\check{x}=a\} \quad \dot{g}^wi\check{l}\dot{g}^wela$
hang-BEC $\{=INST=DET, =ACC=DET\}$ clothes
‘to hang clothes {INST, ACC}’
- b. $muk^wa\{sa, \check{x}a\} d\dot{a}n\dot{a}m$
 $muk^wa \quad \{=s=a, =\check{x}=a\} \quad d\dot{a}n\dot{a}m$
tie $\{=INST=DET, =ACC=DET\}$ rope
‘to tie rope {INST, ACC}’
- c. $\dot{\gamma}am\check{l}a\{sa, \check{x}a\} yaci$
 $\dot{\gamma}am\check{l}a \quad \{=s=a, =\check{x}=a\} \quad yaci$
play $\{=INST=DET, =ACC=DET\}$ Yahtzee
‘to play Yahtzee {INST, ACC}’
- d. $h\dot{a}n\check{x}\lambda\dot{a}nd\{sa, \check{x}a\} digil\dot{a}ci$
 $h\dot{a}n\check{x}\lambda\dot{a}nd \quad \{=s=a, =\check{x}=a\} \quad digil\dot{a}ci$
hollow.container.upright.on.fire $\{=INST=DET, =ACC=DET\}$ teapot
‘to set a teapot {INST, ACC} down on the stove’
- e. $huq^wa\{sa, \check{x}a\} h\dot{a}m\dot{e}?$
 $huq^wa \quad \{=s=a, =\check{x}=a\} \quad h\dot{a}m\dot{e}?$
vomit $\{=INST=ACC, =ACC=DET\}$ food
‘to vomit food {INST, ACC}’
- f. $\check{\lambda}i\dot{q}a\{s, \check{x}\} Mabel$
 $\check{\lambda}i\dot{q}a \quad \{=s, =\check{x}\} \quad Mabel$
jealous-a $\{=INST, =ACC\}$ Mabel
‘to be jealous of Mabel {INST, ACC}’

Taking as our starting point the existence of the three kinds of relations above, the central empirical problem this dissertation sets out to solve is the problem of how to predict and explain, for any given internal argument, why that argument is expressible as an instrumental, accusative, or potentially alternating object.

My solution for capturing the distribution of object case will centre on the claim that the distribution of object case in K^{wak}wala is grounded in an event-structural distinction between *initiating* and *non-initiating* subevents. Later in this chapter I’ll provide a short preview of this solution. Before this, however, I will provide some background on instrumental and accusative objects (Section 1.2), followed by an overview of what has previously been said about object case in K^{wak}wala in order to contextualize the novel contribution made by this dissertation

(Section 1.3). I'll then preview my semantic solution (Section 1.4) and will finish by providing a chapter-by-chapter overview of the dissertation (Section 1.5).

1.2 Background on objects

The purpose of this section is to delineate the set of case-marked nominals that this dissertation aims to provide a theory for and introduce their basic morphological and syntactic properties.

Instrumental and accusative objects are morphologically distinct only in the third person, where case is realized by the enclitics =s ('instrumental') and =x̃ ('accusative'). These case markers appear as the leftmost elements within noun phrases and as such, tend to form a prosodic constituent with the syntactic constituent to their immediate left, resulting in a mismatch between prosodic and syntactic phrasing that is characteristic of noun phrases in K^wak^wala (Boas 1911: p. 528; Boas 1947: p. 252; Anderson 2005: p. 19, Janzen 2015: p. 40-42). This mismatch can be observed in the first line of examples (4)-(5), where objects have been indicated in **bold**. Here we can see the case marker prosodically associating with the constituent to its left, while an accompanying nominal (when one is present) forms a separate prosodic word.

(4) Examples of third person instrumental (=s) objects

- a. lən q̄i q̄əʔeqəlas **Abbi**
 lə =ən q̄i~q̄a-_ieq-la =s **Abby**
 AUX =1 REDUP~worried-in.mind-CONT =INST **Abby**
 'I'm worried about **Abby** (INST).' (VF)

- b. *Context: Hope is navigating her house in the dark during a power-outage, and has just picked up a flashlight.*

ləʔəmləwis q̄wəx̃ʔidəs
 lə=ʔm=lə=wis q̄wəx̃-xʔid =s
 AUX=VER=REP=and go.on-bec =INST
 'Then she turned **it** [**the flashlight**] (INST) on.' (VF)

(5) Examples of third person accusative (=x̃) objects

- a. cəxamasũ Jamesĩx̃ũda ʔəwinaʔg^wil
 cəx-a-mas =ũ James=x̃ =x̃=ũ=da ʔəwinaʔg^wil
 slippery-A-CAUS =3MED James=VIS =ACC=3MED=OST **floor.in.house**
 'James made **the floor** (ACC) slippery.' (VF)

- b. gãxi Katie ləmx^wãx̃n səya
 gãxi =i Katie ləmx^w-a =x̃=ən səya
 come =3DIST Katie dry-A =ACC=1POSS **hair**
 'Katie came to dry **my hair** (ACC).' (VF)

When an overt nominal argument is expressed as an object, its case marker may appear alone (as in (4a)), or as the first element in a string of prenominal enclitic determiners which

have possessive and locative meanings (Chung 2007) or which indicate a category which Black (2011) refers to as ‘ostension’, a kind of linguistic pointing gesture. For instance, a nominal meaning ‘this (proximal, visible) writing utensil’ could be expressed as an instrumental object as *=s=ga=da kadayu=k* (=INST=PROX=OST writing.utensil=PROX.VIS²). The prenominal deictic clitic strings that I have encountered for objects in my fieldwork are presented in Table 1.1, excluding possessives.³

Deictic category	Instrumental	+OST	Accusative	+OST
proximal	<i>=sga</i>	<i>=sgada</i>	<i>=ǰga</i>	<i>=ǰgada</i>
medial	<i>=suǰ</i>	<i>=suǰda</i>	<i>=ǰuǰ</i>	<i>=ǰuǰda</i>
medial existential	— ⁴	—	<i>=ǰ^wa</i>	<i>=ǰ^wada</i>
distal	<i>=si</i>	<i>=sida</i>	<i>=ǰi</i>	<i>=ǰida</i>
existential ⁵	<i>=sa</i>	<i>=sada</i>	<i>=ǰa</i>	<i>=ǰada</i>

Table 1.1: Prenominal deictic forms for instrumental and accusative objects

In modern Kwakwaka, the prenominal clitic strings in Table 1.1 can appear without a following nominal and thereby function as pronouns. Alternatively, there is a separate set of third person pronominal object forms. These forms are listed in Table 1.2, where they have been adapted from a table in Boas (1947: p. 252). These separate pronominal forms never include ostensive *=da*.

	Instrumental	Accusative
proximal, visible	<i>=sək</i>	<i>=qək</i>
proximal, invisible	<i>=sgaʔ</i>	<i>=ǰgaʔ</i>
medial, visible	<i>=suǰ</i>	<i>=q^w</i>
medial, invisible	<i>=suʔ</i>	<i>=q^wʔ, =quʔ</i>
distal, visible	<i>=s</i>	<i>=q</i>
distal, invisible	<i>=si</i>	<i>=qi</i>

Table 1.2: Third person enclitic pronominal objects in Boas (1947: p. 252)

² Within noun phrases, the first prosodic word is also followed by postnominal clitics which mark, among other things, whether the nominal is visible or invisible (Chung 2007). I discuss postnominal (i.e. second-position) enclitics in Chapter 2, Section 2.3.

³ The system of possessive enclitics is complicated in that some possessives are prenominal clitics, some are postnominal clitics, and some can appear either in prenominal position or in both positions at once (Boas 1947: p. 254-255; Littell 2016: p. 575-578, 579, 581-583).

⁴ A phonological constraint preventing the realization of labialized alveolar fricatives (**=s^wa*) might help explain the gap in the paradigm here.

⁵ This label comes from Black (2011) who proposes that *=a* marks a fourth locative determiner category with an existential meaning.

I have not encountered all of the forms in Table 1.2 in my fieldwork. This suggests that use of the pronominal forms in Table 1.1 as pronouns is gradually replacing use of the separate pronominal forms in Table 1.2.

First person and second person instrumental and accusative objects are expressed by the syncretic forms listed in Table 1.3 and Table 1.4. The first person forms in Table 1.3 are derived historically from constructions involving the motion verb *gaḥ-* ‘come’ (Anderson 1984: p. 25, Sardinha 2011a: p. 390, Rosenblum 2013: p. 234) which are no longer semantically transparent (Davis & Sardinha 2011). In modern Kwakwala, I have observed second person pronouns expressed by the two alternative forms listed in Table 1.4. More research is needed to map out their distribution in the modern language.

Form	Gloss
<i>gaḥən</i>	1 st singular, instrumental or accusative
<i>gaḥənʔs</i>	1 st plural inclusive, instrumental or accusative
<i>gaḥənuʔḥ^w</i>	1 st plural exclusive, instrumental or accusative

Table 1.3: First person object forms

Form	Gloss
<i>loḥ ~ loḥ</i>	2 nd instrumental or accusative
<i>qus ~ ḥus ~ ḥus</i>	2 nd instrumental or accusative

Table 1.4: Second person object forms

Since instrumental and accusative objects are not distinct in the first and second person, examples containing these forms are rarely made use of in this dissertation.

Within the clause, =s marked nominals and =ḥ marked nominals appear in the same surface syntactic position. The basic word-order of monotransitive clauses in Kwakwala is VSO. Whether the object is an =s object (6) or a =ḥ object (7), it must immediately follow the subject (‘a’ examples), unless the subject has raised to a position preceding the main verb, in which case it must immediately follow the verb (‘b’ examples).

(6) =s objects

- a. V S O
- həḷaq =uḥ Ted =sida ləq^wa
- həḷaq =uḥ Ted =s=i=da ləq^wa
- pay =3MED Ted =INST=3DIST=OST firewood
- ‘Ted is paying/paid **with firewood** (INST).’ (VF)

- b. AUX S V O
- ləʔəm =s ʔəḥḥcu =sida ʔcuḡ^wayu
- lə=ʔm =s ʔəḥḥ-cu =s=i=da ʔcuḥ^w-_wayu
- AUX=VER =2 DO-inside =INST=3DIST=OST wash-INST.PASS
- ‘Then you put in **soap** (INST).’ (VF)

(7) =ǰ objects

- a. V S O
 kəlx^w =oǰda babag^wəmeǰ =ǰ^wa dzastu ǰətəml
 kəlx^w =oǰ=da babag^wəm=ǰ =ǰ=^w=a dzastu ǰətəml
 buy =3MED=OST little.boy=VIS =ACC=3MED=OST blue.colour hat
 ‘The little boy bought **a blue hat** (ACC).’ (JF)
- b. AUX S V O
 ləmis =əS cuǰ^wa =ǰida nax^wa hishəmaǰiya?
 lə=ʔm=is =s cuǰ^w-a =ǰ=i=da nax^wa hishəmaǰi=a?
 AUX=VER=and =2 wash-A =ACC=3DIST=OST everything dishware=INVIS
 ‘Then you wash **all the dishware** (ACC).’ (VF)

I will refer to the clausal position these case-marked nominals occur in as **canonical object position**. Its position in clausal syntax is schematized in (8).

(8) Canonical object position

- i. V S O PP*⁶
 ii. Aux V S O PP*
 iii. Aux S V O PP*

Wherever English translations are provided for K^wak^wala sentences, a nominal in canonical object position is indicated by the label ‘(INST)’ if it is instrumental (as in (6)) or ‘(ACC)’ if it is accusative (as in (7)).

In this dissertation, I will only be concerned with =s nominals and =ǰ nominals which are realized in canonical object position. I refer to these nominals as instrumental objects and accusative objects, respectively. In the chapters to come, my aim is to provide a theory that explains when it is grammatically possible to realize an instrumental object, an accusative object, or an object in either case.

The reason that this delineation of instrumental and accusative objects is important is that it excludes a set of =s marked and =ǰ marked nominals which can appear to the right of this position, which my analysis does not attempt to account for. First off, it excludes =s marked nominals like the one in (9) which appears outside of canonical object position, following a prepositional phrase.

- (9) ǰəlsida cədaq laǰis ǰuǰəmeyesa ǰina
 ǰəls =i=da cədaq la =ǰ=is ǰuǰəme?
 paint =3DIST=OST woman PREP =ACC=3REFL.POSS face
 =s=a ǰina
 =MEANS=DET eulachon.grease
 ‘The lady is painting on her face **with eulachon grease**.’ (JF)

⁶ The Kleene star here indicates that there may be zero or more PPs (prepositional phrases) in the position indicated. It’s also possible for more than one auxiliary to be present, but I’ve left out details regarding their ordering aside here, since this topic is complicated, and unrelated to the clausal positioning of objects. For more information on the positioning of auxiliaries relative to the subject, the reader is referred to Littell (2012) and Littell (2016: 587-590).

The set of =s initial phrases which can appear outside of canonical object position tend to be adjunct-like in their semantics, denoting Instruments or Means, while the set of =s initial phrases which appear in canonical object position can also denote Instruments or Means, but may in addition possess a wider range of thematic meanings than this (as I will shown in chapters to come; see also the data in (1)). My assumption is that the =s marked nominals which appear outside of canonical object position, in the domain of PPs, are PPs themselves, headed by a covert preposition which assigns its nominal complement inherent case (Woolford 2006, Legate 2008). To avoid terminological confusion, I will refer to this inherent case as ‘means case’, and will gloss the =s in these contexts as MEANS.⁷ The analysis I assume is summarized in (10).

(10) **Means-PP Analysis** ($\emptyset_P=s$)

=s marked phrases which appear to the right of canonical object position are Means PPs headed by a covert preposition which assigns inherent means case.

Nominals denoting Instruments or Means can be realized either as =s objects in canonical object position (as in (6a)) or in =s initial Means PPs (as in (9)), so it will sometimes be impossible to tell whether a given nominal is an instrumental object or a Means PPs on account of these constituents’ identical surface morphology. Empirical evidence supporting the analysis in (10) is discussed in Appendix C.⁸

There is in addition a set of = \check{x} marked nominals which may appear outside of canonical object position which are excluded from my analysis. These = \check{x} marked nominals include relative clauses (11), temporal adverbial phrases (12), and appositives (13).

- (11) Masaki, haga ʔəʔedaqasa keʔgəs **ḡuʔs gəlufʔicəwʔs**
 Masaki, haga ʔə~ʔit-_waqɑ =s=a keʔgəs = \check{x} =uʔs
 Masaki, HORT REDUP~again-go =INST=DET cake =ACC=2POSS
gəlulḡ-xʔid-swʔuʔs
steal-BEC-ACC.PASS=2POSS
 ‘Masaki, return the cake (INST) **that you stole.**’ (Littell 2016, p. 603)

- (12) ʔawisoḡda ʔəbəmpḡa nəmuk^w**ḡa ʔənswəl**
 ʔawis =oḡ=da ʔəbəmp = \check{x} =a nəm-uk^w
 angry =3MED=OST mother =ACC=DET one-person
 = \check{x} =a **ʔənswəl**
 =ACC=DET **yesterday**
 ‘The mother was angry at her friend (ACC) **yesterday.**’ (VF)

⁷ Alternatively, this case could be referred to as an inherent instrumental case. However, since at this point in the exposition I have not yet shown the reader why the object instrumental case is not *itself* an inherent case, I have chosen not to adopt this label.

⁸ If the Means-PP Analysis turned out to be wrong, the one claim that would be seriously affected is the syntactic analysis of instrumental case assignment presented in Chapter 6, Section 6.4.2. Semantically-speaking, the set of =s marked nominals which can appear outside of canonical object position are a subset of the =s marked nominals which can appear in canonical object position; therefore, the semantic analysis I propose in Chapter 4 for determining the distribution of object case would be largely unaffected if (10) turned out to be wrong (outside of any connection to the syntactic realization of case, that is).

- (13) li ʔəxʔids laʔis ʔəyəʔsu, ʔis ʔəteʔ
 lə =i ʔəx-xʔid =s la =xʔ=is
 AUX =3DIST DO-BEC =INST PREP =ACC=3REFL.POSS
 ʔəyəʔsu =xʔ=is ʔəteʔ=eʔ
 hand/arm =ACC=3REFL.POSS take.medicine=NMZ
 ‘Then he puts it (INST) on his arm, **his medicine.**’ (VF)

I assume that accusative case is assigned as a default case in these phrases, and do not discuss them further below.

One final property to be aware of in relation to instrumental and accusative objects in K^wak^wala is their correspondence with a set of suffixes which have been variously referred to as *passives* (Boas 1947, Anderson 1984, Rosenblum 2013), *focus suffixes* (Levine 1980, 1981, 1984), *nominalizers* (Boas 1911, Sherer 2014), and *voice suffixes* (Sherer *ibid.*). These suffixes are used to “regulate the mapping of thematic roles to subject position” (Sherer 2014: p. 23) through the formation of passive-like predications, wh-questions, relative clauses, and clefts. Two voice suffixes in particular are relevant to this study due to their intimate connection with object case: the instrumental passive *-ayu* (INST.PASS)⁹ and the accusative passive *-səw* (ACC.PASS).¹⁰ The voice suffix *-ayu* is used to promote nominals which in active clauses are expressed as instrumental (=s) objects. Thus is shown in (14): (14a) shows an active clause with an =s object, and (14b) shows a corresponding passive clause with *-ayu* on the same verb, where the internal argument is realized as the subject. The voice suffix *-səw* is used to promote accusative (=x) objects; this is shown in (15): (15a) shows an active clause with a =x object, and (15b) shows a corresponding passive clause with *-səw* on the same verb, where the internal argument is realized as the subject. Concomitantly, nominals which undergo object case alternation can be promoted to subject by either *-ayu* or *-səw*. This is shown in (16), where an argument which undergoes case alternation in an active clause (16a) is shown being questioned using sentences containing either voice suffix (16b)-(16b).

(14) =s objects covary with -ayu

- a. walasən kəʔisa wa:ladzi wəci
 walas =ən kəʔ-xʔid =s=a walas-dzi wəci
 big/very =1 scared-BEC =INST=DET big/very-AUG dog
 ‘I got really scared by **the big dog** (INST).’ (VF)
- b. kəʔidayuwoxda lolinox(əsox Keti)
 kəʔ-xʔid-ayu =ox=da lolinox (=s=ox Keti)
 scared-BEC-INST.PASS =3MED=OST ghost (=3POSS=3MED Keti)
Literally: ‘A ghost **is what was gotten scared of (-ayu)** (by Katie).’ (VF)

⁹ The suffix *-ayu* can appear in two positions within the verb stem (Littell 2016: pg. 509-518). When it attaches to the left of derivational aspectual morphology it weakens the preceding consonant, and when it attaches to the right of this morphology, it does not. I follow Littell in parsing the former use as *-_wayu* and the latter use simply as *-ayu*, while glossing both uses as INST.PASS.

¹⁰ This suffix is typically represented as *-suʔ*, though Littell (2016: p. 519) establishes that its underlying form is *-səw* and that it is realized as either *-səw* or *-suʔ* depending on whether a vowel follows it (*-səw*) or does not follow it (*-suʔ*). I assume Littell’s analysis here, though I have left the schwa in glosses of this suffix to maintain consistency with the conventions I’ve adopted for representing this vowel.

(15) = \check{x} objects covary with -səw'

- a. təpidi Karen \check{x} a k'wə?sta
 təp-x?id =i Karen = \check{x} =a k'wə?sta
 broken-BEC =3DIST Karen =ACC=DET cup
 'Karen broke **the cup** (ACC).' (VF)
- b. təpidsəw'oxda k'wə?ste?(s Pat)
 təp-x?id-səw' =ox=da k'wə?st=e? (=s Pat)
 broken-BEC-ACC.PASS =3MED=OST cup=INVIS (=O.POSS Pat)
 'The cup is **what was broken** (-səw') (by Pat).' (VF)

(16) {=s, = \check{x} } objects covary with {-ayu, -səw'}

- a. ġix'w?idi Mabele {sa, \check{x} a} nəx'wəne? la \check{x} a ġix'wəna
 ġix'w-x?id =i Mabel=i {=s=a, = \check{x} =a}
 hang-BEC =3DIST Mabel=VIS {=INST=DET, =ACC=DET}
 nəx'-(k)ən=e? la = \check{x} =a ġix'wəna
 wrap-body-NMZ PREP =ACC=DET clothesline
 'Mabel was hanging/hung **the blanket** {INST, ACC} on the clothesline.' (VF, JF)¹¹
- b. məsi ġix'w?idayuwe?su \check{x} Hopi \check{x}
 məs =i ġix'w-x?id-ayu=e? =s=u \check{x} Hope= \check{x}
 what =3DIST hang-BEC-INST.PASS=NMZ =O.POSS=3MED Hope=VIS
 'What is Hope hanging?' or 'What did Hope hang?' (VF)
Literally: 'What Hope is hanging/hung (-ayu) is what?'
- c. məsi ġix'w?idsu'we?su \check{x} Hopi \check{x}
 məs =i ġix'w-x?id-səw'=e? =s=u \check{x} Hope= \check{x}
 what =3DIST hang-BEC-ACC.PASS=NMZ =O.POSS=3MED Hope=VIS
 'What is Hope hanging?' or 'What did Hope hang?' (VF)
Literally: 'What Hope is hanging/hung (-səw') is what?'

The distribution of -ayu and -səw' is in correspondence with the distribution of =s objects and = \check{x} objects, in the way summarized in Table 1.5.

Case	Voice suffix
INST (=s)	-ayu
ACC (= \check{x})	-səw'
{INST (=s), ACC (= \check{x})}	{-ayu, -səw'}

Table 1.5: Correspondences between object case and voice suffixes

¹¹ The annotation '(VF, JF)' is ordered, and indicates that this sentence was volunteered with =sa, the first choice within the brackets in the K'wak'wala translation line, and judged grammatical and felicitous with = \check{x} a, the second choice within the brackets in K'wak'wala translation line. The annotations (JF, VF), (VF, VF), and (JF, JF) will be encountered in future examples and are meant to be interpreted in a similar fashion.

The significance of these correspondences lies in the fact that they enable Kwakwala data involving *-ayu* and *-səw* to inform us indirectly about the distribution of *=s* and *=x̣*. Thus, even though I am not specifically concerned here with the formation of passives, questions, clefts, and relative clauses, I have made extensive use of these voice suffixes to investigate case frames and will occasionally make use of data containing them when illustrating empirical arguments.

1.3 Previous work on object case

Very little previous work has focused on Kwakwala object case, and what has been said about object case raises some significant problems to be solved.

To begin with, no semantic factors have yet been identified which can explain, in unified terms, the difference between *=s* objects and *=x̣* objects. I discuss what previous researchers have said regarding the semantics of object case in Section 1.3.1.

Secondly, even though the case alternation in (3) is widespread in modern Kwakwala, it is not discussed in the extensive early descriptive work on Kwakwala (Boas 1911, 1947) or in any work published since. I discuss this apparent empirical gap in Section 1.3.2.

1.3.1 Semantic factors in case distribution

The distribution of object case markers in Kwakwala is outlined in Boas (1900: p. 713-714), Boas (1911: p. 528, 544), and Boas (1947: p. 251-254, 281, 284-286), in works which lay the foundation for all subsequent work on object expression in this language. On the whole, Boas' descriptions of object case are surprisingly brief, and are notable for the challenges they pose for defining a semantic theory of object case.

Boas (1911) clearly identifies instrumental (*=s*) as a semantic case for Instruments,¹² a fact which is reflected in the following remark.

“Whenever an action can be interpreted as performed with an instrument, the instrumental is used, for which the Kwagul has a great predilection.” (Boas 1911: p. 544)

In Boas (1947), the labels ‘instrumental’ for *=s* and ‘objective’ for *=x̣* appear without comment, with the apparent intention being to allow these labels to speak for themselves. Thus, *=s* is taken to be a case for introducing semantic Instruments, while *=x̣* is taken to introduce most arguments we might expect to be direct objects on the basis of what we see in familiar Indo-European languages. Nevertheless, Boas' few explicit comments about *=s* indicates that he was puzzled by its distribution, which is wider than expected. This attitude is apparent, for instance, in the following passage from Boas (1947):

“The number of cases in which the object used in an action is expressed by the instrumentalis [*=s*] is very large. In most of these [instances where the instrumental is used] we rather conceive of the action as done **to** the object. We say, ‘I pour water into the dish.’ The Kwakiutl prefers ‘I pour with water into the dish.’” (Boas 1947: 285; emphasis added)

¹² Thematic role labels are capitalized throughout the dissertation for easy recognition. Thematic roles are used here for discussing semantic categories, stating semantic generalizations, and representing the entailed semantic arguments of particular verbs. I do not take a stand here about whether thematic roles have any causal role within the grammar.

In this quote, Boas observes that many instrumental-marked arguments in Kwakwala don't fall naturally into the category of what a speaker of a Germanic language might intuitively classify as an Instrument. In the following quote he develops this thought further, observing that many instrumental-marked arguments closely resemble accusative marked arguments (referred to here simply as 'objects') in their thematic properties.

“In a limited number of cases the instrumental appears alone, without object. These agree in part with our concept of instrumentality: *qaʔx̣s kiʔsəi məqasəs wəɫba* ‘for he had not let go of his lance C 26:15.123; *gaʔsa qasa* ‘he came with sea otters’ C II 102.24; *lə mənsʔitsa kʷaʔx̣lawi* ‘then he measured with a cedar stick’ R 64.68. **In other cases we should expect an object:** *lə hənlʔitsis hanaʔəm* ‘then he shot him (with) his arrow’ C 26:136.69; *lə nəpasa t̥isəm* ‘then he threw (him with) a stone’ C 26:136:71;” (Boas 1947:285; emphasis added)

Boas clearly believed =s to be a semantic case for Instruments. What surprised him about the distribution of =s was how broad the semantic category ‘Instrument’ seemed to be in the mind of Kwakwala speakers. In other words, the distribution of instrumental case was puzzling to Boas because it suggested to him that Kwakwala speakers were more likely to conceptualize objects as Instruments than, for instance, speakers of a Germanic language. When we cast Boas’ problem in the light of modern linguistic theory, the distribution of instrumental case in Kwakwala can be seen as a thematic role problem: all Instruments are marked with =s, but so too are many semantic arguments which are *not* obviously Instruments, and which seem intuitively to have something ‘done to’ them. Instrumental case, then, has a wider distribution than what we might expect on the basis of an intuitive notion of what an Instrument is, so that there is a mismatch between the label ‘instrumental’ and the class of arguments marked by =s. The problem we inherit from Boas’ early descriptions, then, is that they only partially enable us to predict the distribution of =s objects and =x̣ objects.

Boas’ observation that there is an association between =s marking and Instruments is supported by Sardinha’s (2011a) analysis of the diachronic origins of =s marking. Sardinha (ibid.) argues that instrumental =s developed out of constructions involving the Proto Northern Wakashan preposition **his*, a marker that was used historically to introduce semantic Instruments.¹³ While this finding is consistent with Boas’ view that instrumental case is a semantic case, it does not help explain why some =s objects are not Instruments, and thus Boas’ puzzle remains.

From the time of Boas’ descriptions to the publication of work leading up to this dissertation (Sardinha 2016b), no published research has focused on the distribution of object case in Kwakwala. When we look at the glossing conventions of different researchers, however, we see that the labels which have been applied to =s have taken on a syntactic flavour over time. In Table 1.6 I give a representative list of the labels assigned to object case markers in the literature on this language.

¹³ Sardinha (2011a) also proposes that prepositional **his* introduced third person genitives and oblique agents, which in modern Kwakwala are also introduced by the enclitic =s. I take these other uses of =s to be synchronically distinct from =s as an instrumental object marker.

Source	Label for = \check{x}	Label for = s
Hall (1888)	objective	— ¹⁴
Boas (1947)	objective	instrumental
Levine (1980)	object	oblique
Anderson (1984)	objective	instrumental
Davis & Sardinha (2011)	accusative	oblique
Rosenblum (2013)	primary object	secondary object
Greene (2013)	accusative	oblique
Sherer (2014)	accusative	oblique possessor
Janzen (2015)	accusative	oblique
Littell (2016)	accusative	oblique

Table 1.6: Examples of labels used to refer to K^{wakwala} object markers

Levine (1978: p. 9), Anderson (1984: p. 24) and Rosenblum (2013: p. 271) explicitly assume the distribution of object case to be syntactically determined, while Davis & Sardinha (2011) suggest that object case may be determined lexically. Other researchers have continued to cite Boas’ description of object case markers without committing to any particular theory about what determines their distribution (e.g. Littell 2016: p. 566-7).

In short, Boas’ description of object case in K^{wakwala} drew attention to an obvious association between = s marking and Instruments, and indeed, all Instruments are predictably = s marked. However, this semantic generalization is not sufficient for predicting the distribution of = s objects, since many = s objects are not obviously Instruments. An adequate theory of object case in K^{wakwala} will therefore need to explain two things: first, why the semantic notion of an Instrument is partially, though not wholly, able to account for the distribution of instrumental case; and second, why many = s objects are not Instruments.

1.3.2 Case alternation, or lack thereof

Something that stands out about Boas’ grammatical descriptions of K^{wakwala} is that there is no unambiguous mention of the {= s , = \check{x} } case alternation observed in (3).¹⁵ Rather, one gets the impression from reading Boas (1911) and Boas (1947) that the alternation in question was either rare or non-existent in the speech of his consultants. Unfortunately however, this impression is very hard to verify. For instance, Boas (1911) seems to be discussing object case alternation when he states that “In many cases, however, both instrumental and objective can be used,

¹⁴ Hall (1888) lists ‘possessive’ as a case associated with = s ; however, he appears to be referencing a synchronically distinct use of the enclitic = s as a postnominal genitive, rather than the use of = s to introduce direct objects under discussion here.

¹⁵ An approximate estimate, produced on the basis of my own fieldwork corpus, is that around 1/4 of all verb-argument pairs are strict-instrumental, 1/2 are strict-accusative, and 1/4 are alternating. These estimates characterize my corpus only, and should be taken with a grain of salt. Regardless of how accurate these estimates are, what is important to note is that each type of relation is well-attested. Case alternation, in particular, is far from a marginal phenomenon in the modern language.

according to the point of view taken” (p. 544). However, the examples following this statement involve only instrumental objects, and no further commentary is given. Another place where Boas appears to discuss case alternation is cited below, in a quote where he is discussing how the addition of the suffix *-d/-nd/-ud*¹⁶ to stative stems produces ‘active’ (that is, eventive as opposed to stative) forms. He states:

“When the concept contained in the suffix is conceived of as locative, or generally adverbial, they are active and the object is expressed by the objective **or** the instrumental (see p. 284). Sometimes they appear without object in a generalized meaning. When the suffix is conceived of as nominal they appear without object.” (Boas 1947, pp. 273; emphasis added)

A problem arises in trying to interpret Boas’ comment here because the ‘or’ that is bolded in the quote is ambiguous between being an inclusive or exclusive disjunction. If ‘or’ is meant here to have an inclusive reading, then Boas is indeed discussing the semantic conditions under which case alternation can occur. However, if ‘or’ is meant to have an exclusive reading, Boas is not making any statement about case alternation at all. In fact, the examples that Boas lists immediately following this comment suggest that this latter interpretation is the intended one: all of the examples he gives with =s objects involve stems with the meaning of ‘put’ (17), while all of the examples with =ǰ objects involve verb stems which in the modern language can only take =ǰ objects (18).¹⁷ In other words, none of the examples Boas gives to illustrate his point provide evidence for case alternation being possible with the *same* verb stem. (The translations of these examples are Boas’, while the labels used in glossing are my own; Boas did not gloss most of the examples in his grammars.)

(17) With instrumental (=s)

- a. qaʔs ʔəǰǰəndes
 qa =is ʔəǰ-xǰ-xʔid=i =s
 PREP =3REFL.POSS DO-on.fire-BEC=NMZ =INST
 ‘and he puts **it** (INST) on the fire.’ (Boas 1947: p. 273)
- b. ʔəǰəgənts laǰa ǰulaǰi
 ʔəǰ-(g)ega-xʔid =s la =ǰ=a ǰulaǰi
 do-inside.hollow.object-BEC =INST PREP =ACC=DET steaming.box
 ‘he puts **it** (INST) on the rim of the steaming box’ (Boas 1947: p. 273)
- c. ʔəǰstənts
 ʔəǰ-ʔsta-xʔid =s
 DO-in.water-BEC =INST
 ‘he puts **it** (INST) into water’ (Boas 1947:p. 273)

¹⁶ I analyze the suffix *-d/-nd/-ud* as an allomorph of the momentaneous aspect suffix *-xʔid* (Greene 2013). Specifically, the set of forms *-d/-nd/-ud* are found attached to stems containing lexical suffixes.

¹⁷ In Boas’ era, the pronominal forms of accusative objects contain =q, rather than =ǰ. In the modern language, =q is almost always spirantized to =ǰ.

- d. le ɣuχcudlɑʔənts giʔasis giɔlasi
 le ɣuχ-cu-xʔid=lɑ =ənʔs giʔa =s=is
 AUX wear-inside-BEC=IMP =1INCL.POSS lady =INST=3REFL.POSS
gi-cu-la =s=i
 LOC-inside-CONT =3POSS=3DIST
 ‘then put on our lady **hers that she had on (INST)**’ (Boas 1947: p. 273)

(18) With accusative (=χ̣)

- a. qaʔs cəxsʔəndəq
 qa =is cəx-(x)sʔ-xʔid =q
 PREP =3REFL.POSS chop-across-BEC =ACC
 ‘and he chops **it (ACC)** off’ (Boas 1947: p. 273)
- b. supəχodəq
 sup-^hχu-xʔid =q
 chop-neck-BEC =ACC
 ‘she chops **it (ACC)** off at the neck (butt of tree)’ (Boas 1947: p. 273)
- c. ʔicənd paxsʔəndχa ʔəpsolila
 ʔit-(x)sʔ-xʔid pa-(x)sʔ-xʔid =χ̣=a ʔəpsolila
 again-across-BEC split.wood-across-BEC =ACC=DET **other.side**
 ‘again (off) she splits off **the other side (ACC)**’ (Boas 1947: p. 273)
- d. qaʔs kiʔse λiğwəłtudəχ waldəmasis n̄in̄əmuk^we
 qa =is kiʔs=i λiğwəłtud =χ̣ waldəm
 PREP =3REFL.POSS NEG=NMZ miss =ACC **words**
 =s=is n̄i~n̄əmuk^w=i
 =3POSS=3REFL.POSS REDUP~friend=VIS
 ‘and he did not miss (disobey) **the words of his friends (ACC)**’ (Boas 1947: p. 273)
- e. le k^waşğəmdχis bolχsdayi
 le k^wə-sğəm-xʔid =χ̣=is bolχsdayi
 AUX sit-round-BEC =ACC=3REFL.POSS **muskbag**
 ‘then he sat on **his muskbag (ACC)**’ (Boas 1947: p. 273)

The impression one gets from reading Boas (1911, 1947) is that case marking was generally strict in the late 19th and early 20th century, the historical period he was working in. For instance, many of the example forms Boas cites, such as *ɔs* (*ɔ=s*) ‘he gives it (INST)’, and *ɔnk^wəs* (*ɔnk^w=s*) ‘he was angry with him (INST)’ (both of which are listed on Boas 1947, p. 285), can undergo case alternation in the modern language.¹⁸ This suggests that some verb-argument pairs which alternate in the modern language may have been mostly, and perhaps solely, strict-instrumental relations in Boas’ era. Moreover, there is a pattern of speaker variation in the modern language which provides at least tentative support for the hypothesis that case alternation

¹⁸ It’s worth nothing that the modern speakers I have consulted do have a noticeable bias towards volunteering instrumental objects with these stems.

has increased in frequency since Boas' time relative to strict-instrumental relations. While all consultants I have worked with allow case alternation with a large core set of verbs, one consultant disallows it specifically with verbs of giving (e.g. *čo* 'give', *yaq^w* 'gift in Potlatch'). This consultant treats these verbs as strict-instrumental, a pattern which is in line with what was reported in Boas (1911, 1947).

When we search within the Boas and Hunt text corpus (Boas & Hunt 1902a, 1902b, 1902c), however, we do find instances of case alternation. Such instances appear to be relatively rare and may be specific to certain regional variants of K^wak^wala, though more research is needed to verify this impression. One text that was found to contain numerous instances of case alternation with 'put' verbs is a text called *Bəkus* (The Wood-Man), a text which originates from the Q^wiq^wəsutinu^x of Gilford Island.¹⁹ Two examples from this text involving 'put' verbs are shown in (19). The relevant verb stem in both examples is *ʔəxʔəls-* 'put (something) outside (somewhere)'. The fact that this verb takes an accusative object in (19a) and an instrumental one in (19b) shows that case alternation was indeed possible with the *same* verb stem in Boas' era.

(19) Excerpts from *Bəkus* (The Wood-Man) (Boas & Hunt 1902a)

- a. *lalai ʔəxʔəlsaq lax nəqamalásas ʔaqulayuǰ^wa lax k^wacinaýas*
lə=la =i ʔəx-ʔls =q la =x nəqama-la-ʔas
 AUX=REP =3DIST DO-outside =ACC PREP =ACC front-CONT-LOC.PASS
 =s ʔaqulayuǰ^wa la =x k^wə-*h*s-inay =s
 =3POSS Calling-Tribes PREP =ACC sit-on.ground-abstract =3POSS
 'They put **it** (ACC) down in front of the place where Calling-Tribes was sitting.'
 (p. 254, lines 37 — 39)
- b. *lalai ǰ^wala ləʔas ʔəxʔəlsasa ǰ^wuyaʔak^wi ǰ^waqəms laxa ʔəwiñakusi*
lə=la =i ǰ^wal-a lə-ʔas ʔəx-ʔls-a
 AUX=REP =3DIST finish-A AUX-LOC.PASS DO-outside-A
 =s=a ǰ^wuyaʔak^w=i ǰ^waqəms la
 =INST=DET softened=VIS cedar.bark PREP
 =x=a ʔəwiñakus=i
 =ACC=DET ground=VIS
 'And after she had finished, she put **the soft cedar-bark** (INST) on the ground.'
 (p. 253, lines 15 — 17)

More research is ultimately needed to know to what extent case alternation existed in Boas' era, requiring meticulous comparison of modern data with the vast body of textual materials assembled by Franz Boas and George Hunt. For our purposes, we are left to simply wonder why Boas did not draw more attention to the phenomenon of case alternation, especially given that it was present (though seemingly rare) in the data he collected.

Since the time of Boas' writing, no subsequent research has brought attention to the case alternation in (3). To my knowledge then, this dissertation and lead-up work to its publication (Sardinha 2016b) are the first works to discuss {=s, =x} case alternation as a phenomenon in the

¹⁹ I am very grateful to Halia DeWeese for helping me hunt for instances of case alternation in the Boas and Hunt corpus.

modern language.²⁰ Any solution to the empirical puzzle described in Section 1.1 must be able to predict when case alternation both is and is not possible.

1.4 Preview of a semantic theory of object case

As a solution to the empirical puzzle outlined in Section 1.1, I will pursue a semantic theory of object case that is grounded in event structure. This theory will be referred to as the **Initiating Subevent Theory** of object case. It consists of two main claims, which are previewed here and developed in detail in Chapter 4.

The first claim of the Initiating Subevent Theory is that object case distinctions in Kwakwala are grounded in event structure. An event is an entity which consists of up to two linguistically relevant internal parts, which in the literature are referred to as subevents (e.g. Dowty 1979, Parsons 1990, Tenny 1994, Pustejovsky 1995, Rappaport-Hovav & Levin 1998, Rothstein 2004, Ramchand 2008, Tatevosov 2008, and many others). For the purpose of capturing object case patterns in Kwakwala, we can think of events as each consisting of up to two linguistically relevant subevents, the nature of which can be intuitively grasped in terms of two sorts of oppositions. The first opposition is a temporal opposition between the initial bound (or beginning) of an event and the final bound (or end) of an event. The second opposition is a causal opposition between the cause of an event and the effect or result of an event. If an event has a linguistically encoded initial and/or causal part, I will say it has an *initiating subevent*. If an event has a linguistically encoded final part consisting of some kind of result or effect, I will say it has a *non-initiating subevent*. These subevental categories are summarized in Figure 1.1.

	<i>Initiating subevent</i>	<i>Non-initiating subevent</i>
<i>Temporal dimension:</i>	initial bound / beginning	final bound / end
<i>Causal dimension:</i>	cause	effect / result

Figure 1.1: *Initiating versus non-initiating subevents*

The first claim of the Initiating Subevent Theory is that internal arguments which participate in *initiating* subevents are expressed with instrumental (=s) case, while internal arguments which

²⁰ In addition, while a fair bit of research has been done on the voice suffixes introduced at the end of Section 1.2, none of the researchers cited in that section appear to have been aware of the correspondence between alternating {=s, =x} objects and the ability to use either -səw' or -ayu to promote them. This is significant because this unawareness seems to have led these researchers to posit more irregularity in the voice system than there actually is. For instance Anderson (1984), summarizing Levine (1980, 1981), notices that there are more than one passive counterpart for a given active sentence; however, rather than connecting this voice suffix alternation with the phenomenon of case alternation, as I do here, he cites this pattern as evidence for particular passive morphemes being lexically-selected rather than syntactically regular (pg. 22-23). In a similar vein, Sherer (2014) claims that -səw' has become a default voice morpheme in the modern language, seemingly in order to account for the observation that it -səw' is used in more contexts than we might expect on the basis of patterns reported in Boas (1911, 1947). While I agree with Sherer that there is a sense in which -səw' is a default (namely, because -səw' is in correspondence with accusative, and accusative is a default case), I've also found the distribution of -səw' to be more restricted than what Sherer (p. 42) reports. My field data suggest that -səw's distribution can be straightforwardly accounted for once we acknowledge the correspondences in Table 1.5.

participate in *non-initiating* subevents are expressed with accusative (=ǎ) case.²¹ This generalization can also be stated in terms of the two event roles that these internal arguments instantiate: instrumental (=s) objects instantiate a novel event role I refer to as *Co-initiator*, while accusative (=ǎ) objects instantiate an event role I refer to as *Non-initiator*.²² These correspondences are summarized in Figure 1.2.

Semantics:	participant in <i>initiating</i> subevent	participant in <i>non-initiating</i> subevent
Syntax:	=s object	=ǎ object
Event role:	<i>Co-initiator</i>	<i>Non-initiator</i>

Figure 1.2: Correspondences underlying Claim-I of the Initiating Subevent Theory

To account for case alternation, all we need to do is recognize that arguments which undergo case alternation are precisely those which simultaneously meet the semantic conditions for being both *Co-initiators* and *Non-initiators*. This is stated as the Alternation Condition in (20).

(20) **Alternation Condition:**

An argument which satisfies the conditions for being both a *Co-initiator* and a *Non-initiator* may appear in either instrumental (=s) or accusative (=ǎ) case.

The three relations introduced in Section 1.1 can then be explained as follows: internal arguments which only qualify as *Co-initiators* are strict-instrumental; internal arguments which only qualify as *Non-initiators* are strict-accusative; and internal arguments which instantiate both event roles simultaneously are alternating.

The second claim of the Initiating Subevent Theory concerns the manner in which semantic value is encoded in K^{wakwala} grammar. In particular, I will argue that only instrumental case is **interpretable**, while accusative case is an **uninterpretable** default case.²³ Thus while the notions of *Co-initiator-hood* and *Non-initiator-hood* are both relevant for predicting the distribution of object case, my claim here is that only the former notion is grammaticalized in K^{wakwala}.

The remaining chapters of this dissertation are devoted to establishing these two claims, both with the intention of explaining the distribution of object case in K^{wakwala} (Chapters 3-5, 7) and of assessing how K^{wakwala}'s object case system fits into wider cross-linguistic patterns (Chapter 6).

²¹ What it means to 'participate' in an *initiating* or *non-initiating* subevent will be fleshed-out in Chapter 4, Section 4.2.3 in terms of two sets of semantic conditions.

²² Event roles are consistently capitalized and italicized throughout the dissertation.

²³ Strictly-speaking, what I will propose is interpreted by the grammar is not instrumental case itself, but the syntactic head which is responsible for instrumental case assignment — a proposal which I discuss in Chapter 6, Section 6.4.2. To simplify exposition, however, I will refer to instrumental case as an 'interpretable' case, by which I simply mean that instrumental case is associated with semantic value. I will also refer to accusative case as 'uninterpretable', by which I mean that it is not associated with semantic value.

1.5 Chapter overview

The remainder of the dissertation is organized into six chapters.

- Chapter 2 provides background on the K^{wak}wala language and on the empirical basis of the research. I begin by orienting the reader to the scholarly tradition on K^{wak}wala, and then give an introduction to basic features of the language that will be useful for understanding glossed examples. After this, I introduce my research methodology, and discuss the data which serves as the empirical basis for the study. I finish the chapter by discussing inter-speaker variation and the implications different types of variation have for my analysis of object case.
- In Chapter 3, I present three empirical arguments for the distribution of object case in K^{wak}wala being semantically-determined. First, I show that verbs with strict-instrumental relations, verbs with strict-accusative relations, and verbs with alternating relations fall into semantically coherent verb classes. After this, I show that with certain verbs, there is a correlation between the object case(s) available for a given internal argument, and the semantic perspective that is lexicalized by the verb. Finally, I show that object case constrains the semantic interpretation of monotransitive and ditransitive predicates formed with the ‘dummy’ root ʔəχ- ‘do’ and the indefinite interrogative root wʔy-.
- In Chapter 4, I present my semantic analysis of object case in K^{wak}wala, the Initiating Subevent Theory. First, I defend the claim that object case is semantically grounded in an event-structural distinction between *initiating* and *non-initiating* subevents, such that participants in *initiating* subevents (*Co-initiators*) take instrumental case, and participants in *non-initiating* subevents (*Non-initiators*) take accusative case. I then discuss the conditions under which case alternation is possible. Next, I defend the claim that only instrumental case is semantically interpretable while accusative case is an uninterpretable default, and outline a proposal for how this case system is implemented in K^{wak}wala grammar. Following this, I show that while the distribution of object case can be predicted in semantic terms, syntactic case features are nevertheless necessary for the grammar to ensure the existence of strict-instrumental relations. In the course of illustrating these claims, I propose an analysis of what it means for an internal argument to participate in an *initiating* subevent (i.e. be a *Co-initiator*) and participate in a *non-initiating* subevent (i.e. be a *Non-initiator*), and illustrate how my semantic analysis accounts for the semantic generalizations reported in Chapter 3. I finish the chapter with a reflection on Boas’ perceptions of instrumental case.
- In Chapter 5, I provide new evidence in support of the claim that object case is grounded in event structure. I show in particular that modifying event descriptions leads to changes in object case-marking possibilities through a discussion of three types of case alternations: the Direct Manipulation Alternation, the Caused Motion Alternation, and semantic incorporation with *-(g)ila* ‘do, make’.
- In Chapter 6, I zoom out and consider what K^{wak}wala’s object case system tells us about language in general. I begin by showing that K^{wak}wala’s object case system is a mirror

image of the object case system in Finnish as analyzed in Leino (1982), Heinämäki (1984, 1994), Vainikka (1989), and Kratzer (2004). While K^wak^wala grammaticalizes an interpretable object case associated with the *initial* bound of events, Finnish grammaticalizes an interpretable object case associated with the *final* bound of events — a pattern which explains differences in the two languages in how telic interpretations arise. I develop a syntactic analysis of instrumental case which is modelled directly off of Kratzer’s (2004) analysis of accusative case in Finnish. I then discuss how K^wak^wala fits into Ritter & Rosen’s (2000) event-structural typology of I(nitiator)-Languages and D(elimiting)-Languages.

- Chapter 7 provides a bird’s eye view of the theory presented in previous chapters and discusses directions for future research. In particular, I present preliminary evidence for two particular pragmatic strategies speakers use in choosing between instrumental (=s) case and accusative (=x̄) case in contexts where case alternation is possible.

In addition to the main content of the dissertation, there are five appendices containing supporting materials.

- Appendix A provides an overview of the major findings of the dissertation in plain, non-technical language. This essay is suitable for anyone who would like an intuitive grasp of what the dissertation is about, and is recommended reading for anyone with little or no background in linguistics.
- Appendix B contains a chart comparing six different orthographies which have been used to represent written K^wak^wala.
- Appendix C provides preliminary empirical support for the Means-PP Analysis referenced in Section 1.2.
- Appendix D answers a question that arises out of the discussion in Chapter 6 regarding ways in which telicity is encoded in K^wak^wala.
- Appendix E integrates the Initiating Subevent Theory developed in this dissertation with the analysis of lexical aspect classes in K^wak^wala proposed in Greene (2013), thereby showing the compatibility of these two analyses.

Kwakwaka'wakw Orientation and Methodology

2.1 Introduction

Kwakwaka'wakw is a Wakashan language spoken on the central coast of British Columbia, Canada, in communities located on northwestern Vancouver Island, the adjacent mainland and intervening islands, and in urban centres such as Victoria and Vancouver. The Wakashan language family consists of two branches, Northern and Southern (Sapir 1911). Kwakwaka'wakw is a member of the Northern branch, which also includes three more closely-related languages, Haisla, Heiltsuk, and Oowekyala (Lincoln & Rath 1980, Rath 1984), while the Southern branch includes Nuuchahnulth, Ditidaht, and Makah (Haas 1969, Jacobsen 1969, Jacobsen 2007). Kwakwaka'wakw is spoken within the Pacific Northwest Coast linguistic area and as such, shares a number of areal features with nearby language families such as Salish and Chemakuan (Thompson & Kinkade 1990, Beck 2000).

Kwakwaka'wakw has five dialects (Anonby 1997) which are distributed geographically as shown in Figure 2.1. The northernmost dialect is 'Nakwala, which is spoken today in C'əlǵwadi. Two of the six speakers I have consulted with speak this dialect. The northwestern dialect is ʔaʔaʔsiqwəla, which is reported to have few, if any, speakers. The southeastern dialect is ǵuɕala (also known as ǵuɕa), which is spoken in Quatsino. The central dialect is Kwakwala, which is spoken in Kingcome Inlet, Fort Rupert, Hopetown, and Alert Bay. Four of the six speakers I have consulted speak this dialect, and it is this dialect which I am most familiar with. Finally, the western dialect is Liq'wala, which is spoken around Campbell River.

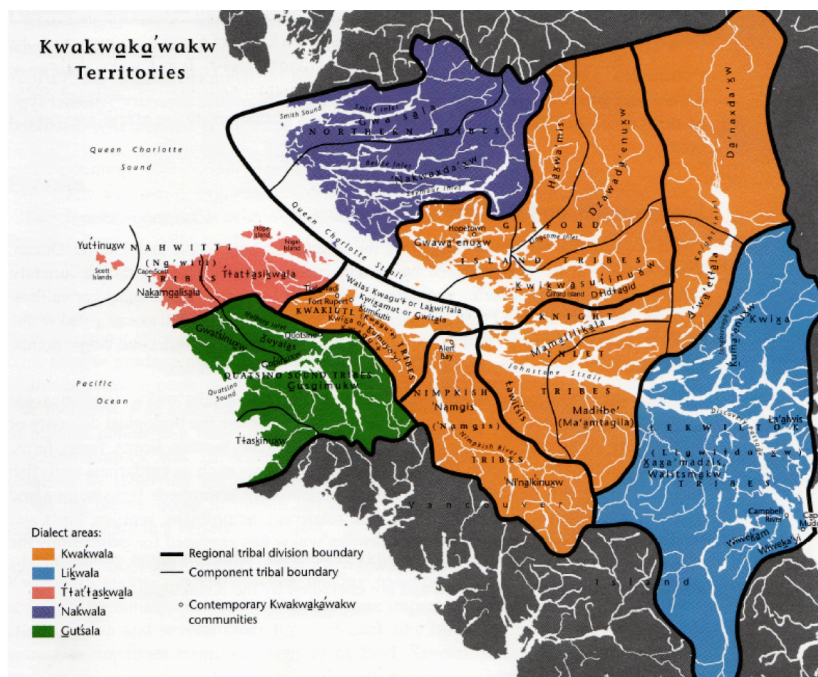


Figure 2.1: Map of Kwakwaka'wakw Territory (Pasco, Compton & Hunt 1998: p. 3)

The purpose of this chapter is to orient the reader to basic features of the Kwakwaka language and the empirical basis of the study. The chapter is organized as follows:

- In Section 2.2 I provide an overview of previous scholarship on Kwakwaka, introducing the sources I've drawn upon in the course of my research.
- In Section 2.3 I provide an orientation to the basic features of Kwakwaka one should be familiar with to understand the details of glossed examples in the rest of the dissertation.
- In Section 2.4 I discuss the fieldwork methodology I've employed in the course of my research.
- In Section 2.5 I discuss features of the linguistic data and their mode of presentation in this dissertation.
- Finally, in Section 2.6 I discuss inter-speaker variation and the issue of how my analysis is positioned relative to this variation.

By the end of the chapter, the reader should have an understanding of how the findings in this dissertation fit in with what's already known about this language, and should be familiar enough with the project's empirical basis to be able to make sense of glossed examples in subsequent chapters.

2.2 Sources

Compared to other Northwest Coast languages, Kwakwaka is relatively fortunate in terms of its existing documentation, though this documentation has several limitations. Notably, most of the extensive descriptive work on this language focuses on the central dialect (Kwakwaka), and in particular on the way this dialect was spoken around the turn of the 20th century. This work is also skewed heavily towards the description of phonology and morphology, while syntax, semantics, pragmatics, and variation have received less overall attention. Recently however, this has begun to change.

Scholarship on Kwakwaka can somewhat arbitrarily be divided into three major periods (early, middle, recent), to which we can add the existence of a steady current of community-generated documentation produced outside of the academic sphere. In the course of my research I've made use of materials from each of these four domains, each of which I'll now introduce in turn.

2.2.1 Early scholarship (1890s — 1940s)

Perhaps the earliest sources on the Kwakwaka language come from the missionary Rev. Alfred J. Hall. In addition to producing Bible translations in the language, Hall published its first short grammar (Hall 1888).

The most extensive early documentation of the Kwakwaka language was carried out by Franz Boas and his assistant George Hunt, whom Boas collaborated with in the collection of

vocabulary, songs, narratives and myths (e.g. Boas 1983, Boas 1910, Boas 1969[1925], Boas & Hunt 1902a, 1902b, 1902c). These and other ethnographic materials served as the basis for a series of sketches and grammars on the language, beginning with a short impressionistic sketch (Boas 1900), followed by the two sources which have served as standard references on the language ever since: Boas (1911), a shorter and more accessible grammatical introduction, and Boas (1947), a grammar and glossary of suffixes which was compiled and published posthumously from Boas' extensive notes. In the year following the publication of this second grammar, a dictionary was also published posthumously (Boas 1948).

2.2.2 Middle scholarship (1970s — 1990s)

Following several decades hiatus of work on K^wak^wala, the 1970s saw renewed interest in the language. This interest in linguistic analysis continued steadily throughout the 1990s.

In the realm of phonology, Grubb (1974) discusses the status of /ə/ in K^wak^wala, and proposes a practical writing system for the language that is much simpler than the more phonetically-inspired orthography employed by Boas. Other work on phonology from this period includes work on vowels and stress (Bach 1975), glottal assimilation and hardening (Wilson 1977), syllable structure (in Heiltsuk and K^wak^wala) (Wilson 1978), and metrical structure in Wakashan (Wilson 1986).

In the realm of syntax, work in this period focuses on the behaviour of a set of passive-like suffixes in K^wak^wala (Levine 1978, 1980, 1981, 1984) and on the subject-oriented nature of K^wak^wala grammar (Anderson 1984). In the domain of morpho-semantics, Berman (1990) discusses the nature of shape classification in K^wak^wala. The role of discourse markers and auxiliaries is taken up in Berman (1982, 1983).

Documentation of the language for pedagogical and revitalization purposes also resumes in this period, with the publication of a new dictionary (Grubb 1977) and a glossed K^wak^wala text (Levine 1977). Anonby (1997) discusses language revitalization and dialect variation.

Work on other languages from the Northern Wakashan language branch proceeded during this period as well. Lincoln and Rath (1980) produced a comparative Northern Wakashan root list, and Rath (1984) discusses word classes in what he termed the Upper Northern Wakashan languages: Haisla, Heiltsuk, and Oowekyala. Work on Haisla during this period includes grammatical description and dictionary work (Bach & Bates 1970, Lincoln & Rath 1986), textual material (Lincoln, Rath, & Windsor 1986), and work on stem extension (Bach 1990). A grammatical description and dictionary of Heiltsuk was also published during this period (Rath 1981).

2.2.3 Recent scholarship (2000s to present)

Research on K^wak^wala has increased since the 2000s, both in terms of output and in terms of the range of topics covered. This seems to be in part due to an increase in the number of students, as well as faculty, who have become involved in research on First Nations languages of British Columbia, especially at British Columbia's three major coastal universities: University of Victoria, University of British Columbia, and Simon Fraser University.

In the realm of phonetics and phonology, work in this period focuses on reduplication (Kalmar 2003, Kirchner 2007), epenthesis and moraicity (Bach, Howe, & Shaw 2005), voice onset time (Mayer 2010), and intonation (Noguchi 2011).

In the realm of syntax and semantics, specific work has targeted the structure of the nominal domain (Chung 2007), the syntax and semantics of the demonstrative predicates or copulas (Stewart 2011, Littell 2010), argument structure (Davis & Sardinha 2011), continued work on passives, referred to recently as voice suffixes (Rosenblum 2013, Sherer 2014), the syntax and semantics of *-nuk^w*, a suffix associated with possession and the expression of indefinite objects (Sardinha 2013), causatives (Sardinha 2015a), weather predicates (Sardinha 2016a), and the realization of focus (Littell 2016). Of particular relevance to this thesis, Greene (2013) explores lexical aspect classes in K^wak^wala and proposes three classes: states, processes, and transitions. I discuss how Greene’s analysis of aspectual classes aligns with my theory of object case in Appendix E. Greene (2013, 2014) also demonstrates the existence of non-culminating accomplishments in K^wak^wala, which is a finding I return to discuss in Chapter 6, Section 6.3.1.3.

One of the things K^wak^wala is known for is its elaborate system of clitic determiners. Aspects of their prosody have been the focus of studies by Anderson (2005), Janzen (2011) and Janzen (2015). The syntax of subject-marking clitics is investigated in Littell (2012), while the semantics of determiners is investigated in Nichol森 & Werle (2009) and Black (2011).

In the realm of documentation, Rosborough (2012) provides a lucid perspective on current language revitalization efforts and the experience of being indigenous. There is also a compilation of texts from this period circulated in manuscript form (Cranmer & Janzen 2014), and a morphemically glossed text from the Boas-Hunt corpus is published by Frim (2015).

Comparative work on Northern Wakashan during this period includes work by Fortescue (2006) on differences between Northern and Southern Wakashan, work comparing argument structure patterns on the Northwest Coast (Mithun 2007), a comparison between determiner systems in Northern Wakashan (Bach 2006), and a Wakashan comparative dictionary (Fortescue 2007). The historical development of various =s forms in K^wak^wala from the Proto-Northern Wakashan preposition **his* is discussed in Sardinha (2011a).

Targeted research on Northern Wakashan languages other than K^wak^wala slowed down and came to a halt early on in this period. Some general questions about language are discussed in relation to data from Haisla in Bach (2002), and work on Oowekyala includes work on segmental phonology (Howe 2000) and syllabic obstruents (Howe 2001).

2.2.4 Community documentation

In addition to the academic sources just mentioned, members of the K^wak^wak^w community and their allies have for decades been actively creating language materials for pedagogical and community purposes. Some language materials have been published through community institutions, such as the U’ mista cultural centre in Alert Bay, while other language materials have been produced locally and circulated informally. In my own research, I’ve made use of a series of textbooks for young learners (Powell, Jensen, Cranmer, & Cook 1981), a book on plants and animals of the K^wak^wak^w world (Pasco, Compton, & Hunt 1998), and a book of K^wak^wala hymns entitled “Jesus Saves: Kwa Kwa La Hymns”, compiled by Harry James Webber (Webber 1990). The FirstVoices Online dictionary (FirstVoices 2009) has also been a valuable and accessible resource.

2.3 Basic grammatical features

In order to understand the Kwakwala examples in this dissertation, it is important to have knowledge of some of the basic features of the language's phonology, morphology, and nominal deictic system.¹

Kwakwala is perhaps most well known for its phonology and morphology, a fact which is unsurprising given the presence of a number of typologically interesting features in these linguistic subdomains. Kwakwala's sound system is in keeping with the general Northwest Coast pattern, with a large consonant inventory containing many typologically rare segments, such as lateral affricates, as well as an abundance of glottalized segments (Thompson & Kinkade 1990). Kwakwala's consonants are summarized in Table 2.1.

	Bilabial	Alveolar	Lateral	Palatalized Velar	Labialized Velar	Uvular	Labialized Uvular	Glottal
Stops	p b	t d		k g	k ^w g ^w	q ɢ	q ^w ɢ ^w	ʔ
Ejectives	p̰	t̰		k̰	k̰ ^w	q̰	q̰ ^w	
Affricates		c dz	ɬ λ					
Ejective Affricates		c̰	ɬ̰					
Fricatives		s	ʃ	x	x ^w	χ	χ ^w	h
Sonorants	m	n	l	y	w			
Glottalized Sonorants	m̰	n̰	l̰	y̰	w̰			

Table 2.1: Kwakwala consonants

Though Kwakwala has many phonetic surface vowels, only six vowels are represented in modern Kwakwala orthographies: /i/, /e/, /a/, /o/, /u/, and /ə/. These vowels are summarized in Table 2.2.

	Front	Central	Back
High	i		u
Mid	e	ə	o
Low		a	

Table 2.2: Kwakwala vowels

¹ For a more extensive introduction to Kwakwala grammar, a good place to start is Appendices A-B in Littell (2016).

Littell (2016) notes that it may be possible to reduce the number of phonemic vowels to just /i/, /a/, and /u/, and Bach (1975) proposes reducing this even further, to just /a/ and /ə/. In what follows I won't take a stand on which vowels are phonemic. In the gloss line of examples, I maintain schwa (ə) in the representation of roots, clitics, and suffixes, but omit schwa where it is epenthetic between roots, clitics, and suffixes. Otherwise, I follow the conventions established in Littell (2016) regarding vowel realization, which means that certain vowels are taken to arise through regular phonological processes (e.g. /CyC/ → [CiC], /CayC/ → [CeC]). For an overview of phonological processes of this sort, the reader should consult Littell (2016).

Throughout its written history, K^wak^wala has been represented by numerous orthographies. The orthographic conventions I adopt for presenting data in this dissertation are based on the North American Phonetic Alphabet (NAPA), and in particular on a variant which Littell attributes to Prof. Thom Hess and his students at the University of Victoria (Littell 2016: pg. 32). The only difference between the orthography I adopt and the one just referenced is that I've chosen to represent the voiced alveolar affricate as a digraph ('dz') instead of a single character ('dʒ'). A summary of six of the most commonly encountered K^wak^wala orthographies is provided in Appendix B.

With respect to its morphology K^wak^wala is exclusively suffixing, though it does make use of a large number of reduplication patterns at the beginning of words, some of which are triggered by particular suffixes (Boas 1947, Kalmar 2003, Kirchner 2007). K^wak^wala possesses a large class of 'lexical suffixes' — suffixes, that is, which resemble open class items in terms of the semantic content they convey. Two examples of lexical suffixes are *-pala* 'smell (of)' (21) and *-(g)ila* 'make, do' (22). The suffix *-pala* incorporates a root describing the evaluation of a smell (21a) or a smell's quality (21b). The suffix *-(g)ila* can appear on the dummy root *ʔəx-* (glossed here as 'do') (22a), or it can incorporate its logical object (22b). I'll return to discuss the case-marking potential of predicates formed using *-(g)ila* in Section 5.4.

- (21) a. ʔixpaloŋda lum
 ʔik-pala =oŋ=da lum
 good-smell.of =3MED=OST room
 'The room smells good.' (JF)
- b. ʔabəlspaloŋda hamiksilaʔas
 ʔabəls-pala =oŋ=da həm-i-ksi-la-ʔas
 apple-smell.of =3MED=OST eat-NMZ-occupy-CONT-LOC.PASS
 'The kitchen smells like apples.' (VF)
- (22) a. ʔəxʔilida çədaqeŋa qəngaŋtola
 ʔəx-(g)ila =i=da çədaq =ŋ=a qəngaŋtola
 DO-make =3DIST=OST woman =ACC=DET button.blanket
 'The woman is making/made a button blanket (ACC).' (VF)
- b. k^wəʔstagiloŋda çədaq
 k^wəʔsta-gila =oŋ=da çədaq
 cup-make =3DIST=OST woman
 'The woman is making/made a cup.' (VF)

Lexical suffixes are used to encode many spatial and locative concepts. In (23) for instance, the body part suffix *-(ǵ)əm* ‘face’ adds information about the Path of Monica’s spitting, while in (24), the suffix *-_wil* ‘in house’ adds information about where Eddie is walking (24a) and where something is spilled (24b).

- (23) *k^wisəmduǰ Monica waxǰis čayá, ləm^{is}uǰ λiq^wa*
k^wis-(ǵ)əm-xǰid =uǰ Monica wax =ǰ=is
spit-face-BEC =3MED Monica try =ACC=3REFL.POSS
čayá lə=ǰm=is =uǰ λiq^w-a
younger.sibling AUX=VER=and =3MED miss-A
 ‘Monica tried to spit in her younger sibling’s face (ACC), and she missed.’ (VF)

(24) *Context: Eddie comes home. As soon as he walks through the door, he sees some white liquid spilled all over the floor.*

- a. *gaǰuǰ Eddiyǰ qadzil laǰis guk^w*
gaǰ =uǰ Eddie=ǰ qas-_wil la =ǰ=is guk^w
come =3MED Eddie=VIS walk-in.house PREP =ACC=3REFL.POSS house
 ‘Eddie walked into his house.’ (VF)
- b. *ma:suǰda qəbilix laǰ^wa guk^wiǰ*
mas =uǰ=da qəp-_wil=ǰ la =ǰ=^w=a guk^w=ǰ
what =3MED=OST spill-in.house=VIS PREP =ACC=3MED=DET house=VIS
 [Then he said] ‘What’s that spilled on the floor here!?’ (VF)

Lexical suffixes are listed in Boas (1911: p. 446-527) and Boas (1924), and are discussed more extensively alongside lists of examples in Boas (1947: p. 301-377).

The addition of a lexical suffix to a stem can trigger a range of systematic phonological changes, including reduplication,² vowel lengthening, consonant weakening (lenition), consonant hardening (glottalization), and segment deletion. These processes are triggered by particular suffixes, and are lexically specified. I indicate these processes in glosses using the conventions in Table 2.3.

Phonological change	Indication in glosses	Example
reduplication	‘ _r ’	<i>-_rəm</i> ‘small, diminutive’
vowel lengthening	‘ _l ’	<i>-_ləm</i> ‘true, genuine’
consonant weakening	‘ _w ’	<i>-_wil</i> ‘in house’
consonant hardening	‘ _h ’	<i>-_heq</i> ‘in mind’
consonant deletion	‘(deleted segment)’	<i>-(g)ila</i> ‘do, make’

Table 2.3: Phonological changes triggered by suffixes

² Reduplication can also signal non-lexical information, such as plurality. In glosses, reduplicants are separated from the base with the symbol ‘~’.

For an overview of the specific changes brought about through the addition of lexical suffixes, the reader should consult Boas (1947: p. 225-234) and Littell (2016: p. 37-39, 459-488).

K^wak^wala also possesses an elaborate system of clitic determiners, all of which are enclitics meaning that they form a prosodic constituent with the element to their left. The subject pronominal clitics from Boas (1947: p. 252) are summarized in Table 2.4. The object pronominal forms were introduced in Section 1.2. Looking at this paradigm, we can begin to get a feel for the complexity of the deictic system in which distinctions are made between three persons, three spatial categories, and (in)visibility.

Form	Gloss
=ən	1 st person
=ənʔs	1 st person plural inclusive
=ənuʔx̃	1 st person plural exclusive
=s	2 nd person
=k	3 rd person proximal visible
=gaʔ	3 rd person proximal invisible
=ux̃	3 rd person medial visible
=uʔ	3 rd person medial invisible
=iq	3 rd person distal visible
=iʔ	3 rd person distal invisible

Table 2.4: Subject pronominal enclitics

Nominal arguments, when expressed, are accompanied by two sets of clitic determiners: pronominal determiners, and postnominal determiners. Pronominal (i.e. pre-NP) determiners encode deixis, possession, and a category related to specificity and definiteness which is referred to as ‘ostension’ in Black (2011), realized by the presence of the morpheme =*da*. Postnominal (i.e. NP-internal) determiners encode visibility, deixis, and possession, and are realized in second position within the noun phrase.³ The basic pronominal and postnominal deictic forms encountered in my fieldwork are summarized in Table 2.5, excluding possessive forms. The examples in (25)-(27) illustrate argument phrases with proximal, medial, and distal pronominal deictics, respectively. All three examples contain postnominal visibility deictics corresponding to the category ‘visible’.

pre-NP location	- ostension		+ ostension	
	- ostension	+ ostension	visible	invisible
PROX	= <i>ga</i>	= <i>gada</i>	=(ə) <i>x</i>	---
MED	= <i>ux̃</i> /= <i>ox̃</i>	= <i>ux̃da</i> /= <i>ox̃da</i>	=(e) <i>x̃</i>	---
DIST	= <i>i</i>	= <i>ida</i>	= <i>i</i> , =∅	= <i>aʔ</i> , = <i>eʔ</i> , = <i>oʔ</i>

Table 2.5: Third person determiners

³ This means that if the noun is preceded by an adjective, for instance, these clitics attach to the adjective. For this reason, ‘NP-internal’ is a more accurate way of describing these clitics than ‘postnominal’.

(25) *kɪʔs ʔiʔakgada ʔabəlsix, lən cəxʔids laxada ʔasanoyi*
kɪʔs ʔi(k)ʔak =ga=da ʔabəls=x lə =ən cəx-xʔid
 NEG like =3PROX=OST apple=VIS AUX =1 discard-BEC
 =s la =x=a=da ʔasanoyi
 =INST PREP =ACC=DET=OST outside
 ‘This apple [PROX, VIS] wasn’t liked, so I threw it (INST) outside.’ (VF)

(26) *mən^woǔ Stacyəǔ gaǔən*
mən^w =oǔ Stacey=x gaǔən
 smile =3MED Stacey=VIS 1OBJ
 ‘Stacey [MED, VIS] is smiling at me (ACC).’ (VF)

(27) *kələli Patesa siləm*
kəl-la =i Pat=i =s=a siləm
 scared-CONT =3DIST Pat=VIS =INST=DET snake
 ‘Pat [DIST, VIS] is afraid of snakes (INST).’ (VF)

Third person pronominal subjects can also be expressed by prenominal deictics alone, in lieu of the full pronoun forms listed in Table 2.4. An example in which a prenominal deictic functions as a pronoun is shown in (28).

(28) *ǔəlsixə ʔisəla laxa guk^w*
ǔəls =i =x=a ʔis-la la =x=a guk^w
 paint =3DIST =ACC=DET sun.shine-CONT PREP =ACC=DET house
 ‘She [DIST] is painting a sun (ACC) onto the house.’ (VF)

A more thorough introduction to the topic of various determiners in K^wak^wala is offered in Boas (1947: p. 251-259), Bach (2006), Nichol森 & Werle (2009), and Littell (2016: p. 558–561, 563-565, 568-577, 579-583).

In addition to its system of clitic determiners, K^wak^wala possesses a variety of predicate-modifying and sentential-level clitics which mark categories such as questionhood, tense, modality, polarity, and contrast (Littell 2016: p. 549-558, 561-563). These clitics attach to the right of lexical suffixes, farther from the root. Many of these clitics exhibit second-position effects, which means that they attach to the first word within whichever syntactic domain they are realized in, and some clitics can appear in multiple positions simultaneously in a single sentence (Littell 2012). The example in (29) illustrates this latter possibility using the future tense clitic =*λ*. In this example the future tense clitic attaches to three elements in the same sentence: the main verb *miλʔid* ‘tease’, the auxiliary verb *lə-* ‘now, then’, and the adverbial predicate, *ʔuǔ^waqə* ‘also, too’.

(29) *laλuǔ Monicaǔ miλʔidλ ʔuǔ^waqəλxus nulaǔ, Simon*
lə=λ =uǔ Monica=x miλ-xʔid=λ ʔuǔ^waqə=λ
 AUX=FUT =3MED Monica=VIS tease-BEC=FUT also=FUT
 =x=us nula=x Simon
 =ACC=3REFL.POSS older.sibling=VIS Simon
 ‘Monica’s gonna go tease her older brother back (ACC), Simon.’ (VF)

K^wak^wala is a language with nominative-accusative alignment in both its morphology and syntax. Morphologically, the subject of both intransitive and transitive matrix clauses take nominative case, which in K^wak^wala is zero-marked. Objects of transitive clauses, on the other hand, are marked with one of the language's two morphological case-markers if they are in the third person — either =s ‘instrumental’ or =ǎ ‘accusative’ — or with distinct syncretic forms in the first person and second person (as described in Section 1.2). Syntactically, subjects of both intransitive and transitive clauses pattern distinctly from case-marked objects (Anderson 1984, Sherer 2014).

Features of the language introduced in this section should become clearer as more examples are encountered.

2.4 Methodology

The set of methodologies employed in the course of my research falls broadly into the category of ‘linguistic fieldwork’ or ‘linguistic elicitation’, and the particular methodological framework I draw upon is described in Matthewson (2004) and expanded upon in a volume edited by Bochnak & Matthewson (2015). Linguistic fieldwork basically involves gathering linguistic data through focused interviews with native speakers of a language, called elicitation sessions, which are typically audio recorded. An elicitation session is somewhat like a teaching session, where the speaker is the teacher and the linguist is the student. However, it's a special kind of teaching session, since it is typically the student/linguist who guides the overall trajectory of the session by asking targeted questions or invoking topics for discussion; in this respect, it is somewhat like an interview.⁴ Since elicitation sessions involve a unique style of interaction, it's useful to describe them with distinct terminology. For this reason, the speaker is referred to as the language consultant or consultant, a label which highlights the speaker's role as an expert in his or her language. The person who facilitates the session (linguist or otherwise) is referred to as an elicitor. An elicitation session can involve one or more language consultants, and one or more elicitors. While the majority of the elicitation sessions I've been involved in have been one-on-one, a fair number have also involved multiple elicitors and/or multiple language consultants.

The language under investigation in an elicitation session is referred to as the object language. In the project described here, the object language is K^wak^wala. In the course of most of my research, English was used as a metalanguage to introduce tasks and engage in metalinguistic discussions with the consultant. In my own research, K^wak^wala was used as the sole language of elicitation relatively rarely, and only at times where I felt my competence in the language to be high enough to avoid introducing confounds.

A variety of different tasks can be carried out in the course of an elicitation session, and the nature of tasks can vary considerably, from constrained question-answer paradigms to tasks which invite the language consultant to be creative with their language. It can be useful to think of elicitation tasks as dividing into two types: tasks which elicit positive data — data regarding what is possible in the language — and tasks which elicit negative data — data about what is *not* possible in the language.

In what follows, sentences that are volunteered by the consultant are referred to as volunteered forms (VF), while sentences that are judged by the consultant are referred to as judged forms (JF). In the rest of this section, I'll briefly introduce the tasks I used in the course

⁴ Elicitation sessions are also similar to teaching sessions in the Master-Apprentice framework, in that the learner generally plays an active role in guiding the session (Hinton 2002).

of my research. Tasks which are used to elicit volunteered forms include translation tasks (2.4.1), description tasks (2.4.2), question-answer tasks (2.4.3), storyboards (2.4.4), semi-elicited narratives (2.4.5), story-builder (2.4.6), concept-cued narrative (2.4.7), and free narration (2.4.8). Tasks which are used to elicit judged forms include judgment tasks (2.4.9), preference judgment tasks (2.4.10), and contradiction judgment tasks (2.4.11). A task which elicits both types of data in quick succession is the combined translation-judgment task (2.4.12).

2.4.1 Translation task

In a translation task, the elicitor presents the language consultant with a context, and produces an English sentence which is semantically felicitous in that context. The language consultant's task is to then translate the English sentence into K^wak^wala, all the while making sure that the K^wak^wala sentence is felicitous in the given context. Translation tasks are a straightforward way to elicit positive data in the object language.

An example involving two back-to-back translation tasks is shown in (30).

- (30) **KS:** “Let’s say yesterday, you saw me. I was on the road, and I was...”
Speaker: “ʔəm.” [‘Yeah’]
KS: “...with someone else, with some other person. We were pushing the car.⁵
 How would you ask, ‘Who is Katie pushing the car with?’”
Speaker: [*Volunteers* (a)]

- a. ʔəng^wu^χ wəʔok^wes Katie λaq^wa^χwa kəlkəlxsiʔsəla^χ
 ʔəng^w =u^χ wəʔok^w =s Katie λaq^w-a
 who =3MED companion =3POSS Katie push-A
 =^χ=^w=a kəlkəlxsiʔsəla=^χ
 =ACC=3MED=DET car=VIS
 ‘Who is the one Katie’s pushing the car (ACC) with?’ (VF)

- KS:** “So let’s say you look a little closer, and we’re using some sort of, uh, like weird contraption...”
Speaker: “Uh...”
KS: “...to do the pushing.”
Speaker: “Uh-huh.”
KS: “How would you ask, ‘What are they using to push the car?’”
Speaker: [*Volunteers* (b)]

- b. məsu^χ ʔə^χələʔs qəs λaq^we^χwada kəlkəlsiʔsəla
 məs =u^χ ʔə^χ-la=eʔ =s qa =s
 what =3MED DO-CONT=NMZ =O.POSS PREP =3REFL.POSS
 λaq^w=eʔ =^χ=^w=a=da kəlkəlsiʔsəla
 push=NMZ =ACC=3MED=DET=OST car
 ‘What are they using to push the car (ACC)?’ (VF)

⁵ The car mentioned here is one that is familiar from earlier in the elicitation discourse.

In the fragment in (30), the elicitor leads the consultant through a made-up story, asking for translations of sentences along the way. This is a particularly efficient way to collect positive data in the object language.

If a consultant is asked to translate a sentence for which no prior context has been given, we say that the translation task is done *out-of-the-blue*. In such cases, the elicitor must keep in mind that in the absence of context, speakers will be compelled to imagine their own context to fill the void. This imagined context has the potential to influence the translation in ways that are impossible to control. For this reason, data from out-of-the-blue translation tasks should be interpreted with care.

2.4.2 Description task

A description task is very similar to a translation task, except that instead of being provided with an English sentence to translate, the language consultant is presented with a situation or representation of a situation in the world and is asked to describe it in K^wak^wala. For example, the elicitor may show the consultant a photograph and ask her to describe some feature of it; or, the elicitor may act something out, or point to something in the environment, and ask the language consultant to describe whatever's being indicated.

An example of a description task is given in (31). The context for this example is that the language consultant and KS are sitting in a position where they could both see out onto the consultant's porch. While in this position, KS and the consultant looked out and saw two crows interacting in an interesting way on the porch. KS asked the language consultant if she'd like to describe what they were seeing. The description in (31) is excerpted from the consultant's response.

(31) Description task fragment: kikə̀xə̀lağá 'crows'

- a. ʔo:, duχ^wʔidaʔsχ^wa kikə̀xə̀lağáχ
 ʔo duχ^w-xʔid-a =s =χ^w=a ki~kə̀xə̀lağá=χ
 EXCLAM see-BEC-A =2 =ACC=3MED=DET REDUP~crow=VIS
 'Oh, look at the crows (ACC).'
- b. wa:las naquχda waladzid... yuʔə̀mχə̀nt ʔə̀bə̀mpsuχda ʔə̀meʔbiduχ
 walas naq =uχ=da walas-dzi-d? ... yu=ʔm=χə̀nt
 big/very drink =3MED=OST big/very-AUG-ʔ⁶ be.3MED=VER=MOD
 ʔə̀bə̀mp =s=uχ=da ʔə̀meʔ=bidu=χ
 mother =3POSS=3MED=OST little=DIM=VIS
 'The big one's really drinking... it must be the mother of the little one.'
- c. k̄iʔsuχ hiłqalaχ naqaχ^wa wə̀piχ
 k̄iʔs =uχ hiłqala =χ naq-a =χ^w=a wə̀p=χ
 NEG =3MED allow =ACC drink-A =ACC=3MED=DET water=VIS
 'She's not letting her [the little crow] (ACC) drink any of the water (ACC).'

⁶ This 'd' is probably the initial segment of a word which the speaker stopped saying.

- d. higaṃuḥ həmapuḥda ʔəbəmpiḥ, ʔeʔxçəḥsis xʷənukʷbidu
 higa=ʔm =uḥ həmap =uḥ=da ʔəbəmp=ḥ
 only=VER =3MED eat =3MED=OST mother=VIS
 ʔeʔxçəḥ =s=is xʷənukʷ=bidu
 stingy =INST=3REFL.POSS child=DIM
 ‘The mother’s the only one eating, she’s being stingy with her little child (INST).’

Description tasks are not limited to the visual modality; the language consultant can also be asked to describe what she hears, tastes, smells, or feels. What distinguishes this task from a translation task is that there is no direct translation from the metalanguage into the object language.

Oftentimes in my own research, I’ll combine a translation task with a description task. For instance, I’ll carry out an action such as reaching for a hat that’s sitting on the table, and then I’ll ask the speaker how to say ‘Katie is reaching for the hat’. Technically this is a translation task, but with the visual modality employed as an additional constraint on what the speaker is being asked to translate.

2.4.3 Question-answer task

In a question-answer task, the elicitor asks a question in Kʷakʷala and the consultant answers it in Kʷakʷala. The question itself serves as the immediate linguistic context for the consultant’s volunteered form. This type of task is exemplified in (32).

(32) **KS:** “And what if I asked, *masus katəmdayuḡus?*” [‘What are you taking a picture with?’]

Speaker: “O.” [*Volunteers* (a)]

- a. hēmən katəmdayuwi katəmakʷesi Willi
 he=ʔm =ən kat-əm-xʔid-ayu =i
 be.3DIST=VER =1POSS write-NMZ-BEC-INST.PASS =3DIST
 kat-əm-_wkʷ =s=i Willy
 write-NOM-PART =3POSS=3DIST Willy
 ‘I took the picture with Willy’s camera.’ (VF)
Literally: ‘My picture-taker was Willy’s camera.’

KS: “And what does that mean?”

Speaker: “I, ‘I took the picture with Willy’s camera.’”

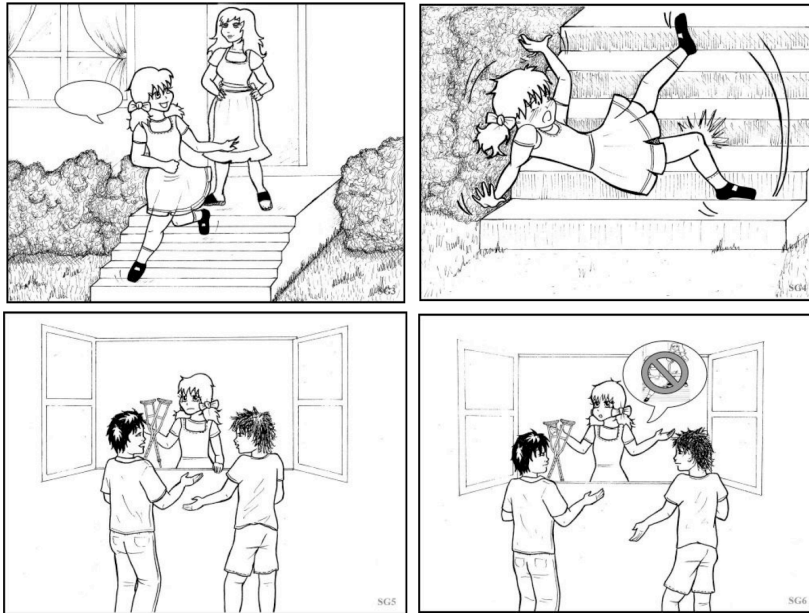
2.4.4 Storyboard task

Storyboards are visual stories — stories that have been adapted from a written text into a set of associated images. Their use in fieldwork is discussed in Burton & Matthewson (2015). First, the language consultant is shown a storyboard, image-by-image, while simultaneously hearing the story told aloud in the metalanguage. After the consultant has seen the storyboard and heard the story as many times as necessary to remember it, she is shown the storyboard again and

asked to tell the story back in the object language, this time making use of the storyboard images as cues for remembering.

In my research, I've elicited a several of the storyboards published online at www.totemfieldstoryboards.org/. A fragment taken from the storyboard 'Sick Girl' (TFS Working Group 2011) is shown in (33). The main construction targeted by this part of the story is the ability modal in line 6.

(33): 'Sick Girl', Images 3, 4, 5, 6



a. Image 3

ləmi Mari dzəlx^wəlsa
 lə=ʔm =i Mary dzəlx^w-ʔls-a
 AUX=VER =3DIST Mary run-outside-A
 'Then Mary ran outside.' (VF)

b. Image 4

k^wəxʔilsox Mariyəx, ləmisox ku^xwʔidux gug^wəyuxʔs
 k^wəx-ʔls =ox Mary=x lə=ʔm=is =ux
 trip-outside =3MED Mary=VIS AUX=VER=and =3MED
 ku^xw-xʔid =ux gug^wəyux =s
 snap-BEC =3MED leg/foot=VIS =3POSS
 'Mary tripped and her leg got broken.' (VF)

c. Image 5

gaʔi niṇəmuk^{wəs} λilála qa leʔs ʔəmleʔ
gaʔ =i ni~ṇəmuk^w =s λilá-la
come =3MED REDUP~friend =3POSS invite-CONT
qa la=iʔ =s ʔəmle=eʔ
PREP go=NMZ =3POSS play=NMZ
‘Then her friends came to invite her to go play.’ (VF)

d. Image 6

kiʔsən weʔ lawəlsa
kiʔs =ən weʔ la-ʔls-a
NEG =1 ABIL go-outside-A
[Mary said] ‘I can’t go outside.’ (VF)

Storyboards are useful for collecting naturalistic data that is targeted towards particular constructions. For instance, storyboards can be constructed for eliciting topics like modality, tense, and contrastive focus. In addition, because narrating a storyboard does not involve direct translation, it lessens the likelihood that the structure of the metalanguage (e.g. English) is influencing the data in any significant way (Burton & Matthewson 2015).

2.4.5 Semi-elicited narrative

Semi-elicited narratives are similar to storyboards, except that the consultant is not presented with a visual version of a story. The elicitor tells a story aloud in English, and the language consultant is asked to tell it back in Kwakwala from memory. Because this task is memory intensive, the story should be designed so that it’s short and easy to remember. To make the task more feasible, the consultant is also invited to embellish parts of the story she doesn’t remember. Even if the Kwakwala story ends up being quite different from the English prompt, it will still tend to share much of its content.

A fragment of a semi-elicited narrative from my fieldwork is given in (34) as an example of this method. The English prompt was designed with the intention of eliciting verbs of forgetting, remembering, and realizing.

(34) Semi-elicited narrative: λiweʔ ‘forgetting’

English prompt:

So last time James went fishing, he forgot to bring his jacket and he got really cold out on the water. Now this time, James didn’t want to forget his coat. So he left it by the door to help him remember to bring it. Sure enough, when it was time to leave, James didn’t forget to bring his coat. He went and he fished until lunchtime, when he started to feel hungry. When he looked in his bag, he realized that he had forgotten his lunch. So suddenly he remembered that he had left it on the table in the kitchen. And that made James feel really silly.

Kwakwala response:

- a. luḥ James kiḷa
 lə =uḥ James kiḷ-a
 AUX =3MED James fish.with.net-A
 ‘James went fishing.’ (VF)⁷
- b. luḥ James, ʔo: kiʔsλən λəwileʔλḥən dadaçəwak^w
 lə =uḥ James ʔo kiʔs=λ =ən λəwileʔ=λ
 AUX =3MED James EXCLAM NEG=FUT =1 forget=FUT
 =ḥ=ən dadaçəwak^w
 =ACC=1POSS jacket
 ‘And James was like, ‘Oh, I’m not going to forget my jacket (ACC).’ (VF)
- c. λu:mən kənaʔisʔid la leʔgən kəyosən dadaçəwak^waʔ
 λum =ən kənaʔis-xʔid la l=a=iʔ=g=ən
 really =1 cold.in.body-BEC go AUX=EMBED=NMZ=3PROX=1POSS
 kəyos =ən dadaçəwak^w=aʔ
 NEG.EXIST =1POSS jacket=INVIS
 ‘I got really cold when I didn’t have my jacket.’ (VF)
- d. ləmən kiʔs λəwileʔλḥ
 lə=ʔm =ən kiʔs λəwileʔ=λ =ḥ
 AUX=VER =1 NEG forget=FUT =ACC
 ‘I’m not going to forget it (ACC).’ (VF)
- e. ləmis ʔəḥʔids qa kiʔseʔs λəwileʔḥ laḥada həmxdəmiḷ
 lə=ʔm=is ʔəḥ-xʔid =s qa kiʔs=eʔ =s
 AUX=VER=and DO-BEC =INST PREP NEG=NMZ =3POSS
 λəwileʔ =ḥ la =ḥ=a=da həmxdəmiḷ
 forget =ACC PREP =ACC=DET=OST table
 ‘And he put it (INST) so he wouldn’t forget it (ACC) on the table.’ (VF)
- f. ləmis la, ləmis kiḷʔida, ləʔəm pusqa
 lə=ʔm=is la lə=ʔm=is kiḷ-xʔid-a
 AUX=VER=and go AUX=VER=and fish.with.net-BEC-A
 lə=ʔm pusqa
 AUX=VER hungry
 ‘Then he went, and he fished, and he was hungry.’ (VF)
- g. ʔo:la λəwileʔḥis həmeʔ
 ʔwa-la λəwileʔ =ḥ=is həm=eʔ
 so-CONT forget =ACC=3REFL.POSS eat=NMZ
 ‘Oh, he forgot his food (ACC).’ (VF)

⁷ The line-by-line translations of this text are my own.

- h. ʔo:la ʔaksam̩is noqeʔ, ʔoləkala la pusqa.
 ʔwa-la ʔaksam̩ =is noqeʔ ʔwa-la-kal-a
 so-CONT bad =3REFL.POSS heart.mind so-CONT-very-A
 lə-a pusqa
 AUX-A hungry
 ‘His heart really soured, he was really hungry.’ (VF)
- i. kəyo:s həmeʔs
 kəyos həm̩=eʔ =s
 NEG.EXIST eat=NMZ =3POSS
 ‘He didn’t have any food.’ (VF)
- j. ʔo: hiʔaʔa dadacəwak^wnuk^wmeʔe waxa
 ʔwa hiʔa =ʔ=a dadacəwak^w-nuk^w=ʔm=a=i wax-a
 so suffice =ACC=DET jacket-have=VER=EMBED=VIS try-A
Hypothesized translation: ‘He tried to be feel satisfied with having his jacket.’ (VF)
- k. ləʔəm ʔoʔəm pusqaxʔida
 lə=ʔm ʔwa=ʔm pusqa-xʔid-a
 AUX=VER so=VER hungry-BEC-A
 ‘He just got really hungry.’ (VF)
- l. ʔoʔəmʔi la neŋak^wʔ
 ʔwa=ʔm=ʔ =i la neŋak^w=ʔ
 so=VER=FUT =3DIST go home=FUT
 ‘He was just going to go home.’ (VF)

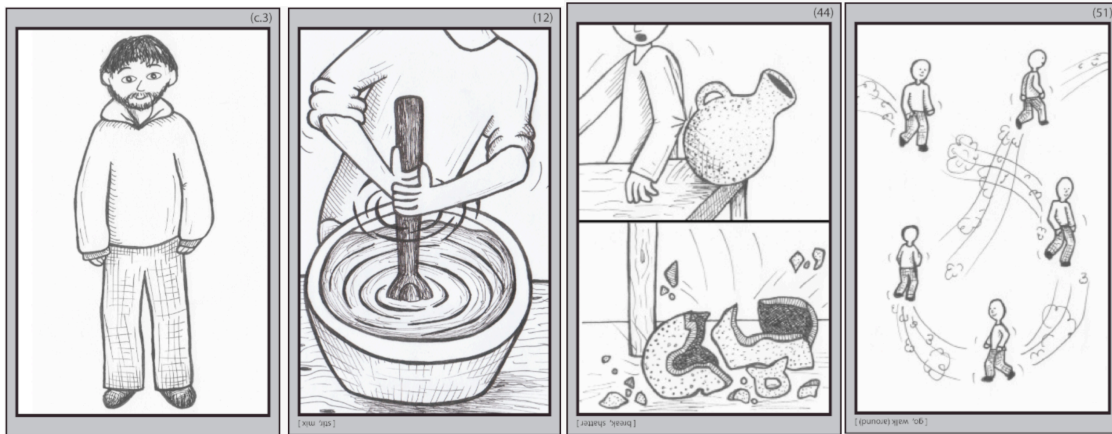
Like storyboards, semi-elicited narratives are useful for eliciting data that are both naturalistic and somewhat constrained. For instance, it’s quite possible to write English prompts that target particular verb classes as in (34), or particular topics such as conditionals. Semi-elicited narratives are like storyboards in that they eliminate the need for direct translation from the metalanguage into the object language.

2.4.6 Story-builder

Story-builder is an adaptable set of picture cards designed for language activities and published online under an open license (Sardinha 2011b). There are two types of cards: ‘action cards’ depicting various kinds of events, and ‘character cards’ depicting various people. The action cards can be arranged in a sequence to construct a visual story, which can then be told about a character, or set of characters, which are depicted by the character cards. When this task is carried out, it’s called ‘story-building’.

A short example of story-building is shown in (35) below, taken from a game called ‘Pick-3’. In this game, the language consultant picks three action cards randomly from the deck and uses them to make up a short story about some character. This particular example revolves around an adult male character, and makes use of the cards for ‘stir, mix’ (*xʔit-*), ‘break’ (*təpid*), and ‘walk’ (*qas-*).

(35) Story-builder ‘Pick-3’ Example Story



- a. yu^mo^x x^wita^xus keʔgəsila
 yu=^m =o^x x^wit-a =^x=us keʔgəs-(g)ila
 be.3MED=VER =3MED stir-A =ACC=3REFL.POSS cake-make
 ‘He was **stirring** the cake he was making (ACC).’ (VF)
- b. ləʔəm ʔəxʔaʔəli ʔuxsəyapəs laxada wəpçolas
 lə=^m ʔəxʔaʔə-la =i ʔuxsəyapə =s
 AUX=VER DO-on-CONT =3DIST shoulder =3POSS
 la =^x=a=da wəp-ço-la-ʔas
 PREP =ACC=DET=OST water-inside-CONT-LOC.PASS
 ‘Then his shoulder was on the bowl.’ (VF)
- c. ləmis tiqaxʔalis qəs təpide?
 lə=^m=is tiq-a^x-a-la-_hs qa =is
 AUX=VER=and fall-down-A-CONT-on.ground PREP =3REFL.POSS
təp-xʔid=e?
broken-BEC-NMZ
 ‘And it [the bowl] fell on the ground and **got broken**.’ (VF)
- d. ləmis ʔoʔəm nix qəs leʔ qasʔida qəs ʔiweʔəxa təpi
 lə=^m=is ʔwa=^m nix qa =is la=e? qas-xʔid-a
 AUX=VER=and so=VER say PREP =3REFL.POSS go=NMZ walk-BEC-A
 qa =is ʔiweʔ =^x=a təp-xʔid
 PREP =3REFL.POSS forget =ACC=DET broken-BEC
 ‘So he decided to go for a **walk** to forget about what he broke (ACC).’ (VF)

The story-builder deck is designed to include action cards depicting events from a wide variety of semantic verb classes listed in Levin (1993). For this reason, it’s useful for eliciting basic eventive sentences with a diverse array of argument structures. More information on the cards and their potential uses can be found at www.story-builder.ca, where the cards are available for download.

In addition to using story-building cards to build visual stories, I've made frequent use of the character cards as fictional characters to talk about during elicitation (Sardinha 2015b). Each character depicted on a card has a name, and is associated with other characters through a web of imagined relationships. In this way, the characters come to embody a mini-universe of fictional referents. The intention behind this is to allow the characters to become familiar to language consultants over time, so that we can refer to them again and again. The character cards are especially useful for talking about topics that could be taboo or inappropriate to talk about in relation to real people, thereby increasing the range of topics that can be discussed in elicitation. For instance, in a session with two language consultants, I played a game called *nanilelá* 'tell around, gossip'. One consultant would first be told a secret backstory about two fictional characters. She would then have a conversation with the other consultant where they engaged in *nanilelá* about the characters. For instance, in one episode of the game, consultants engaged in *nanilelá* about a fictional character who had committed adultery. The fact that we're talking about fictional people, and not real people, makes it possible to talk about things like adultery in a recorded elicitation session.

The reader will find that the following names come up frequently in volunteered examples, since they are names assigned to particular character cards: Karen, Scott, Elsa, Shelly, Eddie, Monica, Simon, Mabel, Vicky, James, Hope, Ted, Bill, Betty, Abby, Norman, Dennis, and Toby.

2.4.7 Concept-cued narrative

In a concept-cued narrative task, the elicitor brings up a concept — typically a K^wak^wala word — and the language consultant is invited to create a short narrative which involves the concept in some way. If the K^wak^wala word is not known in advance, an English word can be used as a cue instead. A succinct example of a concept-cued narrative is shown below in (36).

(36) **KS:** “Um, I wanted to talk about the word, um, like, to be ‘embarrassed’ about something.”

Speaker: [...] “*maḥća*.”

KS: [...] “So let’s make up some stories with these people.”⁸

Speaker: [*Volunteers (a) and (b)*]

a. λu:muḥ maḥćuḥ Tediḥ ḥus nəmuk^wiḥ
 λum =uḥ maḥć =uḥ Ted=ḥ
 really =3MED ashamed =3MED Ted=VIS
 =ḥ=us nəmuk^w=ḥ
 =ACC=3REFL.POSS friend=VIS
 ‘Ted is really ashamed of his friend (ACC).’ (VF)

b. luḥ gəlulʔiḥa dala laḥada guk^weʔsuḥ ʔəniseʔs
 lə =uḥ gəlul-xʔid =ḥ=a dala la =ḥ=a=da
 AUX =3MED steal-BEC =ACC=DET money PREP =ACC=DET=OST
 guk^w=eʔ =s=uḥ ʔəniseʔ =s
 house=INVIS =3POSS=3MED aunt=INVIS =3POSS
 ‘He stole money (ACC) from his aunt’s house.’ (VF)

⁸ KS is referring to character cards that have been placed on the table in front of the consultant.

This type of task is particularly useful for exploring the prototypical meanings of particular words, as well as associations between concepts. I've made extensive use of this method in exploring the meaning of psych verbs.

2.4.8 Free narration

In free narration, the language consultant is invited to tell any story of their choosing. The story can be a traditional narrative, a personal anecdote, or an entirely made-up story.

A personal story shared by a language consultant is shown in (37).⁹ The consultant is recalling a time that she drove to her daughter's house and had a surprising encounter with some dogs that came up to the car to greet her.

(37) Narrative fragment: The Encounter

- a. lən kəlxʔid laḥ guk^wes Suzie
 lə =ən kəlx-xʔid la =ḥ guk^w =s Suzie
 AUX =1 drive-BEC PREP =ACC house =3POSS Suzie
 'I drove over to Suzie's house.' (VF)
- b. lən ʔəḥstuḥa təxəla laḥən kəl kəl xʔsisəla
 lə =ən ʔəḥ-stu =ḥ=a təxəla la
 AUX =1 DO-round.opening =ACC=DET door PREP
 =ḥ=ən kəl kəl xʔsisəla
 =ACC=1POSS car
 'And I opened the door (ACC) on my car.' (VF)
- c. lən ʔo:, kiʔsən ʔoʔləla məsida gaḥ!
 lə =ən ʔo kiʔs =ən ʔoʔ-la məs =i=da gaḥ
 AUX =1 EXCLAM NEG =1 know-CONT what =3DIST=OST come
 'Then o:h, I didn't know what had come!' (VF)
- d. ləʔəm ʔix^wʔidəḥ həbəsa
 lə=ʔm ʔix^w-xʔid =ḥ həbəsa
 AUX=VER feel-BEC =ACC furry
 'I felt something furry (ACC).' (VF)
- e. ləmə: wa:lasuḥ ǵ^waʔgila?
 lə=ʔm =a=i walas =uḥ ǵ^waʔ-gal=a?
 AUX=VER =EMBED=3DIST big/very =3MED scream-BEC.SOUND=INVIS
 'And the scream was colossal.' (VF)
- f. ʔuǵ^waqasmida wəʔoçi kəlʔida ləw Suzie
 ʔuǵ^waqas-s=ʔm =i=da wəʔoçi kəl-xʔid-a ləw Suzie
 also-?=VER =3DIST=OST dog.PL scared-BEC-A CONJ Suzie
 'The dogs also got scared, along with Suzie.' (VF)

⁹ The translations of each sentence in this narrative are my own, based off of the storyteller's discussion of the story.

- g. ʔoʔəm la dəxdəxstoli Susan, kələmala
 ʔo=ʔm lə dəx~dəx-ʔstu-ał
 SO=VER AUX REDUP~eyes.wide.open-round.opening-STAT
 =i Susan kəl-(ğ)əm-ała
 =3DIST Susan scared-face-STAT
 ‘Susan’s eyes were just wide, her face looked terrified.’ (VF)
- h. lida waciğas dzidzəlx^wʔida
 lə =i=da waci=ğas dzi~dzəlx^w-xʔid-a
 AUX =3DIST=OST dog=poor.thing REDUP~run-BEC-A
 ‘And the poor dogs ran away.’ (VF)
- i. n̄ikeʔqələnaχ he λeȳi
 n̄ik-_heq-la =ən =χ he λeȳi
 say-in.mind-CONT =1 =ACC be.3DIST bear
 ‘I had thought it was a bear.’ (VF)

Free narratives provide extremely rich, naturalistic linguistic data, and are a place where marked constructions tend to show up. Given their nature, they are not typically targeted towards any particular construction the linguist may be after.

2.4.9 Judgment task

Since both syntactic and semantic judgment tasks were employed in the course of my research, I’ll describe both types of judgments in turn.

In a syntactic judgment task, a sentence is presented to the language consultant, and she is asked to judge whether the sentence is grammatical. An example of a syntactic judgment task is shown in (38).

(38) **KS:** “And then if I didn’t want to mention the tripping part, could I just say anything like, *hinumuχ Annaχ təp̄idamasχux Dennisχa k^wəʔsta* [(a)]...?”

- a. *hinumuχ Annaχ təp̄idamasχux Dennisχa k^wəʔsta
 hinum =uχ Anna=χ təp-xʔid-a-mas =χ=uχ
 on.purpose =3MED Anna=VIS broken-BEC-A-CAUS =ACC=3MED
 Dennis =χ=a k^wəʔsta
 Dennis =ACC=DET cup
Intended: ‘Anna made Dennis (ACC) break the cup (ACC) on purpose.’ (JF)

Speaker: “I don’t know if you could, it doesn’t sound... sounds like broken English when you phrase it like that.”

Speakers’ comments are often very helpful in interpreting syntactic judgments. Language consultants often describe ungrammatical sentences as sounding ‘broken’, ‘wrong’, or ‘funny-sounding’, or will comment that a form is not something they would ever say.

(40) *Context: Eddie has just put on a green hat; now he's taking it off.*

KS: “How would we say ‘He took off the [...] green hat’...?”

Speaker: “Green hat.” [*Volunteers* (a)]

- a. $\lambda\text{ətu}\check{\text{d}}\text{u}\check{\text{x}} \text{ Eddiy}\check{\text{ə}}\check{\text{x}} \check{\text{x}}^{\text{w}}\text{a} \text{ l}\check{\text{ə}}\text{n}\check{\text{x}}\text{a} \lambda\text{ə}\text{t}\check{\text{ə}}\text{m}\check{\text{l}}$
 $\lambda\text{ə}\text{t}\text{-u-x}\check{\text{z}}\text{id} \quad \quad \quad =\text{u}\check{\text{x}} \quad \text{Eddie}=\check{\text{x}} \quad \quad =\check{\text{x}}^{\text{w}}=\text{a}$
 overhang-off/out-BEC =3MED Eddie=VIS =ACC=3MED=DET
 $\text{l}\check{\text{ə}}\text{n}\check{\text{x}}\text{-a} \quad \lambda\text{ə}\text{t}\check{\text{ə}}\text{m}\check{\text{l}}$
 green-A hat
 ‘Eddie took off the green hat (ACC).’ (VF)

KS: “Can I say, $\lambda\text{ətu}\check{\text{d}}\text{u}\check{\text{x}} \text{ Eddiy}\check{\text{ə}}\check{\text{x}} \text{ SA} \text{ l}\check{\text{ə}}\text{n}\check{\text{x}}\text{a} \lambda\text{ə}\text{t}\check{\text{ə}}\text{m}\check{\text{l}}$ [(b)]...?”

Speaker: “Mhm [‘Yes’]. It sounds legal.”

- b. $\lambda\text{ətu}\check{\text{d}}\text{u}\check{\text{x}} \text{ Eddiy}\check{\text{ə}}\check{\text{x}}\text{sa} \text{ l}\check{\text{ə}}\text{n}\check{\text{x}}\text{a} \lambda\text{ə}\text{t}\check{\text{ə}}\text{m}\check{\text{l}}$
 $\lambda\text{ə}\text{t}\text{-u-x}\check{\text{z}}\text{id} \quad \quad \quad =\text{u}\check{\text{x}} \quad \text{Eddie}=\check{\text{x}} \quad \quad \quad =\text{s}=\text{a}$
 overhang-off/out-BEC =3MED Eddie=VIS =INST=DET
 $\text{l}\check{\text{ə}}\text{n}\check{\text{x}}\text{-a} \quad \lambda\text{ə}\text{t}\check{\text{ə}}\text{m}\check{\text{l}}$
 green-A hat
 ‘Eddie took off the green hat (INST).’ (JF)

Speaker: “Well I think it sounds legal. $\lambda\text{ətu}\check{\text{d}}\text{u}\check{\text{x}} \text{ Eddiy}\check{\text{ə}}\check{\text{x}} \text{ sa} \dots$ I guess that sounds okay.”

KS: “Yeah. Do you like either of them better?”

Speaker: “Hm?”

KS: “Do you like it better with $\check{\text{x}}^{\text{w}}\text{a} \text{ l}\check{\text{ə}}\text{n}\check{\text{x}}\text{a} \lambda\text{ə}\text{t}\check{\text{ə}}\text{m}\check{\text{l}}?$ ”

Speaker: “Mhm [‘Yes’].”

Syntactic preference judgments can also be elicited, where the language consultant judges which of two sentences is more grammatical than the other. Data of this sort can, however, be difficult to interpret (Schütze 1996) and I have not made much use of them in my research.

2.4.11 Contradiction judgment task

Contradiction judgment tasks can be used to test whether a sentence A entails another sentence B. The two target sentences A and B are conjoined, such that sentence B is introduced by a wide scoping negative element; then, the consultant is asked to judge whether the conjoined sentence is a contradiction. In the case that the sentence is judged *not* to be contradiction, the consultant is then asked to think up a hypothetical situation in which the conjoined sentence would be true.

The rationale behind this task goes as follows: because it is not possible to express both a proposition A and the negation of a proposition B which is entailed by A, if the consultant judges the conjoined sentence to be a contradiction, this means that sentence A entails sentence B. This was the consultant’s judgment for the example in (41), where the same semantic argument of $\check{\text{q}}\check{\text{i}}\check{\text{q}}\check{\text{e}}\check{\text{z}}\check{\text{q}}\check{\text{ə}}\text{la}$ ‘worry’ is introduced with instrumental (=s) case in the first conjunct, and the preposition qa in the second (negated) conjunct. Upon reflection of the conjoined sentence in (41), the consultant could not think of a situation in which the whole sentence could be true.

- (41) # q̇i̇q̇eʔq̇əlu̇ Mabel̇ṡis ʔump, k̇iʔstu̇ Mabel̇ q̇i̇q̇eʔq̇əla qeʔis ʔump
 q̇i̇q̇eʔq̇-la =u̇ Mabel=̇ =s=is
 worry-CONT =3MED Mabel=VIS =INST=3REFL.POSS
 ʔump k̇iʔs=ṫa =u̇ Mabel=̇ q̇i̇q̇eʔq̇-la
 father NEG=but =3MED Mabel=VIS worry-CONT
 PREP =3REFL.POSS father
 qa =is ʔump

Literally: ‘Mabel is concerned about her dad (INST), but Mabel isn’t concerned for her dad.’ (JF)

Speaker: “She’s concerned about her dad, but she’s not concerned about her dad.”

Sometimes, however, the conjoined sentence is judged as contradictory not because sentence A entails sentence B, but just because it can be very difficult to think of a hypothetical situation in which the conjoined sentence would be true. For this reason, care must be taken in drawing strong conclusions from judgments of contradictions until they have been thoroughly investigated.

In example (42), in contrast, the consultant judged the sentence to *not* be a contradiction. Here, the internal argument of the verb *kəʔ-* ‘afraid’ is expressed in instrumental (=s) case in the first conjunct, and introduced by the preposition *qa* in the second (negated) conjunct. The consultant also judged the hypothetical context paraphrased below this example to be one where it would be possible to truthfully say (42).

- (42) kəʔəlu̇ Mabel̇sa bədi, k̇iʔstu̇ Mabel̇ kəʔəla qeʔeda bədi
 kəʔ-la =u̇ Mabel=̇ =s=a bədi k̇iʔs=ṫa
 afraid-CONT =3MED Mabel=VIS =INST=DET cougar NEG=BUT
 =u̇ Mabel=̇ kəʔ-la qa =i=da bədi
 =MED Mabel=VIS afraid-CONT PREP =3DIST=DET cougar
 ‘Mabel is afraid OF cougars (INST), but Mabel isn’t afraid FOR cougars.’ (JF)

Possible context: Mabel is afraid of encountering cougars, but she is not afraid of cougars getting hunted to extinction.

Whenever a hypothetical situation can be thought up where a conjoined sentence of the type just discussed would be true, we can conclude that sentence A does not entail sentence B.

2.4.12 Combined translation-judgment task

In a combined translation-judgment task the language consultant is prompted to produce a volunteered form in a particular context, and then subsequently asked whether a different form (the judged form) would be felicitous in that same context.

An example of this task is shown in (43). First, the speaker volunteers a translation of a simple sentence (43a). Following this, KS offers a similar sentence to be judged in that context, and the speaker rejects it (43b).¹⁰

¹⁰ The point of (43) was to test if =s headed phrases can be substituted for prepositional *la* phrases when the intended interpretation is that of a locative Source. This and other tests show that the substitution is not possible.

(43) **KS:** “Um, another question I had was, um, ‘to fall down from something’. Um, I think you taught me before, *tiqa, tiqaḵa?*”

Speaker: “Mhm. [‘Yes’]”

KS: “*tiqaḵa*. So, maybe a cup falls down.”

Speaker: “Mhm [‘Yes’].”

KS: “From the table.”

Speaker: “Mhm. [‘Yes’]”

KS: “How do you say, ‘The cup fell down from the table’...?”

Speaker: “Fell off the table.”

KS: “Fell off the table, yeah.”

Speaker: [*Volunteers* (a)]

a. *tiqaḵuḵda kʷəʔsta laḵʷa həmədzuḵ*
 tiq-aḵ =uḵ=da kʷəʔsta la =ḵ=w=a
 fall-down =3MED=OST cup PREP =ACC=3MED=DET
 həmə-dzu=ḵ
 eat-flat.surface=VIS
 ‘The cup fell off the table.’ (VF)

KS: [.,.] “Can I say, *tiqaḵuḵda kʷəʔstaḵsuḵ həməʔdzuḵ* [(b)]...?”

Speaker: “*ki*.” [‘No.’]

b. * *tiqaḵuḵda kʷəʔstaḵsuḵ həmədzuḵ*
 tiq-aḵ =uḵ=da kʷəʔsta=ḵ =s=uḵ həmə-dzu=ḵ
 fall-down =3MED=OST cup=VIS =INST=3MED eat-flat.surface=VIS
Intended: ‘The cup fell off the table (INST).’ (JF)

KS: “Kay. Does it sound like anything? is it weird?”

Speaker: “*ʔidzaqʷalaʔs*.” [‘Repeat it.’]

KS: “Mhm [‘Yes’]. *tiqaḵuḵda kʷəʔstaḵsuḵ həməʔdzuḵ*.” [Same as (b)]

Speaker: “*ki*.” [‘No.’]

Combined translation-judgment tasks are a particularly efficient way to collect data, since they generate both a volunteered form and a judged form in quick succession.

The twelve elicitation tasks just outlined constitute the core set of methodologies I have used in my research on Kʷakʷala.

2.5 Data

The purpose of this section is to introduce features of the linguistic data and their mode of presentation in this dissertation.

The empirical basis of this dissertation is linguistic data from elicitation sessions, which are typically audio-recorded and later transcribed. The purpose of doing transcriptions is to create a written record of the session which can then be analyzed in-depth. Especially in the later years of my research, I’ve opted for doing close transcriptions of the data where I transcribe everything

that is said in the session, including speech errors and spoken rehearsal. Altogether, the set of transcriptions created during the course of my research constitutes my fieldwork corpus.

Each piece of linguistic data in the corpus consists of the following five components: a K^wak^wala sentence (2.5.1); an English translation (2.5.2); a context description (2.5.3); a grammaticality rating (2.5.4); and a felicity rating (2.5.5). In addition to these mandatory components, some data is also accompanied by metalinguistic commentary (2.5.6). In the remainder of this section, I'll outline some of the conventions I've adopted for representing these components of the data.

2.5.1 K^wak^wala sentences

K^wak^wala sentences are typically presented exactly as they were elicited. This means that when it would not affect readability, instances of phenomena like code-switching have been left as-is. In examples containing minor speech errors or interjections, these have been indicated using square brackets '[]', while code-switching is indicated using *italics*. Words of English origin that are pronounced according to the rules of K^wak^wala phonology are, however, not italicized. Non-K^wak^wala names on the other hand have also not been italicized, regardless of how they are pronounced. In cases where it would affect readability, pauses, minor speech errors, and false starts have been edited out of examples. Examples with more significant speech errors have simply been omitted.

2.5.2 English translations

English translations for K^wak^wala sentences have been assigned in a way which gives priority to a language consultants' own translation (their 'volunteered gloss'). If a language consultant has translated a sentence into English, her translation is the one that is provided.

If the language consultant has not provided her own English translation, but her K^wak^wala sentence is the direct translation of a particular English sentence (e.g. in a translation task), then that English sentence is provided as the translation.

If neither of the previous two cases holds, I have provided my own translation for the sentence. Where there is doubt about the proper translation, I have provided my best hypothesis for it along with the qualifier '*Hypothesized translation: ...*'.

If a sentence also has a more literal translation than the one provided by the language consultant, and the more literal translation is relevant to whatever point the data is being used to make, the literal translation is also provided along with the qualifier '*Literally:*' In judged forms, I have also occasionally (where it seems useful) used the qualifier '*Intended: ...*' to indicate an hypothesis about what the approximate literal meaning of the judged sentence is.

Something to keep in mind whenever one is studying examples is that translations always leave something to be desired, because translations are rarely, if ever, able to exhaustively capture the meaning of a sentence in the object language. This is because K^wak^wala and English differ substantially in the categories that must be expressed in every utterance. For instance, in K^wak^wala the location and status of the subject as visible or invisible is indicated in every utterance, while this is not the case in English. In English on the other hand, tense and aspect marking conspire in every utterance to communicate whether an event has culminated or not, while in K^wak^wala many sentences are ambiguous between a telic and atelic reading (I discuss this topic more in Chapter 6 and Appendix D). Where it's necessary to the point being made and

consultants have approved multiple translations for a K^wak^wala sentence, I've provided more than one translation. In general, translations should always be considered approximations rather than exact renderings.

2.5.3 Context descriptions

Every K^wak^wala sentence is uttered in some context or other. Sometimes, this context is one that has been presented linguistically; other times it is one that has been presented visually, as in the form of a picture or storyboard; and other times, it is some aspect of the elicitation situation that can be pointed to. This means that every sentence can, in principle, be paired with a description of the context in which it was said.

That being said, it's not always crucial to whatever point is being made to know details about the context of an example. This is often the case, for instance, when we're concerned only with a sentence's literal meaning. In cases where the context description is irrelevant to the point being made, it is omitted here.

In other cases, where the context is important, I've adopted three conventions for representing it.

In some cases I've provided verbatim transcriptions in order to illustrate how a context was presented to the language consultant. This is possible when the context description is relatively short and uninterrupted. I've sometimes edited these verbatim transcriptions to improve readability and omit pauses and rehearsals, in which case I've used ellipses in square brackets '[...]' to indicate that something has been omitted. The language consultant is referred to in these dialogues as 'Speaker', and the elicitor as 'KS' (my initials).

In other cases, especially when the context description would be too long or contains numerous interruptions, I've provided a paraphrase of it instead. Paraphrases are indicated in italics and labelled '*Context: ...*'. When a sentence is presented out-of-the-blue — that is, as the start of its own discourse — and when this fact is relevant, I have indicated this as '*Context: Out-of-the-blue.*'

Paraphrases and verbatim transcription are sometimes combined within a single example (e.g. see (40) above).

2.5.4 Grammaticality ratings

Four levels of (un)grammaticality are recognized here. Sentences which are unmarked are grammatical; sentences marked with a single question-mark ('?') are ones which sound mildly iffy, but would be possible to accommodate; sentences marked with a double question-mark ('??') are ones which sound moderately iffy, and are at best marginally acceptable; and sentences with a star ('*') are ungrammatical. Following what I perceive to be standard practice in linguistic fieldwork, these four levels of grammaticality derive essentially from my own judgment regarding how strongly a language consultant likes or dislikes a sentence. Where it's seemed necessary, I've included speakers' comments in order to justify particular ratings.

When doing research on a language in which one is not fluent, as I am here, it isn't always possible to tell whether a sentence is ill-formed for syntactic, semantic, or pragmatic reasons. Oftentimes, speakers will clearly reject a sentence in a context, but will not be able to say why they reject the sentence. In some of these instances, the choice between '*' or '#' can presuppose an analysis in a way that's unwarranted. Therefore, even though the primary use of the '*'

symbol here is to indicate that a sentence is syntactically ill-formed, in practice this symbol is also used to indicate that a sentence is ill-formed in those instances where it isn't clear, on the basis of a speaker's response, *why* the sentence is ill-formed.

2.5.5 Felicity ratings

I recognize only two levels of semantic and pragmatic (in)felicity here. Sentences which are unmarked are felicitous, while sentences marked with a hash ('#') are infelicitous. I haven't found it possible to identify more than two degrees of (in)felicity, except in a very instances where the speaker has made explicit comments to this effect. In these few instances I've marked the example with a hash and a question mark ('#?') and have included the consultant's comments.

When a sentence is judged to be ill-formed but it is not possible to tell whether this is due to infelicity or ungrammaticality, the '*' symbol is used to indicate general ill-formedness.

2.5.6 Metalinguistic commentary

Speakers' often have valuable insights into the nature of their language, especially in cases where a sentence is ungrammatical or infelicitous. Transcripts of speakers' comments are provided in many examples, where they are available. When comments arises in dialogue, the language consultant is referred to as 'Speaker', and the elicitor as 'KS' (my initials).

2.6 Variation

In the course of my fieldwork I've worked with six first-language speakers of Kwakwala, all of whom are fluent in both Kwakwala and English. In this section I discuss the inter-speaker variation I've encountered, and explain what implications this variation has for the analysis of object case presented in this dissertation.

The Kwakwala speakers I've worked with originate from two of the five dialect zones outlined in Anonby (1997). The vast majority of data in my fieldwork corpus are from four speakers of the central Kwakwala dialect spoken in Alert Bay, Hopetown, Kingcome Inlet, and Fort Rupert, while the remaining data come from two speakers of the northern Nakwala dialect spoken in C'əlǵwadi.

The most significant differences between these dialects show up in two domains: lexical items, and the form of deictic determiners. In the lexical domain, some roots are completely different in the two dialects; for instance, the word for 'night' in central Kwakwala is *ǵanuł*, while in 'Nakwala it is *nigək^w*. In the determiner domain, I've observed that speakers of Nakwala, but not central Kwakwala, occasionally drop the final consonant of the third person medial deictic, resulting in variation between =*uǰ* and =*u*, among other slight differences. This dialectal variation is interesting in its own right, but does not impinge upon the analysis of object case in this dissertation.

Speakers also vary individually in terms of vowel quality, especially in the vowels realized in determiners and prepositions. For instance, I've observed speakers to differ in whether they pronounce the third person medial deictic as =*oǰ^w* or =*uǰ*, and in whether they pronounce the preposition meaning 'for' as *qa* or *qe*. I have left variation of this sort as-is in my transcriptions,

so the reader will see various pronunciations represented. In any case, individual variation of this sort does not impinge upon my analysis of object case.

One type of variation which may exist, and which *would be* significant for my analysis of object case if proven to exist, is variation in the interpretability of instrumental (=s) case. One of the core claims of my analysis is that instrumental (=s) case adds semantic meaning to an utterance. Direct evidence for this particular claim, which I present in Chapters 3-5, comes from three (out of four) of the speakers of the central K^{wakwala} dialect whose case data I have found to be consistent. It is these speakers' variety of K^{wakwala} which motivates the interpretability claim advanced in Chapter 4, and which informs the theoretical implications of this claim discussed in Chapter 6. However, when I began to analyze the data from my final fieldwork season, I also came across data from one speaker — the fourth speaker of the central K^{wakwala} dialect — which suggests that this speaker possesses a distinct grammar in which instrumental (=s) case is *uninterpretable*. If this is true, then my semantic analysis of object case does not capture the grammar of this speaker. The reason that I am hedging my claim about grammatical variation here is that while the data I have from the fourth speaker is suggestive of grammatical difference, it is not conclusive; moreover, I have not been able to do follow-up tests with this speaker.¹¹ At this point in time, then, all I can do is acknowledge the possibility that there exists a distinct variety of K^{wakwala} in which instrumental (=s) case does not add semantic value. I leave it as a topic for future research the task of verifying whether or not this grammatical variation exists, and proceed here to develop an analysis which captures the K^{wakwala} variety in which instrumental case is interpretable.

It's important to note, however, that even despite the possibility of variation in the semantic value of instrumental case, the vast majority of K^{wakwala} data in my corpus are consistent across all language consultants. This is because the contexts in which grammatical variation of this sort would manifest are relatively confined: specifically, it's only in contexts where instrumental case has the potential to add *non-redundant* meaning that speakers potentially vary in their case behaviour. Whenever I encounter such contexts in this dissertation, I only make use of data from the three K^{wakwala} speakers who speak the variety of K^{wakwala} in which I've been able to verify that instrumental case is interpretable. Outside of these contexts, however, the semantic value associated with instrumental case is redundant, by which I mean that the semantic value associated with instrumental case just reiterates meaning that's already present (i.e. via lexical entailments). In these contexts it's impossible to tell whether instrumental case is adding semantic value or not, which means that it's also impossible to tell which hypothesized variety of K^{wakwala} is being spoken. For this reason, whenever I discuss contexts in which potential variation is neutralized, I make use of data from all six language consultants. This allows me to make use of data from all language consultants, though strictly-speaking my analysis only captures the variety of K^{wakwala} spoken by those (at least) three speakers of the language for whom instrumental (=s) case is semantically interpretable.

With an introduction to the language and project now complete, we're now ready to explore the semantic underpinnings of object case.

¹¹ I have also not done the specific tests needed with the 'Nak^{wala} speakers to see whether instrumental (=s) case is interpretable or not for them. I leave this as a topic for future research.

3

The Semantic Basis of Object Case

3.1 Introduction

Previous research on K^wak^wala has uncovered one clear semantic generalization about the distribution of object case — namely, that instrumental (=s) case is used to encode semantic Instruments (Boas 1911: p. 544). Otherwise, there have not been any attempts to define a semantic theory for predicting the distribution of object case, and the default assumption within much of the modern K^wak^wala literature appears to be that the distribution of object case is syntactically determined.

In this chapter I'll present three lines of empirical evidence to support the claim that the distribution of object case in K^wak^wala is in fact semantically determined, in line with early intuitions expressed in Boas (1911: p. 544). This discussion will serve both to motivate the semantic analysis I present in Chapter 4, and provide some initial clues about what shape this analysis will take.

The rest of this chapter is organized into four sections, as follows.

- In Section 3.2, I demonstrate the existence of correlations between verbs' lexical semantics and their case frames. In particular, I show that verbs which take strict-instrumental (=s) arguments, verbs which take strict-accusative (=x̃) arguments, and verbs which take an alternating instrumental-accusative {=s, =x̃} argument fall into semantically coherent classes. The finding that the lexical semantics of verbs can be used to predict their case frames suggests that object case is semantically determined.
- In Section 3.3, I examine correlations between particular facets of verbs' meaning and their case frames. Specifically, I investigate case marking on Theme arguments in two types of verb pairs: perspectivally-opposed verb pairs, such as *la*x̃- 'sell' versus *kə*lx̃^w- 'buy', and reverse-action verb pairs, such as *ʔə*x̃*ʔ*alit- 'put down in house' versus *da*- 'pick up, take in hand'. I show that the case which appears on Theme objects is predictable on the basis of two semantic factors: whether the Theme is possessed (in an abstract sense) by the *Initiator*, and whether this relation of possession holds at the *initial* or *final* bound of an event. The finding that object case is predictable on the basis of these particular semantic factors suggests that case is semantically determined.
- In Section 3.4, I show that the interpretation of transitive predicates formed using weak verbs (verbs which possess few, if any, lexical entailments) differs depending on whether the object is instrumental (=s), accusative (=x̃) or alternating {=s, =x̃}. In predicates headed by the dummy root *ʔə*x̃-, the following patterns emerge: (i) monotransitive predicates containing =x̃ objects can be interpreted as 'using', 'wearing', 'taking', 'getting', and 'doing to' events; (ii) monotransitive predicates containing =s objects can be interpreted only as 'using' or 'wearing' events; ; (iii) ditransitive predicates containing an instrumental argument and a prepositional *la* phrase are interpreted as 'putting' events; and (iv) ditransitive predicates containing a =x̃ object and a prepositional *la* phrase are

interpreted either as ‘putting’ events or as ‘taking from’ events. Applying ideas proposed in Ritter & Rosen (1996), I argue that since $\mathcal{P}\acute{\alpha}\check{\chi}$ - possesses no entailments of its own, these semantic constraints on $\mathcal{P}\acute{\alpha}\check{\chi}$ - predicates’ interpretation must be contributed by object case itself. Thus, in addition to providing evidence that object case is semantically determined, the $\mathcal{P}\acute{\alpha}\check{\chi}$ - predicate data reveals that object case is semantically interpretable. A similar interpretive pattern is then shown to arise with another weak verb, interrogative *wigila* ‘do what’.

- Finally, in Section 3.5 I summarize the evidence presented in the previous three sections, and reiterate why this evidence motivates a semantic theory of case. I then provide an overview of what a semantic analysis of object case will need to account for.

By the end of the chapter the reader will be familiar with three new types of empirical evidence motivating a semantic theory of object case, and will have a clear idea of what a theory of object case must explain.

3.2 Evidence from verb classes

A first type of empirical evidence for case being semantically determined comes from looking at correlations between verbs’ lexical semantics and case frames.

In Section 1.1, I introduced three types of relations between verbs, internal arguments, and case markers: strict-instrumental ($=s$) relations, strict-accusative ($=\check{\chi}$) relations, and alternating instrumental-accusative $\{=s, =\check{\chi}\}$ relations. In this section, I show that there are consistent and regular correlations between verbs’ lexical semantics and their case frames. In particular, I show that verbs which take a strict-accusative argument fall into semantically coherent classes (Section 3.2.1), as do verbs which take a strict-instrumental argument (Section 3.2.2), and or alternating argument (Section 3.2.3). The existence of this general pattern, together with the fact that it appears to lack exceptions, strongly suggests that there is a semantic basis to case marking (Section 3.2.4).

In the following sections, I provide lists of verb stems arranged into classes based on similar meaning. The classes themselves are inspired by the classification of English verb classes in Levin (1993). I have not included all of the classes (let alone all of the verb stems) that I’ve encountered in my fieldwork, only the ones I have sufficient data for to be confident in their classification. In particular, the set of strict-instrumental relations listed below is comparatively small, for reasons I discuss below. Along with each verb class, I also provide a Thematic Role label which describes the relevant internal argument’s semantic role, in order to facilitate comparison across classes. I also provide one or two example sentences for each class.

3.2.1 Verbs with strict-accusative relations

Verbs which take strict-accusative ($=\check{\chi}$) objects fall into at least the following eleven semantic verb classes: Creation Verbs, Change Verbs, Ingestion Verbs, Contact Verbs, Obtain Verbs, Transfer Verbs, Communication Verbs, Admire Verbs, Know Verbs, Forget Verbs, and Perception Verbs.

Creation Verbs describe events in which an Agent engages in some action in order to bring about the creation of an object. The internal argument of a Creation Verb, when expressed, is

strict-accusative (44).¹ I refer to this argument as an Incremental Theme, following Dowty (1991: p. 567-571).

Creation Verbs² <i>ʔəxila</i> ‘make’, <i>guk^wil-</i> ‘build’, <i>ǵaλ-</i> ‘crotchet’, <i>ǵəls-</i> ‘paint’, <i>hə^miksila</i> ‘cook’, <i>qən-</i> ‘sew’, <i>yaq-</i> ‘knit’, <i>xə^wəlt-</i> ‘create an artwork, draw’	=x̣ argument Incremental Theme
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(44) qən-xʔidən^wa qu^{x̣}wə^yi^{x̣}
 qən-xʔid =ən =x̣^w=a qu^{x̣}wə^y=x̣
 sew-BEC =1 =ACC=3MED=DET dress=VIS
 ‘I’m sewing a dress (ACC) / I sewed a dress (ACC).’ (VF)

Change Verbs describe events in which some change occurs. The object of a Change Verb, when expressed, is semantically a Patient which undergoes some change, the nature of which is determined by the verb. This change can be a change in some property of the object (e.g. *ya^{x̣}ʔid* ‘melt’), a change in the object’s location (*lu^{x̣}ax̣-* ‘roll down’), a change in the spatial configuration of the object (e.g. *ya^λ-* ‘bundle’), or a change in the object’s physical integrity (e.g. *sup-* ‘chop’). Regardless of what type of change is involved, the object is strict-accusative (45).

¹ Some Creation Verbs can also be used as Change Verbs, and thus are cross-listed there. For example, the verb *qən-* ‘sew’ may describe an event of sewing a new dress (a creation event), or an event of repairing a dress by sewing it (i.e. an event in which the dress undergoes change).

² Creation verbs are also formed productively, with *-(g)ila* ‘do, make’. With the exception of stems that have been conventionalized, such as *guk^wila* ‘build’ (literally: ‘house-make’) and *hə^miksila* ‘cook’ (literally: ‘food-make’), the objects of stems formed through noun incorporation with *-(g)ila* undergo case alternation. This phenomenon is discussed in Chapter 5, Section 5.4.

<p>Change Verbs</p> <p><i>ʔəxʂtud</i> ‘open’, <i>ʔixʷʔid</i> ‘clear’, <i>ʔiʔkil-</i> ‘heal, bless’, <i>gʷix-</i> ‘awaken’, <i>ǰəlxʂtud</i> ‘shut’, <i>ǰʷiǰʷəłca</i> ‘separate, take apart’, <i>hamiksil-</i> ‘cook, make food’, <i>hənl-</i> ‘shoot’,³ <i>hiǰʔid</i> ‘burn’, <i>hił-</i> ‘fix, repair’, <i>kaxlənd</i> ‘fry’, <i>kisʔid</i> ‘light’, <i>kuǰʷʔid</i> ‘snap, split’, <i>kʷəs-</i> ‘peel’, <i>kəlxʂʔid</i> ‘turn on, light up’, <i>kəp-</i> ‘cut hair’, <i>kəwəq-</i> ‘chop wood’, <i>kit-</i> ‘mow’, <i>ləmxʷʔid</i> ‘dry’, <i>ləʔsta-</i> ‘bathe’, <i>lix-</i> ‘flip, turn over’, <i>luǰʷax-</i> ‘roll down’, <i>mədəlkʷ-</i> ‘boil’, <i>məkʷ-</i> ‘iron’, <i>nəqalaʔid</i> ‘straighten’, <i>niǰ-</i> ‘pull’, <i>papudiya</i> ‘pretty up’, <i>pəxʂəmə-</i> ‘flatten (something round)’, <i>qʷapʔid</i> ‘rip, tear’, <i>qʷił-</i> ‘unscrew’,⁴ <i>qʷisʔid</i> ‘smooth’, <i>qʷəǰ-</i> ‘turn off, put out’, <i>qʷił-</i> ‘smash, grind up’, <i>səłt-</i> ‘calm’, <i>sup-</i> ‘chop’, <i>təkʷca</i> ‘crack’, <i>təpʔid</i> ‘break’, <i>təmxʷ-</i> ‘curl’, <i>tus-</i> ‘cut, chop’, <i>wənsʔid</i> ‘sink, drown’, <i>wəx-</i> ‘bend’, <i>xəłt-</i> ‘saw’, <i>xəq-</i> ‘comb’, <i>xul-</i> ‘shuffle cards’, <i>xʷaǰ-</i> ‘fillet’, <i>yawix-</i> ‘move’,⁵ <i>yaxʂʔid</i> ‘melt’, <i>yəǰ-</i> ‘bundle’, <i>yaxʂʔid</i> ‘spoil, ruin’, <i>casʔid</i> ‘stretch’, <i>cəlxʷʔid</i> ‘heat’, <i>cət-</i> ‘crack’, <i>cuxʷ-</i> ‘wash’ <i>cuxʷił-</i> ‘wash away shame [metaphorical]’, <i>laqʷ-</i> ‘push; knead (dough)’, <i>liǰʷ-</i> ‘move, relocate’, <i>laǰʷstud</i> ‘close’, <i>luǰʷʔid</i> ‘freeze’</p>	<p>=ǰ argument</p> <p>Patient</p>
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- (45) *ləmxʷʔidi Hannahǰən səya*
ləmxʷ-xʔid =i Hannah =ǰ=ən səya
dry-BEC =3DIST Hannah =ACC=1POSS hair
‘Hannah dried my hair (ACC).’ (VF)

Ingestion Verbs describe events of eating and drinking. The object of these verbs is consumed in the course of the event; when expressed, it is strict-accusative (46).

<p>Ingestion Verbs</p> <p><i>həmap-</i> ‘eat’, <i>həmxʂʔid</i> ‘eat’, <i>naq-</i> ‘drink’, <i>qʷaqʷixkən-</i> ‘overeat’</p>	<p>=ǰ argument</p> <p>Incremental Theme</p>
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- (46) *walas naǰʔidida wəciǰada wəp*
walas *naq-xʔid* =i=da *wəci* =ǰ=a=da *wəp*
big/very drink-BEC =3DIST=OST dog =ACC=DET=OST water
‘The dog really drank the water (ACC).’ (VF)

Speaker: “Cuz he’s so thirsty, he’s drinking lots.”

Contact Verbs describe events in which an Agent either comes into contact with a Patient, or merely approaches the point of contacting the Patient without actually doing so. Because

³ This verb also has a use as a Verb of Obtaining (‘hunt for’).

⁴ With a strict-accusative argument, this verb assumes the meaning of ‘unscrew (using a tool)’; with an alternating argument, this verb means ‘unravel, untie’ (hence, it is cross-listed as a Manipulation/Change Verb). This latter use is an instance of the Direct Manipulation Alternation, discussed in Chapter 5, Section 5.2. The discussion in Section 7.3.2 may be related to why this verb has two case frames.

⁵ I have encountered the verb *yawix-* in use as a Change Verb (‘move’), a Verb of Contact (‘touch’), and a Verb of Perception (‘feel’), and have placed it in all three lists. I don’t know at this time whether this variation arises due to this root being semantically underspecified, or because speakers vary in their lexical representation of it.

contact is not always achieved, I refer to the argument of these verbs contact as a Patient/Goal. Note the two possible translations for (47).

Contact Verbs	= \check{x} argument Patient/Goal
<i>ʔəmtl-</i> ‘play (a musical instrument)’, <i>dagit-</i> ‘molest’, <i>dix-</i> ‘wipe’, <i>dzək-</i> ‘rub’, <i>kəp-</i> ‘hug, embrace’, <i>kilak-</i> ‘beat up, kill’, <i>k^wič-</i> ‘pound, beat’, <i>məx-</i> ‘strike with fist’, <i>mič-</i> ‘kiss’, <i>nəp-</i> ‘hit the mark; get right [metaphorical]’, <i>q^hap-</i> ‘hit the mark’, ⁶ <i>q^həyək-</i> ‘kick’, ⁷ <i>q^wič-</i> ‘hit’, <i>q^wəlq^w-</i> ‘tickle’, <i>q^wət-</i> ‘scratch’, <i>tək^w-</i> ‘pick, pluck, scratch’, <i>t^hip-</i> ‘step on’, <i>x^wəs-</i> ‘smack, whip’, <i>čay-</i> ‘swipe’, <i>yaw^wič-</i> ‘touch’	

- (47) $x^wəs\?idən \lambda a\check{x}^w a həmə\?dzu\check{x}^w a s a kadayu$
 $x^wəs-x\?id =ən \lambda a =\check{x}=^w=a həm-_{w}dzu=\check{x}$
smack-BEC =1 CONN =ACC=3MED=DET eat-flat.surface=VIS
 $=s=a k a t-_{w} a y u$
=MEANS=DET write-INST.PASS
i. ‘I’m smacking the table (ACC) with a writing utensil’
ii. ‘I’m smacking at/towards the table (ACC) with a writing utensil.’ (VF)

Obtain Verbs describe events in which something either comes into the possession of an Agent, or in which an Agent strives to acquire something, whether or not acquisition is achieved. I refer to the argument that is acquired or strived for with these verbs as Obtained Goods. Many Obtain Verbs also take a prepositional *la* phrase indicating the Source from which something is obtained, as shown in (48).

Obtain Verbs	= \check{x} argument Obtained Goods
<i>da-</i> ‘take in hand’, <i>dida-</i> ‘obtain on credit’, <i>dzik-</i> ‘dig for clams, cockles’, <i>gəluł-</i> ‘steal’, <i>hənł-</i> ‘hunt for’, <i>həms-</i> ‘pick berries’, <i>kəlx^w-</i> ‘buy’, <i>kił-</i> ‘fish for (with net)’, <i>loł-</i> ‘get, receive’, <i>mən-</i> ‘pick’, <i>q^hap-</i> ‘catch’, <i>lap-</i> ‘dig up’, <i>yanəm-</i> ‘bring in, yield’	

- (48) $gəlu\?idu\check{x} Anna\check{x}u \?inəm kukis la\check{x}i wədə\?a\check{c}i$
 $gəluł-x\?id =u\check{x} Anna =\check{x}=u\check{x} \?inəm kukis la =\check{x}=i$
steal-BEC =3MED Anna =ACC=3MED many cookie PREP =ACC=3DIST
 $wəd-_{h}a\check{c}i$
cold-container
‘Anna stole a lot of cookies (ACC) from the fridge.’ (VF)

Transfer Verbs describe events in which an Agent causes a Theme to come into the possession of a Recipient. These verbs allow their internal arguments to appear in two distinct syntactic frames, depending on whether the Theme or the Recipient is encoded as an object in canonical object position. When the Recipient is encoded as the object, it is strict-accusative (49).

⁶ This verb is cross-listed as a Verb of Obtaining because it can also mean ‘catch’.

⁷ This verb also can be used as an activity verb meaning ‘play soccer’.

Transfer Verbs	=\check{x} argument
<i>dzinaʔp</i> - ‘share out, distribute’, <i>həlaq</i> - ‘pay’, <i>həlaʔs</i> - ‘send’, <i>kat</i> - ‘write to’, <i>laʔ</i> - ‘sell’, <i>nəp</i> - ‘throw’, <i>yaq</i> ʷ- ‘give in potlatch’, <i>co</i> - ‘give’, <i>laʔwənt</i> - ‘give charitably, provide’	Recipient

- (49) *co* =i=da *co*daq = \check{x} =a *bəg*ʷanəmə
give =3DIST=OST woman =ACC=DET man
=sa *laʔəmə*
=MEANS=DET hat
‘The woman gave a man (ACC) a hat.’ (JF)

The Theme argument of Transfer Verbs undergoes case alternation, so these verbs are cross-listed in Section 3.2.3.

Communication Verbs describe events in which an Agent transfers a Message to a Recipient. Similar to Transfer Verbs, these verbs allow their internal arguments to appear in two different syntactic frames, with either the Message or the Recipient encoded as the direct object. When Recipients are encoded as direct objects, they are strict-accusative (50).

Communication Verbs	=\check{x} argument
<i>ʔidzaq</i> ʷ- ‘repeat’, <i>nik</i> - ‘say’, <i>nil</i> - ‘tell, reveal’, <i>nus</i> - ‘tell legends, history’, <i>yaq</i> ʷənt- ‘talk’, <i>ʔupa</i> ʷ- ‘whisper’	Recipient

- (50) *nik*luʔ *Vicki*ʔ, “*ki*, *ʔicəməŋ* ǰʷaʔaʔa qəŋ məʔeʔ.”
nik=la =uʔ *Vicky* = \check{x} *ki* (k)iʔs-(\check{x})se=ʔm =əŋ
say=REP =3MED *Vicky* =ACC no NEG-still=VER =1
ǰʷaʔ-aʔa qa =əŋ male=eʔ
finish-STAT PREP =1POSS marry=NMZ
‘Vicky told him (ACC), “No, I’m still not ready to get married.”’ (VF)

The Message argument of Communication Verbs undergoes case alternation, so these verbs are cross-listed in Section 3.2.3.

Admire Verbs are defined here as events in which an Agent appraises an object positively, desires an object, or possesses both of these attitudes towards an object at the same time. The object towards which appraisal and/or desire is directed is strict-accusative (51).

Admire Verbs	=\check{x} argument
<i>ʔəʔʔeʔsd</i> - ‘want’, <i>ʔik</i> ʔak- ‘like’, <i>məx</i> ʷ- ‘covet, admire’, <i>maya</i> ʔx- ‘respect’, <i>məs</i> - ‘desire’, <i>xil</i> - ‘admire’	Object of Appraisal

- (51) $\lambda\text{um}\text{ən}\ \text{xil}\acute{\text{a}}\text{x}\text{us}\ \text{dal}\acute{\text{a}}\text{ci},\ \text{k}\acute{\text{i}}\text{ʔs}\lambda\text{ən}\ \text{ʔ}\acute{\text{ə}}\text{x}\text{ʔ}\acute{\text{e}}\text{x}\text{sda}$
 $\lambda\text{um}\quad =\text{ən}\ \text{xil}\text{-a}\quad =\acute{\text{x}}=\text{us}\quad \text{dala-}\text{h}\text{aci}$
 really =1 admire-A =ACC=2POSS money-container $\text{k}\acute{\text{i}}\text{ʔs}=\lambda$
 $=\text{ən}\ \text{ʔ}\acute{\text{ə}}\text{x}\text{-}\text{ʔ}\acute{\text{e}}\text{x}\text{sd-a}$
 NEG=surprise =1 DO-want-A
 ‘I’m really admiring your purse (ACC), but I don’t want [it].’ (VF)

Know Verbs describe events involving the possession of knowledge or belief. What an Agent knows or believes — their Mental Content — can be encoded as a strict-accusative object (52). The Mental Content of Know Verbs can alternatively be encoded as a sentential complement (not shown here).

Know Verbs	= $\acute{\text{x}}$ argument
$\acute{\text{q}}\text{o}\lambda\text{-}$ ‘know’, $\text{ʔ}\acute{\text{ə}}\text{y}\text{u}\text{ʔs-}$ ‘understand’, $\text{ʔ}\text{u}\acute{\text{q}}\text{w}\acute{\text{ə}}\text{s-}$ ‘believe in, trust’, $\text{g}\text{a}\text{y}\text{a}\text{nol-}$ ‘aware of, conscious of’, $\text{m}\acute{\text{ə}}\text{l}\text{k}^{\text{w-}}$ ‘remember’, $\acute{\text{q}}\text{a}\text{q}\text{u}\lambda\text{-}$ ‘learn’, $\text{m}\acute{\text{a}}\text{t}\text{t}\text{el-}$ ‘recognize’, $\text{s}\acute{\text{ə}}\text{n}\text{y}\text{as-}$ ‘figure out, have insight into’ ⁸	Mental Content

- (52) $\acute{\text{q}}\text{o}\lambda\text{ə}\lambda\text{ami}\ \text{Ted}\acute{\text{x}}\text{a}\ \acute{\text{g}}\text{w}\text{i}\text{x}\text{ʔ}\text{ida}\text{ʔ}\text{asi}$
 $\acute{\text{q}}\text{o}\lambda\text{-la}=\text{ʔm}\quad =\text{i}\quad \text{Ted}\quad =\acute{\text{x}}=\text{a}\quad \acute{\text{g}}\text{w}\text{i-x}\text{ʔid-a-}\text{ʔas}=\text{i}$
 know-CONT=VER =3DIST Ted =ACC=DET indef-BEC-A-LOC.PASS=VIS
 ‘Ted knows what’s happening (ACC).’ (VF)

Forget Verbs describe events having to do with the loss of knowledge. These verb stems take strict-accusative objects denoting what is forgotten (which I have termed here as ‘Lost Mental Content’) (53).

Forget Verbs	= $\acute{\text{x}}$ argument
$\acute{\lambda}\text{iwe}\text{ʔ} \sim \acute{\lambda}\acute{\text{ə}}\text{w}\text{i}\text{le}\text{ʔ}$ ‘forget’, $\text{l}\acute{\text{ə}}\text{n-}$ ‘forget’, $\text{g}\acute{\text{ə}}\text{x}\text{o}\text{mas}$ ‘forget’ [idiom] ⁹	Lost Mental Content

- (53) $\text{l}\acute{\text{ə}}\text{m}\acute{\text{u}}\text{x}\ \text{J}\text{a}\text{m}\text{e}\text{s}\acute{\text{ə}}\text{x}\ \text{k}\acute{\text{i}}\lambda\text{a},\ \text{l}\text{a}\lambda\text{u}\acute{\text{x}}\ \acute{\lambda}\text{iwe}\text{y}\acute{\text{ə}}\text{x}\text{i}\text{s}\ \text{d}\text{a}\text{d}\text{a}\acute{\text{c}}\acute{\text{ə}}\text{w}\text{a}\text{k}^{\text{w}}$
 $\text{l}\acute{\text{ə}}=\text{ʔm}\quad =\text{u}\acute{\text{x}}\quad \text{J}\text{a}\text{m}\text{e}\text{s}=\acute{\text{x}}\quad \text{k}\acute{\text{i}}\lambda\text{-a}$
 AUX=VER =3MED James=VIS fish.with.net-A
 $\text{l}\text{a}=\lambda\quad =\text{u}\acute{\text{x}}\quad \acute{\lambda}\text{iwe}\text{ʔ}=\acute{\text{x}}=\text{i}\text{s}\quad \text{d}\text{a}\text{d}\text{a}\acute{\text{c}}\acute{\text{ə}}\text{w}\text{a}\text{k}^{\text{w}}$
 go=surprise =3MED forget =ACC=3REFL.POSS jacket
 ‘James went fishing, but he forgot his jacket (ACC).’ (VF)

Finally, Perception Verbs denote events in which a stimulus is perceived by a sentient being. These verbs take a strict-accusative object denoting the Stimulus (54).

⁸ This verb appears to have different lexical representations for different speakers. It appears to function as a Know Verb for some speakers, and as a Verb of Thinking for others.

⁹ According to one speaker I’ve worked with, the word *gəxomas* evokes an image of a canoe floating away. It can be used to mean describe this situation literally in addition to its ‘forget’ meaning.

Perception Verbs	=\check{x} argument
<i>duq^w</i> - ‘see’, <i>huł-</i> ‘listen to’, <i>mis-</i> ‘smell’, <i>pəq-</i> ‘taste’, <i>pix^w</i> - ‘feel’, <i>qasəl-</i> ‘pay attention to’, <i>wəl-</i> ‘hear’, <i>yawix-</i> ‘touch’	Stimulus

- (54) η ix η akən qən misəla \check{x} a pələwas
 η ik η ak =ən qa =ən mis-la = \check{x} =a pələwas
like =1 PREP =1POSS smell-CONT =ACC=DET flower
‘I like to smell flowers (ACC).’ (VF)

3.2.2 Verbs with strict-instrumental relations

Three classes of verbs have been identified which take strict-instrumental (=s) objects, all of which name emotional states: the Fear Verbs, Shame Verbs, and Sadness/Longing Verbs.

Fear Verbs describe events involving a feeling of fear or anxiety. The source of fear or anxiety is encoded as a strict-instrumental (=s) object; I refer to this argument as the Source of Emotion (55).

Fear Verbs	=s argument
<i>kəl-</i> ‘afraid, scared’, <i>cətk-</i> ‘startled’, <i>cəndik- ~ cəmdik-</i> ‘spooked’, <i>wisq’a</i> ‘anxious, restless’	Source of Emotion

- (55) \dot{k} i η su \check{x} \dot{k} əl \check{x} η i \check{x} is \dot{n} i \dot{n} ig^wa \dot{c} i. \dot{k} ələlu \check{x} sada lolinu \check{x}
 \dot{k} i η s =u \check{x} \dot{k} əl \check{x} -x η id = \check{x} =is \dot{n} i~ \dot{n} ig^wa \dot{c} i
NEG =3MED turn.off-BEC =ACC=3REFL.POSS REDUP~lights
 \dot{k} əl-la =u \check{x} =s=a=da lolinu \check{x}
scared-CONT =3MED =INST=DET=OST ghost
‘He doesn’t turn off his lights (ACC). He’s afraid of ghosts (INST).’ (VF)

Shame Verbs describe events involving an array of negative emotions such as guilt, embarrassment, and awkwardness. The object of these verbs is also strict-instrumental (=s) (56).

Shame Verbs	=s argument
<i>ηudzaq-</i> ‘awkward, off-feeling’, <i>ma\check{x}ca-</i> ‘ashamed, embarrassed’, ¹⁰ <i>məm\check{x}ca-</i> ‘shy, embarrassed’	Source of Emotion

- (56) walasu \check{x} Abby \check{x} ma \check{x} casu \check{x} Norman \check{x}
walas =u \check{x} Abby= \check{x} ma \check{x} ca =s=u \check{x} Norman= \check{x}
big/very =3MED Abby=VIS ashamed =INST=3MED Norman=VIS
‘Abby’s really ashamed of Norman (INST).’ (VF)

¹⁰ One speaker I have consulted with allows the internal argument of *ma \check{x} ca* to alternate.

Sadness/Longing Verbs describe events having to do with sadness, loneliness, and yearning. Their internal argument is encoded as a strict-instrumental (=s) object (57). Alternatively, this same argument can be encoded as an object of the preposition *qa* (not shown here).

Sadness/Longing Verbs	=s argument
<i>wos-</i> ‘sad, sorry for’, <i>xʷəls-</i> ‘lonely’, <i>ləngəʔa-</i> ‘lonesome’	Source of Emotion

(57) λumən wosbidusada waci
 λum =ən wos=bidu =s=a=da waci
 really =1 sad=DIM =INST=DET=OST dog
 ‘I’m really sad about the poor little dog (INST).’ (VF)

There are two reasons why I’m able to report relatively few verb classes with strict-instrumental relations. The first reason is that a fair number of verbs with strict-instrumental relations are the only known members of their would-be semantic class. For instance, I’m not aware of any synonyms for verbs such as *bəw-* ‘leave’, *mayuλ-* ‘give birth to’, and *ʔiʔkil-* ‘heal/bleed (from)’,¹¹ though all three possess a strict-instrumental (=s) relation. The second reason is that a common type of strict-instrumental relation occurs with semantic Instruments. Verbs from many semantic classes take Instruments, such as certain Creation Verbs (e.g. *qən-* ‘sew’), Change Verbs (e.g. *qʷəs-* ‘peel’), and Contact Verbs (e.g. *xʷəs-* ‘smack, whip’). With some verbs, Instruments may be implicit arguments (Williams 2015: p. 94-116), while with other verbs, Instruments may be adjuncts. Since it’s no trivial task to differentiate verbs which entail Instruments from those which don’t, I have not made an attempt to do so here.

3.2.3 Verbs with alternating instrumental-accusative relations

Verbs with alternating {=s, =x̃} objects fall into at least the following eleven semantic classes: Put Verbs, Manipulation/Change Verbs, Stir/Tow Verbs, Transfer Verbs, Bodily Process Verbs, Performance Verbs, Communication Verbs, Annoy Verbs, Jealousy Verbs, Anger Verbs, and Think Verbs.

Put Verbs describe events in which an Agent causes a Locatum to be in some Location. With verb stems in this class, whenever a Locatum argument is expressed, it can undergo case alternation.¹² Put Verbs additionally take a prepositional *la* phrase which expresses the Location that the Locatum ends up at (58). When the Location is not expressed overtly, the existence of one is nevertheless implied.¹³

¹¹ *ʔiʔkil-* ‘heal, bless’ takes two strict-instrumental (=s) relations: one denoting an Instrument (e.g. heal *with medicine*), and one denoting a Source (e.g. heal *from sickness*).

¹² Some Put Verbs, like *badaʔdzu-* ‘butter a flat surface’, can also appear in a syntactic frame where the Location (e.g. bread) is expressed as an accusative object. What is relevant for the point being made here is that whenever the Locatum is expressed (e.g. to butter *tasty butter* onto bread) it is expressed as an alternating object, and the Location must be expressed in a prepositional *la* phrase.

¹³ For instance, prepositional *la* phrases are often omitted in sentences with Put Verbs formed using locative lexical suffixes. For example, the verb stem *tikʷəxaw-* ‘put on a necklace’ is formed from the root *tikʷ-* ‘hanging’ plus -*xawəʔ* ‘neck’. With this verb, when a *la-* phrase is not expressed, the subject’s throat is assumed to be the Location

<p>Put Verbs</p> <p><i>ʔəḫabu-</i> ‘put underneath’, <i>ʔəḫədzu-</i> ‘put on a flat surface’, <i>ʔəḫst-</i> ‘immerse in water’, <i>ʔəḫću-</i> ‘put inside’, <i>ʔəḫʔalis-</i> ‘put on the ground outdoors’, <i>ʔəḫʔalil-</i> ‘put down in house’, <i>ʔəḫʔal-</i> ‘put down’, <i>ʔəḫʔals-</i> ‘put outdoors’, <i>babaʔq-</i> ‘pepper’, <i>ʔikal-</i> ‘put up high’, <i>ʔikaʔaʔs-</i> ‘put on high heels’, <i>badaʔdzu-</i> ‘butter a flat surface’, <i>dəmsxilel-</i> ‘salt’, <i>dzup-</i> ‘jar, can’, <i>ǵax^w- ~ ǵix^w-</i> ‘hang’, <i>ǵənw-</i> ‘add in’, <i>ǵicū-</i> ‘put inside’, <i>ǵiʔst-</i> ‘immerse in liquid’, <i>hən-</i> ‘set a hollow container upright’, <i>hənxl-</i> ‘set a hollow container upright on fire or stove’, <i>həpst-</i> ‘immerse in colour or dye’, <i>kapəm-</i> ‘put on a cap’, <i>kaxćan-</i> ‘put on a bracelet’, <i>k^wət-</i> ‘attach by sticking’, <i>nəx^w- ~ nax^w-</i> ‘wrap’, <i>pənću-</i> ‘pump in’, <i>qəp-</i> ‘pour, spill’, <i>qiqəlćan-</i> ‘put a ring on’, <i>q^uxću-</i> ‘dress, put on clothes’, <i>tik^w-</i> ‘hang’, <i>tik^wəḫaw-</i> ‘put on a necklace’, <i>tipsidz-</i> ‘put shoes on’, <i>xəlpal-</i> ‘twist on’, <i>yawapst-</i> ‘curtain’, <i>ćək^wću-</i> ‘pour liquid inside’, <i>ćəq-</i> ‘discard, throw away’, <i>ćix^w-</i> ‘pour liquid’, <i>lətəm-</i> ‘put on a hat’</p>	<p>{=s, =ḫ} argument</p> <p>Locatum</p>
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- (58) luḫ Katiyəḫ ʔəḫʔalilə {sa, ḫa} lətəmł laḫa k^waxdəmłiḫ
lə =uḫ Katie=ḫ ʔəḫ-ʔalil-a {=s=a,
AUX =3MED Katie=VIS DO-A-on.floor.in.house-A {=INST=DET,
=ḫ=a} lətəmł la =ḫ=a k^waxdəmłi=ḫ
=ACC=DET} hat PREP =ACC=DET chair=VIS
‘Katie put a hat {INST, ACC} down on the chair [in the house].’ (VF, JF)

Put Verbs are discussed further in Chapter 5, Section 5.3 in connection with the Caused Motion Alternation.

Manipulation/Change Verbs describe events in which an Agent manually manipulates an object, resulting in the object undergoing some change in its configuration. This object can appear in either case (59); I refer to it as an Instrument/Patient because it has properties belonging to both thematic categories.

<p>Manipulation/Change Verbs</p> <p><i>k^ux^w-</i> ‘fold’, <i>muk^w-</i> ‘tie’, <i>qəs-</i> ‘coil, wind’, <i>q^wit-</i> ‘untie, unravel’, <i>xəlpal-</i> ‘twist on’</p>	<p>{=s, =ḫ} argument</p> <p>Instrument/Patient</p>
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- (59) muk^wuḫ Simon {sa, ḫa} dənəm
muk^w =uḫ Simon {=s=a, =ḫ=a} dənəm
tie =3MED Simon {=INST=DET, =ACC=DET} rope
‘Simon tied the rope {INST, ACC}.’ (VF, VF)

Manipulation/Change Verbs are discussed in Chapter 5, Section 5.2 in relation to the Direct Manipulation Alternation.

Stir/Tow Verbs describe events in which an Agent uses an Instrument to bring about a change in a Patient, where in the course of doing so, the Instrument and the Patient both undergo

where the Locatum (a necklace) is put. The Locatum is often left unexpressed with these verbs, but if expressed, it undergoes case alternation.

the event described by the verb in tandem. For instance, if an Agent tows a boat with rope, there is a sense in which both the boat and the rope get towed. Likewise, if an Agent stirs batter with a spoon, both the batter and the spoon undergo stirring. These verbs can occur in two syntactic frames, depending on whether the Instrument or the Patient is mapped to canonical object position. When in object position, both the semantic Instrument and the semantic Patient can undergo case alternation (60)-(61); nevertheless, there is a tendency for the more Instrument-like argument (i.e. the one nearer to the Agent in the causal chain (Wolff 2003)) to appear in instrumental case, and the more Patient-like argument to appear in accusative case.

<p>Stir/Tow Verbs</p> <p><i>dap-</i> ‘tow’, <i>xʷit-</i> ‘stir, mix’</p>	<p>{=s, =x̣} arguments</p> <p>i. Instrument (what is done with) [=s bias]</p> <p>ii. Patient (what is done to) [=x̣ bias]</p>
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(60) *xʷitən*{*sgada*, *x̣gada*} *keʔgəsilasuwən*
xʷit =ən {=*s*=*ga*=*da* , =*x̣*=*ga*=*da*} *keʔgəs-(g)ila-a-səw=ən*
stir =1 {=*INST*=3*PROX*=*OST* , =*ACC*=3*PROX*=*OST*} *cake-make-A-ACC.PASS=1POSS*
 ‘I’m stirring the cake {*INST*, *ACC*} I’m making.’ (VF, JF)

(61) *xʷitən*{*sgada*, *x̣gada*} *x̣widayux*
xʷit =ən {=*s*=*ga*=*da* , =*x̣*=*ga*=*da*} *xʷit-_nayu=x*
stir =1 {=*INST*=3*PROX*=*OST* , =*ACC*=3*PROX*=*OST*} *stir-INST.PASS=VIS*
 ‘I’m stirring the spoon {*INST*, *ACC*}.’ (VF, JF)

Transfer Verbs, which we first encountered in Section 3.2.1, describe events in which an Agent causes a Theme to come into the possession of a Recipient. These verbs appear in two distinct syntactic frames, depending on whether the Theme or the Recipient is mapped to canonical object position. When the Theme is the object, it undergoes case alternation (62).

<p>Transfer Verbs</p> <p><i>dzinaʔp-</i> ‘share out, distribute’, <i>həʔaʔ-</i> ‘pay’, <i>həʔaʔs-</i> ‘send’, <i>kət-</i> ‘write to’, <i>laʔ-</i> ‘sell’, <i>nəʔ-</i> ‘throw’, <i>čo-</i> ‘give’, <i>ʔawənt-</i> ‘give charitably, provide’</p>	<p>{=s, =x̣} argument</p> <p>Theme</p>
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(62) *čo*wux Shelli {*sis*, *x̣is*} *dzastu ʔwəmdzuju laʔux Vicki*
čo =ux Shelly {=*s*=*is* , =*x̣*=*is*}
give =3*MED* Shelly {=*INST*=3*REFL.POSS* , =*ACC*=3*REFL.POSS*}
dzastu ʔwəmdzuju la =x̣=ux Vicky
blue.colour dress PREP =ACC=3MED Vicky
 ‘Shelly gave her blue dress {*INST*, *ACC*} to Vicky.’ (VF, JF)

When the Recipient argument is encoded as a direct object it is strict-accusative (see Section 3.2.1).

Bodily Process Verbs describe fluids and gases exiting or entering the body. These verbs' object undergoes case alternation (63).

Bodily Process Verbs	{=s, =ǰ} argument
<i>ʔalk^w</i> - 'bleed', <i>hasdax</i> - 'breathe in', <i>hasdaxu</i> - 'breathe out', <i>laxo</i> - 'cough', <i>k^wis</i> - 'spit', <i>huq^w</i> - 'vomit'	Theme

- (63) *hasdaxuduǰ* Abby {*suǰda*, *ǰ^wa*} *yolaǰ*
hasdax-u-xʔid =*uǰ* Abby {=*s*=*uǰ*=*da*, =*ACC*=*3MED*=*DET*}
 breathe-out/off-BEC =*3MED* Abby {=*INST*=*3MED*=*OST*, =*ǰ*=*w*=*a*}
yu-la=*ǰ*
 wind-CONT=VIS
 'Abby's breathing out the wind {*INST*, *ACC*}.' (JF, VF)

Performance Verbs describe events in which something is performed, played, or more generally expressed or instantiated in the course of an event. The internal argument of these verbs, which I've labelled the Expressed Theme,¹⁴ undergoes case alternation (64).

Performance Verbs	{=s, =ǰ} argument
<i>ʔamł</i> - 'play (a game)', <i>dənǰ</i> - 'sing', <i>gət</i> - 'draw, create (artwork)', <i>kakadək^wsil</i> - 'read (aloud)', <i>lip</i> - 'play cards', <i>nus</i> - 'tell history or legend', <i>yǰǰ^w</i> - 'dance (in the Bighouse)'	Expressed Theme

- (64) *dənǰəluǰ* Mabel {*sa*, *ǰa*} *qəmdəm*
dənǰ-la =*uǰ* Mabel {=*s*=*a*, =*ǰ*=*a*} *qəmdəm*
 sing-CONT =*3MED* Mabel {=*INST*=*DET*, =*ACC*=*DET*} song
 'Mabel's singing a song {*INST*, *ACC*}.' (VF)

Communication Verbs, which we first encountered in Section 3.2.1, describe events in which an Agent communicates a Message to a Recipient. The Message of Communication Verbs undergoes case alternation (65).¹⁵

Communication Verbs	{=s, =ǰ} argument
<i>ʔidzaq^w</i> - 'repeat', <i>nik</i> - 'say', <i>nił</i> - 'tell, reveal', <i>nus</i> - 'tell legends, history', <i>yaqənt</i> - 'talk', <i>ʔupał</i> - 'whisper'	Message

¹⁴ There doesn't appear to be an established semantic label in the literature for the internal argument of Performance Verbs. A specific term used to refer to the internal argument of dance verbs in Hale & Keyser (2002) is 'hyponymous object' (p. 49-50, 70-71), but this term doesn't seem to apply well to the internal argument of all the Performance Verbs listed.

¹⁵ Judging from examples strewn throughout Boas (1911, 1947), the Message argument of Communication Verbs seems historically to have been strict-instrumental. Nowadays there is an apparent bias towards volunteering instrumental with Message arguments, but all speakers I have asked accept and/or volunteer accusative-marked Messages as well.

(65) *niklá* {*sus*, *ǰus*} *wałdǰmǰ ʔoʔǰma ʔulaqʷa*
nik-lá {=*s*=*us* , =*ǰ*=*us*} *wałdǰm=ǰ ʔwa=ʔm=a ʔulaqʷa*
 say-IMP {=INST=2POSS , =ACC=2POSS} word=VIS so=VER=A quietly
 ‘Say what you said {INST, ACC}, just quietly.’ (VF, VF)

Annoy Verbs describe events involving feelings of annoyance or irritation directed towards someone or something. The person or thing that is causing the irritation can be expressed as an object in either case (66); I refer to this argument as the Source/Target of Emotion, because it is simultaneously the cause and the target of irritation.

Annoy Verbs	{=s, =ǰ} argument
<i>dzibus-</i> ‘annoyed’, ¹⁶ <i>ćiniǰ-</i> ‘troubled’, <i>ǰʷinat-</i> ‘irked’, <i>waniq-</i> ‘disgusted’ ¹⁷	Source/Target of Emotion

(66) *dzibusǰ Mabelǰ* {*suǰda*, *ǰuǰda*} *waciǰ*
dzibus =*uǰ* *Mabel=ǰ* {=*s*=*uǰ=da* , =*ǰ*=*uǰ=da*} *waci=ǰ*
 annoy =3MED *Mabel=VIS* {=INST=3MED=OST , =ACC=3MED=OST} dog=VIS
 ‘Mabel’s annoyed by the dog {INST, ACC}.’ (VF, VF)

Jealousy Verbs describe events involving feelings of jealousy. The person or thing one feels jealous about can be encoded in either case (67). Once again, I refer to this as the Source/Target of Emotion, because it is simultaneously the cause and the target of jealousy.

Jealousy Verbs	{=s, =ǰ} argument
<i>babal-</i> ‘jealous’, <i>ǰiǰ-</i> ~ <i>ǰeq-</i> ‘jealous’	Source/Target of Emotion

(67) *ǰiǰuǰ Mabelǰ* {*sus*, *ǰus*} *nǰmukʷ*
ǰiǰ =*uǰ* *Mabel=ǰ* {=*s*=*us* , =*ǰ*=*us*} *nǰmukʷ*
 jealous =3MED *Mabel=VIS* {=INST=3REFL.POSS , =ACC=3REFL.POSS} friend
 ‘Mabel’s jealous of her friend {INST, ACC}.’ (VF, VF)

Anger Verbs describe events involving feelings of anger or offence. The internal argument of these verbs undergoes case alternation, though there is a noticeable difference in the frequency with which the verbs in this class take one case versus the other: *ćǰnkʷ-* usually takes an =*s* object (68), while *lawis-* usually takes a =*ǰ* object (69), but both verbs have been observed to take objects in either case.

¹⁶ For one (out of four) speakers I have consulted about this word, the internal argument is strict-instrumental.

¹⁷ The same speaker mentioned in the previous footnote also treats this relation as strict-instrumental.

Anger Verbs	{=s, =x̣} argument
<i>čənk^w</i> - ‘offended, furious’, <i>lawis</i> - ‘angry’	Source/Target of Emotion

(68) λumuχ Elsaχ čənk^wsuχ Karenχ, kiʔsaʔaχ məlk^wəla qəs nileʔs
 λum =uχ Elsa=x̣ čənk^w =s=uχ Karen=x̣
 really =3MED Elsa=VIS offended =INST=3MED Karen=VIS
 kiʔs=a=x̣ məlk^w-la qa =is niʔ=eʔ =s
 NEG=EMBED=VIS remember-CONT PREP =3REFL.POSS show=NMZ =3POSS
 ‘Elsa was really offended by Karen (INST) when she didn’t remember to mention her.’ (VF)

(69) lawisi Ketiyəχa bibəg^wanəm
 lawis =i Katie=x̣ =x̣=a bi~bəg^wanəm
 angry =3DIST Katie=VIS =ACC=DET REDUP~man
 ‘Katie’s angry at the men (ACC).’ (JF)

Think Verbs describe events involving mental rumination. All Think Verbs allow their internal argument to undergo case alternation (70); I refer to this argument as a Thought.

Think Verbs	{=s, =x̣} argument
<i>gigəʔeq</i> - ‘ponder, imagine’, <i>nikeʔq</i> - ‘think, judge, decide’ [<i>Literally</i> ‘say in mind’], <i>nanoqiksil</i> - ‘consider, think seriously about’, <i>nanuk^w</i> - ‘ruminate about someone who hasn’t returned’, <i>qəyeʔq</i> - ‘worry’, <i>qiqəʔq</i> - ‘worry’, <i>sənyas</i> - ‘think, ruminate’ ¹⁸	Thought

(70) a. gigəʔeqələn λas waldəmaʔsa nəmuk^w
 gigəʔeq-la =ən λa =s waldəm=a?
 ponder-CONT =I CONN =INST word=INVIS
 =s=a friend
 =3POSS=DET friend
 ‘I’m thinking about what a friend said (INST).’ (VF)

b. gigəʔeqələn λaχa səyuṅak^wəla
 gigəʔeq-la =ən λa =x̣=a siχ^w-_wṅak^wəla
 ponder-CONT =I CONN =ACC=DET paddle-GRAD.ADV
 ‘I’m thinking about the boat that’s going by (ACC).’ (VF)

3.2.4 Side-by-side comparisons

In the previous three sections I’ve shown that correlations exist between particular semantic verb classes and particular object case frames. Table 3.1 summarizes the correlations reported above; to facilitate comparison, I’ve also included the thematic categories of internal arguments.

¹⁸ As mentioned in Section 3.2.1, this verb has a different meaning for some speakers, patterning as a Know Verb.

Verb classes with strict-accusative (=x̃) relations	=x̃ argument
Creation Verbs	Incremental Theme
Change Verbs	Patient
Ingestion Verbs	Incremental Theme
Contact Verbs	Patient/Goal
Obtain Verbs	Obtained Goods
Transfer Verbs	Recipient
Communication Verbs	Recipient
Admire Verbs	Object of Appraisal
Know Verbs	Mental Content
Forget Verbs	Lost Mental Content
Perception Verbs	Stimulus
Verb classes with strict-instrumental (=s) relations	=s argument
Fear Verbs	Source of Emotion
Shame Verbs	Source of Emotion
Sadness/Longing Verbs	Source of Emotion
Verb classes with alternating {=s, =x̃} relations	{=s, =x̃} argument
Put Verbs	Locatum
Manipulation/Change Verbs	Instrument/Patient
Stir/Tow Verbs	Instrument, Patient
Transfer Verbs	Theme
Bodily Process Verbs	Theme
Performance Verbs	Expressed Theme
Communication Verbs	Message
Annoy Verbs	Source/Target of Emotion
Jealousy Verbs	Source/Target of Emotion
Anger Verbs	Source/Target of Emotion
Think Verbs	Thought

Table 3.1: Semantic verb classes organized by case frame

Table 3.1 shows that in general, verbs with similar meaning have similar case frames. This is precisely what we'd expect to see if the distribution of object case was semantically determined.

Note that if the distribution of object case was not semantically determined, but was determined by syntax alone, nothing would prevent the pattern in Table 3.1 from arising. What would be surprising, however, is the regularity and consistency with which we observe verb stems falling into particular classes. If case were only syntactically determined, we might expect to see numerous exceptions to the generalizations in Table 3.1. The absence of such exceptions, together with the existence of clear correlations between verb meaning and case frames, suggests that object case is determined by semantic factors.

On the other hand, it's important to note that this type of evidence has limitations. To begin with, the association between semantic verb classes and object case frames shown above is a *static* pattern in the language. It's technically possible, then, that this pattern was determined by semantics at an earlier stage of the language's history and subsequently become syntacticized, in which case object case could still be determined, synchronically, by syntax alone. However, this is at least somewhat unlikely, since the use of =s as a case marker seems to have developed recently in the language's history (Sardinha 2011), making the time period in which syntacticization could have occurred relatively short. The finding that this static pattern is fully regular also makes a syntacticization scenario somewhat less likely, as the existence of regularity may indicate that not enough time has passed for deviations from the semantic pattern to accrue.

A second limitation of the evidence in this section is that it doesn't tell us whether object case marking adds any semantic information beyond what's already contributed by verbal entailments. For instance, we've seen that all monotransitive verbs which entails change (i.e. Change Verbs) can take an object in the accusative case. If accusative case marking adds any semantic information, it's likely to be meaning that is *redundant* relative to the meaning already supplied by the verb. Thus, in order to diagnose where particular meaning components come from, and to know whether case adds semantic information, a different type of evidence is needed than the evidence presented in this section.

3.3 Evidence from case marking asymmetries in verb pairs

A second type of evidence for object case being semantically determined comes from observing the case frames of two types of verb pairs. The first type includes verbs which lexicalize different perspectives on the same event, such as *sell* versus *buy*; I refer to these as **perspectivally-opposed verb pairs**. The other type includes verbs which lexicalize conceptual reversals of each other, such as *put down* versus *pick up*; I refer to these as **reverse-action verb pairs**.

I'll start by showing that there is a correlation between the perspective on an event encoded by a verb, and that verb's case frame (Section 3.3.1). I'll then show that an analogous correlation shows up with verb pairs that are conceptual reversals of each other (Section 3.3.2). Generalizing across these two cases will lead to the discovery that which case appears on Theme objects is predictable on the basis of two semantic factors: whether the Theme is possessed by the *Initiator*, and whether this relation of possession holds at the *initial* or *final* bound of the event (Section 3.3.3).

3.3.1 Perspectivally-opposed verb pairs

A **perspectivally-opposed verb pair** consists of verbs which encode different viewpoints on a single situation. According to Gleitman (1990), these are verb pairs where “the verbs seem to

- b. kəlx^wuǎ Shelliǎuǎ kəlkəlsəlasa dala
 kəlx^w =uǎ Shelly =ǎ=uǎ kəlkəlsəla
 buy =3MED Shelly =ACC=3MED car
 =s=a dala
 =MEANS=DET money
 ‘Shelly bought **the car** (ACC)(*INST) with money.’ (VF)

(74) *ćo-* ‘give’ versus *loǎ-* ‘receive, get’

- a. ćowuǎ Shelli {sis, ǎis} dzastu ǎ^wəmdzuǎ laǎuǎ Vicki
 ćo =uǎ Shelly {s=is, =ǎ=is}
 give =3MED Shelly {=INST=3REFL.POSS, =ACC=3REFL.POSS}
 dzastu ǎ^wəmdzuǎ la =ǎ=uǎ Vicki
 blue.colour dress PREP =ACC=3MED Vicki
 ‘Shelly gave **her blue dress** {INST, ACC} to Vicky.’ (VF, JF)

- b. *Context: Katie took part in a Secret Santa gift exchange.*

loǎoǎ Ketiyəǎa ǎəsəne?
 loǎ =oǎ Katie =ǎ=a ǎəsəne?
 obtain =3MED Katie =ACC=DET shirt
 ‘Katie got **a shirt** (ACC)(*INST).’ (VF)

(75) *nəp-* ‘throw’ versus *ǎap-* ‘catch’

- a. nəpiduǎ Monicaǎ {sis, ǎis} ǎəǎaǎəǎm laǎ Simon
 nəp-xǎid =uǎ Monica=ǎ {s=is, =ǎ=is}
 throw-BEC =3MED Monica=VIS {=INST=3REFL.POSS, =ACC=3REFL.POSS}
 ǎəǎaǎəǎm la =ǎ Simon
 doll PREP =ACC Simon
 ‘Monica is throwing/threw **her doll** {INST, ACC} to Simon.’ (VF, JF)

- b. *Context: The speaker is pretending to hold a ball in her hand.*

ǎapənǎǎada ballx
 ǎap =ən =ǎ=ǎa=da ball=x
 catch =1 =ACC=3PROX=OST ball=VIS
 ‘I caught **this ball** (ACC)(*INST).’²¹ (VF)

The data in (73)-(75) is summarized in Table 3.2.

²¹ The context in which *ǎap-* ‘catch’ (75b) was elicited requires that the event be interpreted as telic. However, this verb can also be used in sentences translated in the English progressive (e.g. *I am catching the ball*), which shows that this verb is truly perspectively-opposed to the verb *nəp-* (cf. the two possible translations in 75a).

Verbs ('a')	Gloss	Case	Verbs ('b')	Gloss	Case
<i>laǰ-</i>	'sell'	{INST, ACC}	<i>kəlx^w-</i>	'buy'	(ACC)
<i>čo-</i>	'give'	{INST, ACC}	<i>loǰ-</i>	'get'	(ACC)
<i>nəp-</i>	'throw'	{INST, ACC}	<i>qap-</i>	'catch'	(ACC)

Table 3.2: Case marking of the Theme in perspectivally-opposed verb pairs

The difference in meaning between the 'a' verbs and the corresponding 'b' verbs in Table 3.2 reduces to a difference in lexically-encoded perspective: the 'a' verbs (*laǰ-*, *čo-*, and *nəp-*) are alike in that they all describe events in which a Theme is transferred to a Recipient, while the 'b' verbs (*kəlx^w-*, *loǰ-*, and *qap-*) are alike in that they all describe events in which a Theme is obtained from a Source. In Section 3.2, I referred to the 'a' verbs as Transfer Verbs, and the 'b' verbs as Obtain Verbs. What's significant here is that the difference in a verb's encoded perspective correlates with a difference in case frame. This suggests that semantic factors are at work in determining the distribution of object case.

3.3.2 Reverse-action verb pairs

The same case-marking pattern reappears when we look at a different set of paired verbs, which I'll refer to as a **reverse-action verb pairs**. While perspectivally-opposed verb pairs lexicalize different perspectives on a single event, reverse-action verb pairs describe two non-overlapping events. In fact, the events described by reverse-action verbs are necessarily non-overlapping: they describe two temporally-separate segments of a reversible action. The phrasal verbs *put down* and *pick up* form a reverse-action verb pair, because *putting* something *down* can be reversed by *picking* that thing *up*. Once I *put down* my juggling balls, I can reverse my action by *picking* them *up*, and likewise in reverse: once I *pick* them *up*, I can *put* them *down* (76)-(77).

- (76) a. Katie **put** her juggling balls **down** on the table.
b. Katie **put down** her juggling balls on the table.
- (77) a. Katie **picked** her juggling balls **up** from the table.
b. Katie **picked up** her juggling balls from the table.

Other examples of reverse-action verb pairs include *put in* versus *take out*, *stick (on)* versus *unstick (from)*, and *attach* versus *detach*.

Once again, we see that there is no obvious difference in how the Theme is encoded in English across members of these verb pairs: with both *put down* and *pick up*, the Theme is encoded as a direct object, which in these examples can appear on either side of the particle (76)-(77). In K^wak^wala however, there is a difference in the way Themes are encoded in reverse-action verb pairs. In particular, these verb pairs show the same case patterns as perspectivally-opposed verb pairs: one member of each pair has an alternating {=s, =ǰ} object, while the other member has a strict-accusative (=ǰ) one. This is illustrated below with the verb pairs *ǰəǰ^walil-* 'put down on surface indoors' versus *da-* 'pick up, take in hand' (78), *ǰi^wcu-* 'put inside' versus *ǰəǰ^wəl^wcu-* 'take out from inside' (79), and *k^wətaǰ-* 'stick on surface' versus *lawe-* 'remove' (80).

(78) ʔəxʔalil- ‘put down on surface indoors’ versus da- ‘pick up, take in hand’

- a. ləmũx Katiyəx ʔəxʔalil {**suxda**, **xuxda**} **ʔətəml** laxʷa ʔəwiŋaʔgʷil
 lə=ʔm =uḥ Katie=x ʔəx-ʔalil {=s=**uḥ=da**,
 AUX=VER =3MED Katie=VIS DO-A-on.floor.in.house {=INST=**3MED=OST**,
 =**x=uḥ=da**} **ʔətəml** la =xʷ=a ʔəwiŋaʔgʷil
 =ACC=**3MED=OST**} **hat** PREP =ACC=3MED=DET floor.in.house
 ‘Katie is putting **the hat** {INST, ACC} down on the floor.’ (VF, JF)
- b. ləmũx daxʔiduḥ Katiyəxʷa **ʔətəml** laxʷa ʔəwiŋaʔgʷil
 lə=ʔm =uḥ da-xʔid =uḥ Katie =xʷ=a
 AUX=VER =3MED take.in.hand-BEC =3MED Katie =ACC=**3MED=DET**
ʔətəml la =xʷ=a ʔəwiŋaʔgʷil
hat PREP =ACC=3MED=DET floor.in.house
 ‘Katie is picking **the hat** (ACC)(*INST) up off the floor.’ (VF)

(79) giću- ‘put inside’ versus ʔəxwəlcu- ‘take out from inside’

- a. ləmũx gićuduḥ Kati {**suxda**, **xʷa**} **ʔətəml** laxʷa niḥniḥax
 lə=ʔm =uḥ gi-ću-xʔid =uḥ Katie {=s=**uḥ=da**,
 AUX=VER =3MED LOC-inside-BEC =3MED Katie {=INST=**3MED=OST**,
 =**xʷ=a**} **ʔətəml** la =xʷ=a
 =ACC=**3MED=DET**} **hat** PREP =ACC=3MED=DET
 niḥ~niḥ-a=x
 REDUP~pull-A=VIS
 ‘Katie put **the hat** {INST, ACC} into the drawer.’ (VF, JF)
- b. ʔəxwəlcuduḥ Katiyəxʷa **ʔətəml** laxʷa niḥniḥax
 ʔəx-wəlcu-xʔid =uḥ Katie =xʷ=a
 DO-out.from-inside-BEC =3MED Katie =ACC=**3MED=DET**
ʔətəml=x la =xʷ=a niḥ~niḥ-a=x
hat=VIS PREP =ACC=3MED=DET REDUP~pull-A=VIS
 ‘Katie took **the hat** (ACC)(*INST) out of the drawer.’ (VF)

(80) kʷətaλ- ‘stick on surface’ versus lawe- ‘remove’

- a. kʷətaλəluḥ Mabəlaḥ {**sa**, **xa**} **kətəmak** laxʷa hənḥsolás
 kʷət-aλ-la =uḥ Mabel=x {=s=**a** , =**x=a**}
 stuck-on.surface-CONT =3MED Mabel=VIS {=INST=DET , =ACC=DET}
kətəmak la =xʷ=a hənḥsolás
picture PREP =ACC=3MED=DET window
 ‘Mabel is sticking/stuck **a picture** {INST, ACC} onto the window.’ (VF, JF)

- b. laweduḥ Eddieḥ^wa **katəmak^w** k^wətala laḥ^wa hənḥsolás
 lawe-xʔid =uḥ Eddie =ḥ^w=a
 come.off-BEC =3MED Eddie =ACC=3MED=DET
katəmak^w la =ḥ^w=a hənḥsolás
picture PREP =ACC=3MED=DET window
 ‘Eddie took down **the picture** (ACC)(*INST) that was stuck on the window.’ (VF)

This data in (78)-(80) is summarized in Table 3.3.

Verbs (‘a’)	Gloss	Case	Verbs (‘b’)	Gloss	Case
<i>ʔəḥʔalit-</i>	‘put down in house’	{INST, ACC}	<i>da-</i>	‘pick up’	(ACC)
<i>gi’co-</i>	‘put inside’	{INST, ACC}	<i>ʔəḥwət’cu-</i>	‘take out’	(ACC)
<i>k^wətala-</i>	‘stick on’	{INST, ACC}	<i>lawe-</i>	‘remove’	(ACC)

Table 3.3: Case marking of the Theme in reverse-action verb pairs

The ‘a’ examples in Table 3.3 are alike in that they are all Put Verbs, describing events in which a Locatum is caused to be in some Location. Likewise, the ‘b’ examples are alike in that they are all Obtain Verbs, describing events in which a Theme is obtained from a Source. The difference in meaning between these two types of verbs correlates with a difference in case frame. This shows once again that semantic factors are at work in determining the distribution of object case.

3.3.3 Semantic basis of verb-pair case frames

When we compare the patterns in Table 3.2 and Table 3.3, a semantic generalization arises. This generalization has to do with when, in the course of an event, the *Initiator* possesses the Theme. I take possession here to be a relation, potentially abstract, which holds between a Possessor and a Possesum. This relation may hold between physical or abstract entities, and may be either temporary or permanent (Heine 1997).²² In what follows, I annotate the possession relation using the predicate WITH.

The generalization that unifies the patterns in Table 3.2 and Table 3.3 is the following one. When the Theme starts out in the *Initiator*’s possession at the event’s *initial* bound and subsequently leaves his or her possession by the event’s *final* bound, it can appear in either case; but when the Theme ends up in the *Initiator*’s possession by the event’s *final* bound, it is strict-accusative. This generalization is stated concisely in (81).

(81) **Verb-Pair Generalization**

- i. Verb-argument relations in which the argument starts WITH the *Initiator* at the event’s *initial* bound and ends up not WITH the *Initiator* at the event’s *final* bound undergo case alternation {=s, =ḥ};
- ii. Verb-argument relations in which the argument ends up WITH the *Initiator* at the event’s *final* bound are strict-accusative (=ḥ).

²² Heine (1997) specifically proposes the following seven-way classification of kinds of possession: physical possession, temporary possession, permanent possession, inalienable possession, abstract possession, inanimate alienable possession, inanimate alienable possession. On his analysis they are all connected notions.

The verb-pair generalization in (81) provides us with a specific hypothesis about how meaning determines the distribution of object case. It has two facets. First, it claims that possession by an event’s *Initiator* is a relevant factor in determining object case distribution; and second, it ties this possession relation to particular *parts* of an event — either the event’s *initial* bound or its *final* bound. The verb-pair generalization therefore provides our first clear piece of evidence that the distribution of object case is tied to event structure, an idea I will develop fully in Chapter 4.

More generally, the fact that we’ve been able to derive the semantic generalization in (81) from patterns in Kwakwala data provides additional evidence for the claim that object case is semantically determined.

3.4 Evidence from interpretation with dummy ʔəx-

A third type of evidence for there being a semantic basis to object case distinctions comes from observing the interpretation of case-marked internal arguments in the vicinity of weak verbs — verbs, that is, which impose few (if any) constraints on the thematic interpretation of their arguments (Ritter & Rosen 1996). In addition to providing strong evidence for there being a semantic basis to object case patterns, the data in this section also demonstrate a new fact about object case: that object case contributes semantic content.

The argument is developed in several stages below. First, I explain the theoretical motivation for using weak verbs as a diagnostic for the semantics of object case, drawing on theoretical notions developed in Ritter & Rosen (1996) (Section 3.4.1). Following this, I look at the semantic value of case marking in the vicinity of Kwakwala’s dummy root ʔəx-, which possesses no entailments of its own (Section 3.4.2). I then show that a related pattern of interpretation arises with another weak verb, *wigila* ‘do what’ (Section 3.4.3).

3.4.1 Weak verbs as diagnostics

To understand how weak verbs function as diagnostics for the semantic contribution of object case, we first need to consider the more general problem of where thematic meaning comes from.²³

Thematic meaning is meaning having to do with how semantic arguments are related to events. For instance, the subjects in (82) and (83) are interpreted as the semantic Agents of their respective events; the object in (82) is interpreted as a semantic Patient (‘what is cut’) in a cutting event; and the object in (83) can be interpreted either as the Theme (‘what is thrown) or as the Goal (‘what is thrown at’) of a throwing event. The labels Agent, Patient, Theme, and Goal name four different thematic categories, which is to say four ways that an argument can participate in an event.

- (82) tʉsʔiduχ Mabeləχ^wa k^wənik^w
 tʉs-xʔid =uχ Mabel =χ^w=a k^wənik^w
 cut-BEC =3MED Mabel =ACC=3MED=DET bread
 ‘Mabel is cutting/cut **the bread** (ACC).’ (= Patient)

²³ The content in this section was presented as a talk at the 91st Annual Meeting of the Linguistic Society of America conference in Austin TX, and has benefited from comments and questions there.

- (83) *nəpɪdi Eddiḥa λətəml*
nəp-xʔid =i Eddie =ḥ=a λətəml
 throw-BEC =3DIST Eddie =ACC=DET **hat**
 i. ‘Eddie threw **the hat** (ACC).’ (= Theme)
 ii. ‘Eddie threw **at the hat** (ACC).’ (= Goal)

There are clear constraints on thematic meaning, which is evident from the fact that the thematic relations I’ve just named are the only ones possible for the nominals in these sentences. For instance, neither of the objects in (82) or (83) can be interpreted as the Instrument of their respective events. The existence of constraints such as these ones raises a theoretical question about *where* these constraints on thematic interpretation come from.

In examples like (82)-(83), there are three potential sources of thematic meaning. First, there is the lexicon, which is a source of thematic meaning if we assume (as I do here) that verbs possess entailments related to how their arguments participate in events (Dowty 1991, Grimm 2011). For instance, the verb *tus-* ‘cut’ entails that normal *tus-* (‘cutting’) events involve an argument which undergoes change, specifically the change of undergoing ‘cutting’. Secondly, thematic meaning can be contributed by the grammar. For instance, semantic value can be associated with grammatical processes, such as case-marking. Inherent case, such as the dative case which appears on Goals in languages such as Icelandic, is one example of a way that thematic meaning can be signalled grammatically (Woolford 2006, Legate 2008). Finally, thematic meaning may arise due to pragmatics. For instance, in order to interpret a particular utterance of sentence (83), information must be gleaned from the context in order to figure out whether the *λətəml* ‘hat’ is what is being thrown (Theme) or what is being thrown at (Goal).

The fact that there are numerous potential sources of thematic meaning generates a problem, which is that we can’t tell, just from looking at examples like (82)-(83), whether or not object case is semantically interpretable — that is, whether object case *adds* meaning onto utterances. This is because if object case does add meaning, it will be impossible to tell what this meaning is if it happens to be meaning that’s redundant with respect to the information independently contributed by the verb via lexical entailments. In order to find out whether case is semantically interpretable or not, we need a way of teasing apart the meaning that is contributed via lexical entailments of the verb, from any meaning which may be contributed by case marking. In short, we need a way of factoring out the semantic contribution of verbs.

This is where ideas proposed in Ritter & Rosen (1996) become useful. These authors’ central insight is that verbs differ from each other semantically not only in terms of *what* meaning they possess, but in terms of *how much* meaning they possess. This distinction is captured in terms of an opposition between ‘strong’ and ‘weak’ verbs: strong verbs are those which have more semantic selectional requirements, while weak verbs are those which have fewer semantic selectional requirements. Another way of framing this distinction would be to say that strong verbs possess more entailments, while weak verbs possess fewer entailments. This dimension of verb strength falls on a continuum, as I illustrate in (84)-(86) with respect to the Instrument argument of three different verbs of cutting and separation. The strongest verb below is *ḥ^waλ-* ‘fillet’; this verb places very stringent semantic requirements on its Instrument — so stringent, in fact, that the only kind of Instrument expressible with this verb is a *ḥ^walayu*, a particular kind of traditional knife used for filleting fish (84). A somewhat weaker verb is *tus-* ‘cut’; this verb specifically requires that its Instrument possess a sharp edge, but will accept any argument that meets this criteria (85). Finally, an even weaker verb is *ḡ^wi(ḡ^wə)lčənd* ‘take apart’.

This verb places even fewer specific requirements on an expressed Instrument, allowing expression of a wide range of Instruments such as a knife, glass, or one's hands (86).

(84) Strongest verb: ʃ^waλ- 'fillet'

ʃ^waλuʃ Abbiʃ...
 ʃ^waλ =uʃ Abby=ʃ...
 fillet =3MED Abby=VIS...
 'Abby is filleting/filleted...'

a. ...sa ʃ^waλayu
 ...=s=a ʃ^waλayu
 ...=INST=DET fillet.knife
 '...with a fillet-knife (INST).' (JF)

b. # ...sa kawayu
 ...=s=a kawayu
 ...=INST=DET knife
 '...with a knife (INST).' (JF)

c. # ...sis ʔiʔəyəsʉ
 ...=s=is ʔi~ʔəyəsʉ
 ...=INST=3REFL.POSS REDUP~hand/arm
 '...with her hands/arms (INST).' (JF)

(85) Intermediate strength verb: tʉs- 'cut'

tʉsuʃ Mabeləʃ^wa k^wənik^w...
 tʉs =uʃ Mabel =ʃ^w=a k^wənik^w...
 cut =3MED Mabel =ACC=3MED=DET bread...
 'Mabel is cutting/cut bread (ACC)...'

a. ...sa kawayu
 ...=s=a kəʃ^w-ayu
 ...=MEANS=DET carve=INST.PASS
 '...with a knife.' (JF)

b. ...sa gles
 ...=s=a gles
 ...=MEANS=DET glass
 '...with glass.' (JF)

c. # ...sis ʔiʔəyəsʉ
 ...=s=is ʔi~ʔəyəsʉ
 ...=MEANS=3REFL.POSS RED~hand/arm
 '...with her hands/arms.' (JF)

(86) Weakest verb: *ǰʷiǰʷəlčənd* ‘take apart’

ǰʷiǰʷəlčəndaluǰ Tede...
 ǰʷi~ǰʷilčə-xʷid-a-la =uǰ Ted=i...
 REDUP~dismantle-BEC-A-CONT =3MED Ted=VIS...
 ‘Ted is taking apart/took apart...’

- a. ...sa kawayu...
 ...=s=a kaǰʷ-w_ayu...
 ...=INST=DET carve=INST.PASS...
 ‘...with a knife (INST)...’ (JF)
- b. ...sa gles...
 ...=s=a gles...
 ...=INST=DET glass...
 ‘...with glass (INST)...’ (JF)
- c. # ...sis ʷiʷəyəs...
 ...=s=is ʷi~ʷəyəs...
 ...=INST=3REFL.POSS RED~hand/arm...
 ‘...with her hands/arms (INST).’ (JF)

...laǰa ʷəmləm.
 ...la =ǰ=a ʷəml-w_əm
 ...PREP =ACC=DET play-NMZ
 ‘...the toy.’

In fact, these verbs possess the same relative strengths with respect to their Patient arguments, as well. Thus the strongest verb *ǰʷaǰ-* can only be used to describe cutting fish; the intermediate-strength verb *tus-* can describe cutting any kind of food, as well as many inanimate objects; and the weakest verb, *ǰʷiǰʷəlčənd*, can be used to describe separating many different kinds of things, ranging from inanimate objects to people.²⁴

In addition to describing differences *between* lexical verbs, the strong-weak contrast can be defined relative to more abstract linguistic units, such as other predicate-defining categories. This is visualized in Figure 3.1.

← STRONG WEAK →
 sentential idioms > VP idioms > lexical verbs > light verbs > auxiliary verbs

Figure 3.1: Semantic strength continuum (adapted from Ritter & Rosen 1996)

²⁴ In the words of one speaker: “You could *ǰʷilčənd* ma:ny, many, many, many, many things. You could ‘separate’ people... foods... Lots of stuff.”

The part of Ritter & Rosen’s theory that is most useful for our purposes here specifically concerns verbs on the weak end of the continuum in Figure 3.1. The crucial idea is that the weaker a verb is, the fewer entailments the verb has about its arguments; and the fewer entailments a verb has about its arguments, the more we can attribute any semantic constraints we see on an argument’s thematic role to sources other than the verb itself, such as the construction the verb occurs in, or the case it appears in. Investigating constructions with weaker and weaker verbs, then, provides us with a method for factoring out lexical meaning, thereby allowing us to isolate what meaning, if any, is contributed grammatically.

The weakest possible verb, in theory, is one that possesses no entailments. Because such a maximally weak verb would contribute no entailments of its own, it should be possible to use it to isolate the semantic contribution of object case. Fortunately, K^wak^wala possesses a verb with this property: the dummy root ʔəǰ-.

3.4.2 Evidence from the dummy root ʔəǰ-

ʔəǰ- is a dummy root in K^wak^wala, glossed as ‘do’ in examples in Boas (1911) and more recently in Littell (2016).²⁵ Syntactically, ʔəǰ- passes several of the tests for verbhood outlined in Littell (2016) and Sardinha (2013).²⁶ Most significantly for us here is the fact that ʔəǰ- does not possess any entailments. To begin with, ʔəǰ- doesn’t entail agentivity: while it can indeed appear as the head of predicates which receive an agentive interpretation (87), it can also head predicates in which agentivity is explicitly denied (88).

(87) *Context: Merlin is a hypnotist.*

KS: “Merlin made the man get up.”

ləmi	Merlin	ʔəǰ	bəg ^w anəm	qa	laǰ ^w ʔideʔs	
lə=ʔm	=i	Merlin	ʔəǰ	=ǰ=a	bəg ^w aməm	
AUX=VER	=3DIST	Merlin	DO	=ACC=DET	man	
	qa	laǰ ^w -xʔid=eʔ	=s			
	PREP	stand-BEC=NMZ	=3POSS			

‘Merlin **did** [**something**] **to the man** (ACC) so he’d get up.’ (VF)

²⁵ There is one other ‘empty’ root in K^wak^wala, ʔo- (underlyingly ʔwa-), glossed as ‘so’ in Littell (2016: 294), which is used to form predicates loosely related to expressing part relations and extents of space, but I am not aware of it being used to form eventive predicates with instrumental or accusative objects.

²⁶ For example, ʔəǰ- consistently takes postnominal -eʔ (from -aʔ ‘invis’) in argument position, takes passive morphology, and forms indefinite object constructions with -*nuk^w* similar to other verbs.

- (88) *Context: We're standing in a haunted basement, when we turn around and look at a table that previously had nothing on it.*

ləm̩is ʔəmləm ʔəx̩aʔa lax̩. kəyosdi ʔəx̩ʔaʔəlasuʔnuk^ws
 lə=ʔm=is ʔəml̩-_wəm ʔəx̩-aʔa la =x̩ kəyos=xd =i
 AUX=VER=and play-NMZ DO-STAT PREP =ACC NEG.EXIST=REC.PAST =3DIST
 ʔəx̩-aʔ-la-səw̩-nuk^w =s
 DO-on-CONT-ACC.PASS-have =3POSS
 ‘Then a toy **was sitting** there. No one had put anything there.’ (VF)

Dummy ʔəx̩- occurs in indefinite nominalizations meaning ‘someone’ (89) or ‘something’ (90). It’s also the root of the word ʔəx̩aya, which is glossed in the online First Voices dictionary as ‘thing, (thing-a-ma-jig)’.²⁷ This word functions in some instances as a pause filler (91), and in other instances as a predicate meaning ‘use’ or ‘do with’ (92). These examples are consistent with ʔəx̩- having an indefinite meaning, though it’s also possible that this meaning could arise from other sources. Outside of this possibility, ʔəx̩- does not contribute any obvious semantic constraints on the interpretation of the sentence.

- (89) ʔax̩ʔidu^{x̩}da ʔəx̩eʔx̩ lax̩ gigəʔoʔnuk^wesa cədaq
 ʔak-xʔid =u^{x̩}=da ʔəx̩=eʔ=x̩ la =x̩ gigəʔoʔnuk^w
 bad-BEC =3MED=OST DO=NMZ=VIS PREP =ACC relative
 =s=a cədaq
 =3POSS=DET woman
 ‘**Somebody** in the woman’s family died.’ (VF)

- (90) məlməʔq^wəla^{x̩}us ʔiʔəx̩eʔqus
 məl~məʔq^w-la =x̩=us ʔi~ʔəx̩=eʔ =q =us
 REDUP~remember-CONT =ACC=2POSS REDUP~DO=NMZ =CONN =2POSS
 ‘Remember **your things** (ACC).’ (VF)

- (91) ləm̩isu^{x̩} w̩ənx̩ʔid lax̩, ʔəx̩aya, bəneyeʔsis gəʔelas
 lə=ʔm=is =u^{x̩} w̩ənx̩-xʔid la =x̩ ʔəx̩aya bəñ-a^y=eʔ
 AUX=VER=and =3MED hide-BEC PREP =ACC **pause.filler** under-NMZ=INVIS
 =s=is gəʔelas
 =3POSS=3REFL.POSS bed
 ‘Then she hid at, **um**, the underside of her bed.’ (VF)

²⁷ Accessed on October 7, 2017.

(92) **KS:** “Okay, so feel free to elaborate and say it in your own words, this sentence. ‘So she uses her bailer like a paddle, and she paddles back to shore.’”

ləmũx̣ ʔə́x̣ayaʔenux̣^wsa celayũ qəs six̣^wʔix̣us x^wak^wənax̣
 lə=ʔm =uḥ̣ ʔə́x̣-aya-*i*nuḥ̣^w =s=a celayũ qa =is
 AUX=VER =3MED DO-aya²⁸-expert =INST=DET bailer PREP =3REFL.POSS
 six̣^w-x̣ʔid =ḥ̣=us x^wak^wəna=ḥ̣
 paddle-BEC =ACC=3REFL.POSS canoe=VIS
 ‘Then she **knew what to do** with her bailer (INST) to paddle her canoe.’ (VF)

Speaker: “You’re getting smart, Mabel.”

The root ʔə́x̣- often hosts lexical suffixes, in which case it is the suffix which contributes semantic content and constrains the syntactic structure of the clause. Some example stems involving ʔə́x̣- and lexical suffixes are shown in (93). Notably, the case frames summarized in (93) are determined by the semantics of the lexical suffix, without any apparent contribution from ʔə́x̣-.

(93) Example stems involving ʔə́x̣- with lexical suffixes

	Stem	Arguments	Gloss
a.	ʔə́x̣ila ʔə́x̣-(g)ila DO-make	i. ___ [ACC]	‘___ make [something]’
b.	ʔə́x̣stu ʔə́x̣-stu DO-round.opening	i. ___ ii. ___ [ACC]	‘___ be open’ ‘___ open [something]’
c.	ʔə́x̣ʔeḥ̣sd ʔə́x̣-ʔeḥ̣sd DO-desire	i. ___ [ACC] ii. ___ [qa ...]	‘___ desire [something]’ ‘___ desire [for something]’
d.	ʔə́x̣ədzu ʔə́x̣- _w dzu DO-flat	i. ___ [la...] ii. ___ [INST/ACC] [la...]	‘___ be on flat surface [somewhere]’ ‘___ put [something] on flat surface [somewhere]’

²⁸ The identity of this morpheme is unknown and requires further research. One possibility, which is suggested by the gloss of this word in First Voices as ‘thing (thing-a-ma-jig)’, is that -aya is a nominalizer, in which case a better translation of (92) might be something along the lines of ‘Then she was an expert with her bailer for paddling her canoe’. In any case, this suffix doesn’t appear to contribute any meaning, which means that it doesn’t interfere with the point being made here about ʔə́x̣-’s status as a dummy root.

(94) *Context: Talking about ways the speaker remembers moss being used to decorate crosses for burials.*

KS: “How would you say they ‘covered’, ‘covered the cross with moss’...?”
Speaker: “Um, *nałhəmpəna* [clears throat] *ʔoʔəm*... Uh, *ʔəχʔisada* moss *qa wileʔs ʔoʔəm* moss-*ida* cross. Uh, it – they’d put the moss on the cross, and just cover it.”

nałhəmpəna ʔoʔəm ʔəχʔisada moss qa wileʔs ʔoʔəm moss-ida cross
nałhəmpəna ʔwa-ʔm ʔəχ-xʔid =s=a=da moss
 sometimes SO-VER DO-BEC =INST=DET=OST **moss**
qa wila=eʔ =s ʔwa-ʔm moss =i=da cross
 PREP all=NMZ =3POSS SO-VER moss =3DIST=DET cross
Literally. ‘Sometimes they just **put moss (INST)** [there] so the cross would just be all mossed’. (VF)

Speaker: “...I could, could have found better words, but I can’t think of any.”

The content of bare *ʔəχ-* predicates is at least somewhat dependent on the context in which it is uttered, hence pragmatics plays a role. What I’m interested in here, then, is whether the presence of object case markers constrains the possible interpretation of *ʔəχ-* predicates, or if their interpretation is left up to pragmatics alone.

In short, *ʔəχ-* contributes no entailments, making it a maximally weak verb. Bare *ʔəχ-* predicates therefore provide an ideal environment for investigating whether object case contributes semantic value given the following logic: since *ʔəχ-* contributes no semantic constraints of its own, any semantic constraints on the thematic interpretation of case-marked arguments which are found to exist in bare *ʔəχ-* predicates must derive from case marking itself. Hence, bare *ʔəχ-* predicates can be used to diagnose whether object case contributes semantic information.

To illustrate this use of *ʔəχ-* as a diagnostic, I’ll present data from three tasks: an out-of-the-blue translation task, a contradiction judgment task, and a combined translation/judgment task.²⁹

When speakers were asked to interpret bare, monotransitive *ʔəχ-* predicates out-of-the-blue, the interpretations assigned to sentences were found to differ depending on which object case was present on the object. Bare *ʔəχ-* predicates with instrumental (=s) objects were translated with the English verb ‘use’ (95a) while bare *ʔəχ-* predicates with an accusative (=χ) object were translated with the English verb ‘take’ (95b).

²⁹ Translation tasks are described in Section 2.4.1, contradiction judgment tasks are described in Section 2.4.11, and combined translation/judgment tasks are described in Section 2.4.12.

(95) Out-of-the-blue translations of monotransitive bare ʔəx̃- predicates

- a. ʔəx̃ʔiduḥ Mabelḥsa λətəml̩³⁰
 ʔəx̃-xʔid =uḥ Mabel=ḥ =s=a λətəml̩
 DO-BEC =3MED Mabel=VIS =INST=DET **hat**
Speaker: “Mabel used **the hat** (INST).” (JF)
- b. ʔəx̃ʔiduḥ Mabelḥa λətəml̩
 ʔəx̃-xʔid =uḥ Mabel=ḥ =ḥ=a λətəml̩
 DO-BEC =3MED Mabel=VIS =ACC=DET **hat**
Speaker: “Mabel took **the hat** (ACC).” (JF)

The only difference between the sentences in (95) is a difference in which case appears on the object. The fact that these sentences receive different translations is a first indication that object case contributes semantic value.

The two sentences in (95) were then combined via conjunction to form the constructed sentence in (96). Speakers were asked whether there were any circumstances under which (96) could be true, or whether this sentence was a contradiction. The prediction here is that if case marking is *not* semantically contentful, we expect (96) to be judged as a contradiction; this is because the only difference in form between the conjuncts in (96) is the presence of instrumental (=s) in the first conjunct, and accusative (=ḥ) in the second; if case contributes no semantic value, there should be no semantic difference between the conjuncts, so that asserting the first conjunct, together with its negation, should result in a contradiction. Significantly however, the sentence was judged as being not necessarily a contradiction (96).

(96) Bare ʔəx̃- predicate contradiction test

- ʔəx̃ʔiduḥ Mabelḥsa λətəml̩, kiʔstuḥ Mabelḥ ʔəx̃ʔidḥa λətəml̩
 ʔəx̃-xʔid =uḥ Mabel=ḥ =s=a λətəml̩
 DO-BEC =3MED Mabel=VIS =INST=DET **hat**
 kiʔs=tə =uḥ Mabel=ḥ ʔəx̃-xʔid =ḥ=a λətəml̩
 NEG=but =3MED Mabel=VIS DO-BEC =ACC=DET **hat**
 ~ ‘Mabel **used the hat** (INST), but Mabel didn’t **take the hat** (ACC).’ (JF)

- Speaker:** “Mmm, I guess you could — I guess you could make sense of it.”
KS: [...] “But the sentence, it’s not a contradiction?”
Speaker: “Uh, *ki*.” [‘No’]

The fact that this sentence is not necessarily a contradiction implies the existence of a meaning difference between the two conjuncts. Since the only difference in form between the conjuncts is in terms of object case, we can conclude from this data that object case is associated with semantic value in some way.

³⁰ The continuative aspect is more natural here, namely ʔəx̃əluḥ Mabelḥsa λətəml̩, and occurs in all of the volunteered examples with this meaning of ‘use’ in my data. By hypothesis this is because the meaning of -xʔid adds an inchoative meaning (‘start to use’) which I assume is a pragmatically rare meaning to want to express.

So far, bare $\text{ʔə}\check{\text{x}}$ -predicates reveal the following: that object case has semantic value; that having an instrumental object can describe a ‘using’ event; and that having an accusative object can describe a ‘taking’ event. Beyond this, a survey of my K^wak^wala fieldwork corpus revealed seven distinct interpretations that bare $\text{ʔə}\check{\text{x}}$ -predicates can receive, including five possible interpretations for monotransitive bare $\text{ʔə}\check{\text{x}}$ -predicates and two possible interpretations for ditransitive bare $\text{ʔə}\check{\text{x}}$ -predicates. Significantly, these possible interpretations were found to be dependent on object case marking, in a way which I will now show.

The interpretations available for monotransitive bare $\text{ʔə}\check{\text{x}}$ -predicates are shown in (97)-(101). Bare $\text{ʔə}\check{\text{x}}$ -predicates with instrumental (=s) objects can be interpreted as ‘using’ (97a) and ‘wearing’ (98a) events, but cannot be interpreted as ‘taking’ events (99a), ‘obtaining’ events (100a), or ‘doing to’ events (101a).³¹ On the other hand, bare $\text{ʔə}\check{\text{x}}$ -predicates with accusative (=x̄) objects can receive all five of these possible interpretations, as indicated by the ‘b’ examples below.

(97) USE (something): =s (VF), =x̄ (JF)

Context: Everybody knew that Eddie wanted an axe for Christmas, and he got two — one red, and one black. He’s outside chopping wood, and I ask you which one he’s using. You tell me:

- a. $\text{ʔə}\check{\text{x}}\text{əlo}\check{\text{x}}$ Eddiyə $\check{\text{x}}$ sis $\check{\text{λ}}\text{a}\check{\text{x}}^{\text{w}}\text{stu}$ subayu
 $\text{ʔə}\check{\text{x}}$ -la =o $\check{\text{x}}$ Eddie= $\check{\text{x}}$ =s=is $\check{\text{λ}}\text{a}\check{\text{x}}^{\text{w}}\text{stu}$ subayu
 DO-CONT =3MED Eddie=VIS =INST=3REFL.POSS red.colour axe
 ‘Eddie’s using his red axe (INST).’ (VF)
- b. $\text{ʔə}\check{\text{x}}\text{əlo}\check{\text{x}}$ Eddiyə $\check{\text{x}}$ is $\check{\text{λ}}\text{a}\check{\text{x}}^{\text{w}}\text{stu}$ subayu
 $\text{ʔə}\check{\text{x}}$ -la =o $\check{\text{x}}$ Eddie= $\check{\text{x}}$ =x̄=is $\check{\text{λ}}\text{a}\check{\text{x}}^{\text{w}}\text{stu}$ subayu
 DO-CONT =3MED Eddie=VIS =ACC=3REFL.POSS red.colour axe
 ‘Eddie’s using his red axe (ACC).’ (JF)

(98) WEAR (something): =s (VF), =x̄ (JF)

Context: It’s picture day, so Monica got dressed up nice for school.

- a. $\text{ʔə}\check{\text{x}}\text{əlo}\check{\text{x}}$ Monica $\check{\text{x}}$ sa dzastu $\check{\text{q}}^{\text{w}}\text{əmdzu}\check{\text{y}}\text{u}$
 $\text{ʔə}\check{\text{x}}$ -la =o $\check{\text{x}}$ Monica= $\check{\text{x}}$ =s=a dzastu $\check{\text{q}}^{\text{w}}\text{əmdzu}\check{\text{y}}\text{u}$
 DO-CONT =3MED Monica=ACC =INST=DET blue.colour dress
 ‘Monica’s wearing a blue dress (INST).’ (VF)
- b. $\text{ʔə}\check{\text{x}}\text{əlo}\check{\text{x}}$ Monica $\check{\text{x}}$ a dzastu $\check{\text{q}}^{\text{w}}\text{əmdzu}\check{\text{y}}\text{u}$
 $\text{ʔə}\check{\text{x}}$ -la =o $\check{\text{x}}$ Monica= $\check{\text{x}}$ =x̄=a dzastu $\check{\text{q}}^{\text{w}}\text{əmdzu}\check{\text{y}}\text{u}$
 DO-CONT =3MED Monica=ACC =ACC=DET blue.colour dress
 ‘Monica’s wearing a blue dress (ACC).’ (JF)

³¹ While ‘using’ and ‘wearing’ events expressed with a bare $\text{ʔə}\check{\text{x}}$ -predicate can take either an instrumental (=s) or accusative (=x̄) object, instrumental objects are more often volunteered when these interpretations are intended.

(99) TAKE (something): # =s (JF), =ǰ (VF)

Context: Shelly has a throat infection and needs to take medicine every morning.

a. # ʔǰǰidi Shellyyǰsis ʔǰteʔ ǰǰalaxdeʔ
 ʔǰǰ-xʔid =i Shelly =s=is ʔǰteʔ
 DO-BEC =3DIST Shelly =INST=3REFL.POSS medicate=NMZ
 ǰǰala-xd=eʔ
 morning-R.PST=INVIS

Intended: ‘Shelly took her medicine (INST) this morning.’ (JF)

b. ʔǰǰidi Shellyyǰǰis ʔǰteʔ ǰǰalaxdeʔ
 ʔǰǰ-xʔid =i Shelly =ǰ=is ʔǰteʔ
 DO-BEC =3DIST Shelly =ACC=3REFL.POSS medicate=NMZ
 ǰǰala-xd=eʔ
 morning-R.PST=INVIS

‘Shelly took her medicine (ACC) this morning.’ (VF)

(100) OBTAIN (something): # =s (JF), =ǰ (VF)

Context: Eddie sees a box by the side of the road, labelled “free stuff”. He goes over and finds some new pants!

a. # ʔǰǰidi Eddiyǰsa dzǰmba
 ʔǰǰ-xʔid =i Eddie =s=a dzǰmba
 DO-BEC =3DIST Eddie =INST=DET jeans
Intended: ‘Eddie got a pair of jeans (INST).’ (JF)

b. ʔǰǰidi Eddiyǰǰa dzǰmba
 ʔǰǰ-xʔid =i Eddie =ǰ=a dzǰmba
 DO-BEC =3DIST Eddie =ACC=DET jeans
‘Eddie got a pair of jeans (ACC).’ (VF)

(101) DO-TO (something): # =s (JF), =ǰ (VF)

Context: I planted a bunch of flowers by the road, and they’re just starting to bloom. One day I look out my window and I see a strange man standing by my flowers and picking at them. I try to see what he’s doing to them, but I can’t tell.

a. # ʔǰǰidoǰda bǰgʷanǰmasǰn ʔǰlawas
 ʔǰǰ-xʔid =oǰ=da bǰgʷanǰm =s=ǰn ʔǰlawas
 DO-BEC =3MED=OST man =INST=1POSS flower
Intended: ‘The man is doing something to my flowers (INST).’ (JF)

- b. ʔəḵʔidoḵda bəgʷanəmaḵən pələwas
 ʔəḵ-xʔid =oḵ=da bəgʷanəm =ḵ=ən pələwas
 DO-BEC =3MED=OST man =ACC=1POSS flower
 ‘The man is doing something to **my flowers** (ACC).’ (VF)

The fact that the range of possible interpretations for monotransitive bare ʔəḵ- predicates differs depending on which object case is present provides strong evidence that object case has a semantic basis. We also see that the range of possible interpretations of ʔəḵ- predicates with instrumental objects is a subset of the range of possible interpretations of ʔəḵ- predicates with accusative objects. I’ll return to discuss the implications of this subset relationship in Chapter 4, Section 4.3.

The interpretations available for ditransitive, bare ʔəḵ- predicates are shown in (102)-(104). Bare ʔəḵ- predicates with an instrumental (=s) object and a prepositional *la* phrase are interpreted as events in which something is ‘put’ somewhere (102).

(102) PUT (something)(somewhere): =s, *la*

Context: [The speaker watches as KS puts a hat into the fridge]

luḵ Katiyəḵ ʔəḵʔidsuḵda ʔətəmɪ laḵʷa wədəʔaci
 lə =uḵ Katie=ḵ ʔəḵ-xʔid =s=uḵ=da ʔətəmɪ
 AUX =3MED Katie=VIS DO-BEC =INST=3MED=OST hat
 la =ḵ=w=a wəd-_haci
 PREP =ACC=3MED=DET cold-container
 ‘Katie is putting **the hat** (INST) into the fridge.’ (VF)

Bare ʔəḵ- predicates with an accusative (=ḵ) object and a prepositional *la* phrase can have two possible interpretations. First, they too can be interpreted as events in which something is ‘put’ somewhere. Thus example (103), with an accusative object, has the same interpretations as (102), with an instrumental object. Second, they can be interpreted as events in which something is ‘taken from’ or ‘gotten from’ somewhere (104). Note that this means that ditransitive sentences consisting of a bare ʔəḵ- predicate, accusative object, and prepositional *la* phrase are ambiguous.

(103) PUT (something)(somewhere): =ḵ, *la*

Context: [The speaker watches as KS puts a hat into the fridge]

luḵ Katiyəḵ ʔəḵʔidḵuḵda ʔətəmɪ laḵʷa wədəʔaci
 lə =uḵ Katie=ḵ ʔəḵ-xʔid =ḵ=uḵ=da ʔətəmɪ
 AUX =3MED Katie=VIS DO-BEC =ACC=3MED=OST hat
 la =ḵ=w=a wəd-_haci
 PREP =ACC=3MED=DET cold-container
 ‘Katie is putting **the hat** (ACC) into the fridge.’ (JF)

(104) GET (something) FROM (somewhere): = \check{x} , *la*

ge \dot{w} al \check{x} a w \acute{a} ci $\check{?}$ \check{x} $\check{?}$ i \check{x} is h \acute{o} me $\check{?}$ la \check{x} ada dz \acute{x} s \acute{s} em
ge \dot{w} -al = \acute{n} = \check{x} =a w \acute{a} ci **$\check{?}$ \check{x} -x $\check{?}$ id** = \check{x} =is
h \acute{o} m=e $\check{?}$
help-CONT =1 =ACC=DET dog **DO-BEC** =ACC=**3**REFL.POSS
eat=NMZ
la = \check{x} =a=da dz \acute{x} s \acute{s} em
PREP =ACC=DET=OST round.metal
‘I helped the dog **get his food** (ACC) from a can.’ (VF)

As with monotransitive predicates, the fact that the range of possible interpretations for ditransitive bare $\check{?}$ \check{x} - predicates depends on which object case is present provides strong evidence for object case having a semantic basis. This is because $\check{?}$ \check{x} - itself provides no lexical entailments, so the constraints we see on thematic interpretation in these predicates must come from object case together with other aspects of the construction these objects are embedded in (here, prepositional *la* phrases).

Table 3.5 summarizes the range of possible interpretations which bare $\check{?}$ \check{x} - predicates can receive, and their relations to particular case frames.

Case frame	Possible interpretations
$\check{?}$ \check{x} - + <u>INST</u>	‘use <u>something</u> ’, ‘wear <u>something</u> ’
$\check{?}$ \check{x} - + <u>ACC</u>	‘use <u>something</u> ’, ‘wear <u>something</u> ’, ‘take <u>something</u> ’, ‘obtain <u>something</u> ’, ‘do to <u>something</u> ’
$\check{?}$ \check{x} - + <u>INST</u> + <i>la</i>	‘put <u>something</u> somewhere’
$\check{?}$ \check{x} - + <u>ACC</u> + <i>la</i>	‘put <u>something</u> somewhere’, take <u>something</u> from somewhere’

Table 3.5: Possible interpretations of bare $\check{?}$ \check{x} - predicates

Since $\check{?}$ \check{x} - contributes no entailments to these predicates, the restrictions we see on their interpretation must come from grammatical sources, including object case. This demonstrates that object case is semantically determined, while also providing us with a new set of clues about what semantic factors differentiate =*s* objects from = \check{x} objects.

A topical question to answer before moving on is why the range of meanings available for bare $\check{?}$ \check{x} - predicates is restricted to the ones listed in Table 3.5. That is, given that $\check{?}$ \check{x} - is meaningless, why don’t we see a broader range of possible meanings being possible for these predicates? Firstly, it’s important to note that these are the only meanings I’ve observed in the course of my research, and may not be the only ones possible in general. Secondly, I suspect that bare $\check{?}$ \check{x} - predicates do not realize more specific meanings than these ones because speakers prefer to use verbs with more specific meanings whenever it is possible to do so. Concomitantly, this suggests that bare $\check{?}$ \check{x} - predicates should be used to describe events which K^wak^wala does not have an independently lexicalized verb for describing. This is plausibly why bare $\check{?}$ \check{x} - predicates are used to describe ‘using’ events, as there is no independently lexicalized verb in K^wak^wala with this meaning. The same is also true of ‘wearing’ events, insofar as while K^wak^wala possesses

ample lexical and compositional means of describing specific kinds of ‘wearing’ events (e.g. *qə̀x̣sisə̀la* ‘wear pants’) but there is no root in the language with the more general meaning of the English verb ‘wear’. Similarly, the Kwakwala verb for ‘take’, *da-*, specifically describes an event in which someone takes something with their hand, so that bare *ʔə̀x̣-* predicates provide a means of expressing ‘taking’ events which do not involve hands. In short, the fact that there are relatively few observed interpretations for bare *ʔə̀x̣-* predicates can be partially explained by the fact that Kwakwala speakers prefer to use more informative verbs whenever possible; then, when there is no more specific verb stem a speaker could use, bare *ʔə̀x̣-* predicates provide a means for approximating speakers’ intended meaning.

In the next subsection, I turn to discuss data from another weak verb in the language, the interrogative verb *ẉigila*.

3.4.3 Evidence from *ẉigila*

The indefinite interrogative root, *ẉy-* is used to form a wide range of wh-questions in Kwakwala (Littell 2016: p. 495-498). When the lexical suffix *-(g)ila* ‘make, do’ is added to *ẉy-*, the stem *ẉigila* is formed, which is used to question what an Agent is ‘doing’ or ‘occupied with’. The stem *ẉigila* is stronger than *ʔə̀x̣-*, since it requires an Agent external argument (someone capable of ‘doing’ something). Other than this, there don’t seem to be any further restrictions on what a *ẉigila* event can be like.

Restrictions on the interpretation of *ẉigila* predicates once again reveal the semantics of object case. When *ẉigila* is used to question what an Agent is doing ‘with’ an object, the instrumental (=s) case appears, and accusative (=x̣) is infelicitous (105). When *ẉigila* is instead used to ask what someone is doing ‘to’ an object, the accusative (=x̣) case appears, and instrumental (=s) is infelicitous (106).

(105) *Context: Mabel made a beautiful blue dress. The last time I talked to her, she wasn’t sure if she wanted to give it away as a gift, sell it, or start wearing it herself. I’m talking with a friend, and I ask them...*

a. *ẉigilaλi Mabelesa q̣ẉə̀mdzuɣu*
ẉi-(g)ila=λ =i Mabel =s=a *q̣ẉə̀mdzuɣu*
 WH-make/do=FUT =3DIST Mabel =INST=DET **dress**
 ‘What is Mabel going to do **with the dress** (INST)?’ (VF)

b. # *ẉigilaλi Mabelex̣a q̣ẉə̀mdzuɣu*
ẉi-(g)ila=λ =i Mabel =x̣=a *q̣ẉə̀mdzuɣu*
 WH-make/do=FUT =3DIST Mabel =ACC=DET **dress**
Intended: ‘What is Mabel going to do **with the dress** (ACC)?’ (JF)

Speaker: {whispers sentence to herself} “Yeah, if you put *x̣a* you’re, you’re a, you’re — asking what she’s doing TO the dress.”

(106) Context: I want to know what Mabel is doing TO her dress: for example, whether she is ruining it, or tearing it apart...

- a. $\acute{w}igili$ Mabela $\acute{x}a$ $\acute{q}^w\acute{a}mdzu\acute{y}u$
 $\acute{w}i$ -(g)ila =i Mabel = \acute{x} =a $\acute{q}^w\acute{a}mdzu\acute{y}u$
 WH-make/do =3DIST Mabel =ACC=DET dress
 ‘What is Mabel doing to the dress (ACC)?’ (VF)
- b. # $\acute{w}igili$ Mabelasa $\acute{q}^w\acute{a}mdzu\acute{y}u$
 $\acute{w}i$ -(g)ila =i Mabel =s=a $\acute{q}^w\acute{a}mdzu\acute{y}u$
 WH-make/do =3DIST Mabel =INST=DET dress
 Intended: ‘What is Mabel doing to the dress (INST)?’ (JF)

The logic behind these examples is the same as that seen with $\acute{z}\acute{a}\acute{x}$ - above. As a weak verb, $\acute{w}igila$ contributes minimal semantic content through lexical entailments. Therefore, when we find a difference in the interpretation of predicates differing only in which object case is present, we can attribute this difference to the semantics contributed through object case marking. In predicates headed by $\acute{w}igila$, objects that an Agent does something ‘with’ are marked instrumental (=s), while objects an Agent does something ‘to’ are marked accusative (=x).

3.5 Conclusion

In this chapter I set out to establish the claim that there is a semantic basis to object case distinctions in K^wak^wala. With this goal in mind, I presented three types of empirical evidence.

In Section 3.2, I showed that there are consistent and regular correlations between verbs’ lexical semantics and their case frames. More specifically, I showed that verbs with strict-accusative (=x) relations fall into semantically coherent classes, as do verbs with strict-instrumental (=s) relations and verbs with alternating {=s, =x} relations. This pattern is what we would expect to see if object case was semantically determined.

Following this in Section 3.3, I illustrated correlations between several particular facets of verb meaning and object case. Specifically, I compared case frames within two types of verb pairs: perspectively-opposed verb pairs, such as $la\acute{x}$ - ‘sell’ versus $k\acute{a}lx^w$ - ‘buy’; and reverse-action verb pairs, such as $\acute{z}\acute{a}\acute{x}\acute{z}alit$ - ‘put down in house’ versus da - ‘pick up, take in hand’. Generalizing across these verb pairs, I showed that the object case (or cases) an object can appear in is predictable from semantic factors. Once again, this pattern is what we expect if the distribution of case is semantically determined.

Finally, in Section 3.4 I looked at predicates headed by weak verbs, which contribute few (if any) lexical entailments. The rationale behind this methodology, which is inspired by ideas in Ritter & Rosen (1996), is that looking at the interpretation of transitive predicates with weak verbs allows us to factor out the verb’s meaning, so we can isolate the semantic contribution of object case. I showed that in transitive predicates headed by the dummy verb $\acute{z}\acute{a}\acute{x}$ -, object case constrains the possible interpretations of the predicate. I also showed that transitive predicates headed by another weak verb, $\acute{w}igila$ ‘do what’, behave similarly. In addition to providing strong evidence that object case is semantically determined, this set of findings also supports a stronger claim: that object case is semantically interpretable, in the sense of adding semantic value.

In the course of showing that the distribution of object case is semantically determined, we also came across numerous specific clues about what the semantic distinctions underlying instrumental (=s) versus accusative (=ǔ) object case are. We already know from previous literature that semantic Instruments in Kwakwala are consistently realized with instrumental case (see Chapter 1, Section 1.3.1). To this generalization, we can add three new ones.

First, we came across a set of correlations between particular thematic roles and particular object case relations (Section 3.2). These correlations are summarized in Table 3.6.

Verb-argument-case relation	Thematic roles
strict-accusative (=ǔ)	Incremental Theme, Patient, Patient/Goal, Obtained Goods, Recipient, Object of Appraisal, Mental Content, Lost Mental Content, Stimulus
strict-instrumental (=s)	Instrument, Source of Emotion
alternating {=s, =ǔ}	Locatum, Instrument/Patient, Theme, Expressed Theme, Message, Source/Target of Emotion, Thought

Table 3.6: Correlations between object case relations and thematic roles

Second, we saw in Section 3.3 that the case-marking possibilities for Theme objects within certain verb pairs depends on two semantic factors: whether the object is possessed by the *Initiator*; and whether this possession relation holds at the *initial* bound or the *final* bound of the event. This generalization is restated below in (81).

(81) **Verb-Pair Generalization**

- i. Verb-argument relations in which the argument starts WITH the *Initiator* at the event's initial bound and ends up not WITH the *Initiator* at the event's final bound undergo case alternation {=s, =ǔ};
- ii. Verb-argument relations in which the argument ends up WITH the *Initiator* at the event's final bound are strict-accusative (=ǔ).

Finally, we found in Section 3.4 that object case constrains the interpretation of weak predicates. In predicates headed by the dummy root ʔǔ-, we found the range of possible interpretations repeated below in Table 3.5. Significantly, the set of possible interpretations of bare ʔǔ- predicates with instrumental (=s) objects was found to be a subset of the set of possible interpretations of bare ʔǔ- predicates with accusative (=ǔ) objects.

Case frame	Possible interpretations
$\lambda\check{x}$ - + <u>INST</u>	‘use <u>something</u> ’, ‘wear <u>something</u> ’
$\lambda\check{x}$ - + <u>ACC</u>	‘use <u>something</u> ’, ‘wear <u>something</u> ’, ‘take <u>something</u> ’, ‘obtain <u>something</u> ’, ‘do to <u>something</u> ’
$\lambda\check{x}$ - + <u>INST</u> + <i>la</i>	‘put <u>something</u> somewhere’
$\lambda\check{x}$ - + <u>ACC</u> + <i>la</i>	‘put <u>something</u> somewhere’, take <u>something</u> from somewhere’

Table 3.5: Possible interpretations of bare $\lambda\check{x}$ - predicates

In predicates headed by another weak verb, *wigila* ‘do what’, we observed the interpretive possibilities listed in Table 3.7.

Case frame	Possible interpretations
<i>wigila</i> + <u>INST</u>	‘do with <u>something</u> ’
<i>wigila</i> + <u>ACC</u>	‘do to <u>something</u> ’

Table 3.7: Possible interpretations of *wigila* predicates

Abstracting over the the results in Table 3.5 and Table 3.7, we can state the following heuristic: instrumental (=s) objects are those arguments that are ‘done *with*’, accusative (=x̄) objects are those arguments ‘done *to*’ or obtained, and alternating {=s, =x̄} objects are those arguments which get ‘put’ somewhere.

An adequate semantic theory of object case has to explain these semantic generalizations. In Chapter 4, I propose a semantic theory of object case which attempts to do so.

4

A Semantic Theory of Object Case

4.1 Introduction

In the previous chapter, I presented evidence for the distribution of object case in Kwakwala being semantically determined. The aim of this chapter is to develop a semantic theory of case which explains the distribution of strict-instrumental (=s), strict-accusative (=x̃), and alternating {=s, =x̃} relations.

There are only two object cases in Kwakwala, instrumental (=s) and accusative (=x̃), and every object in the language can be marked by one or both of them. This means that whatever semantic factor differentiates these two cases must be fairly abstract — abstract enough, that is, to be relevant to the semantic categorization of every nominal expressible as an object. In this chapter, I propose that the relevant semantic factor is event structure, and in particular that the distinction between participating in an *initiating* or a *non-initiating* subevent is what underlies the difference between instrumental (=s) and accusative (=x̃) case marking on objects. This proposal will be referred to as the **Initiating Subevent Theory** of object case. It consists of two specific claims, which are stated in (107).

(107) Initiating Subevent Theory

Claim-I: Instrumental case (=s) is associated with internal arguments that participate in an *initiating* subevent (*Co-initiators*), while accusative case (=x̃) is associated with internal arguments that participate in a *non-initiating* subevent (*Non-initiators*).

Claim-II: Instrumental case (=s) is interpretable, while accusative case (=x̃) is uninterpretable.

The rest of this chapter is devoted to developing and supporting these two claims, and to showing how the Initiating Subevent Theory accounts for previously-encountered patterns in Kwakwala data. The chapter is organized into four sections, as follows:

- Section 4.2 develops Claim-I of the Initiating Subevent Theory, which is concerned with establishing correspondences between object case, event roles, and subevental structure. It starts out with an introduction to the theoretical concepts that are central to the theory, followed by a concise statement of Claim-I. Following this, I propose an analysis of what it means for an internal argument to participate in an *initiating* subevent versus participate in a *non-initiating* subevent, the shape of which is broadly similar to the analysis of Proto-Agent and Proto-Patient roles in Dowty (1991). I illustrate how the resulting analysis can be used to predict the distribution of object case, which leads into a discussion of the conditions under which case alternation is possible. The section concludes with a discussion of how Claim-I accounts for the verb-argument-case relations, as well as for the data in Section 3.2 and 3.3.

- Section 4.3 is devoted to developing Claim-II of the Initiating Subevent Theory, which is concerned with how semantic value is distributed between the lexicon and the grammar (via case). Here, I return to consider data presented Section 3.4 (Evidence from interpretation with weak verbs) involving the dummy root $\text{ʔa}\check{x}$ -, and explain why this data motivates an asymmetrical semantic analysis in which instrumental (=s) case is interpretable and accusative (=x̄) case is not.
- In Section 4.4, I discuss an empirical problem that arises from the finding that accusative case is uninterpretable, which is that semantic factors are no longer sufficient, on their own, to explain the existence of strict-instrumental (=s) relations. I motivate a syntactic solution to this problem, in which strict-instrumental relations are enforced in the grammar by the presence of syntactic case features on verbs possessing these relations.
- Finally, in Section 4.5 I summarize the theory in its final form, and then turn to reflect on how recent theoretical advances in the theory of event structure have laid the foundation for a coherent semantic analysis of object case in K^{wak}wala. This insight helps explain why earlier researchers, in particular Boas, were puzzled by the distribution of object case; it also highlights the importance of theoretical advancements for language documentation.

By the end of this chapter, the reader should understand the Initiating Subevent Theory in enough depth to be able to use it to predict the distribution of strict-instrumental (=s), strict-accusative (=x̄), and alternating {=s, =x̄} case relations in K^{wak}wala.

4.2 Claim-I: Case, event roles, and subevental structure

In this section, I develop Claim-I of the Initiating Subevent Theory, which is concerned with the grounding of object case distinctions in subevental structure.

I begin by discussing three theoretical notions that are central to the Initiating Subevent Theory: events, event roles, and subevental structure (Section 4.2.1). This discussion lays the foundation for a concise statement of the first (of two) claims of the Initiating Subevent Theory (Section 4.2.2). I then delve into what exactly it means for an internal argument to participate in an *initiating* subevent or participate in a *non-initiating* subevent. To do so, I propose three dimensions along which these notions can be analyzed, corresponding to whether an argument is part of an event's cause, or its result; whether an argument defines an event's temporal beginning or its end; and whether an argument is possessed by the *Initiator* at the beginning of an event, or whether it comes into the possession of the *Initiator* by the end of an event (Section 4.2.3). After this, I specify the conditions under which case alternation is possible (Section 4.2.4). Finally, I discuss how Claim-I accounts for the distributional puzzle in Section 1.1 and for the empirical patterns presented in Section 3.2 ("Evidence from verb classes") and Section 3.3 ("Evidence from case marking asymmetries in verb pairs") (Section 4.2.5).

4.2.1 Theoretical concepts

Three theoretical concepts are of central importance for understanding the K^{wak}wala's object case system. These are the concepts of an *event*, an *event role*, and *subevental structure*.

Intuitively, an **event** is any coherent chunk of experience which can be conceptualized as a particular occurrence. Following Davidson (1967), Parsons (1990), and many others, I assume events to be a type of entity. In the words of Hardt, Mikkelsen, & Ørsnes (2012): “Events are particular spatiotemporal entities with functionally integrated participants.” (p. 347) The way that events relate to verb meaning on this conception is illustrated in (108), with the K^wak^wala root *k^wis-* ‘snow’. The verb denotes a function of type $\langle v, t \rangle$ (from events to truth values) which returns true if and only if the input is an event of snowing.

(108) $\llbracket k^{w}is- \rrbracket = \lambda e_{v}.\text{snowing}(e)$

The root *k^wis-* ‘snow’, modelled in this way, picks out the set of all snowing events.

Snowing events, and weather events more generally, are somewhat special in that they don’t necessarily involve any participants, by which I mean individuals who are involved in the event (though see Bolinger 1973 for arguments to the contrary). However, many events do necessarily involve participants; for instance sewing events, described by the root *q^wan-* ‘sew’ in K^wak^wala, involve at least one expressed individual. To get a feel for what this means, consider the examples in (109)-(113) below, each of which describes a sewing event.

(109) *q^wani* Mabel
q^wan =i Mabel
sew =3DIST Mabel
 ‘Mabel is sewing/sewed.’

(110) *q^wani* Mabelesa *walas q^wanayu*
q^wan =i Mabel =s=a *q^wanayu*
sew =3DIST Mabel =INST=DET sewing.needle
 ‘Mabel is sewing/sewed with a big sewing needle (INST).’

(111) *q^wani* Mabele^xa *lan^xstu q^wamdzuy^u*
q^wan =i Mabel =^x=a *lan^xstu* *q^wamdzuy^u*
sew =3DIST Mabel =ACC=DET green.colour dress
 ‘Mabel is sewing/sewed a green dress (ACC).’

(112) *q^wani* Mabel *la^xa x^wak^wona*
q^wan =i Mabel *la* =^x=a *x^wak^wona*
sew =3DIST Mabel PREP =ACC=DET canoe
 ‘Mabel is sewing/sewed in a canoe.’

(113) *q^wani* Mabele^xa *lan^xstu q^wamdzuy^uusa* *walas q^wanayu la^xa x^wak^wona*
q^wan =i Mabel =^x=a *lan^xstu* *q^wamdzuy^u* =s=a
sew =3DIST Mabel =ACC=DET green.colour dress =MEANS=DET
q^wanayu *la* =^x=a *x^wak^wona*
 sewing.needle PREP =ACC=DET canoe
 ‘Mabel is sewing/sewed a green dress (ACC) with a big sewing needle in a canoe.’

Examples (109)-(113) each describe a sewing event in which Mabel participates, as the one doing the sewing. In (109) she's the sole expressed participant of a sewing event, while in (110) there are two expressed participants: Mabel and a big sewing needle. In (111), there are again two participants, Mabel and a (nascent or completed) dress; in (112), Mabel and a canoe are participants; and in (113) there are four participants: Mabel, a (nascent or completed) dress, a sewing needle, and a canoe.

An **event participant**, then, is any entity that plays a role in an event. The type of role that an event participant plays will be referred to here as an **event role**. In (114), the four event roles represented in (109)-(113) are given labels.

(114) Event roles represented in (109)-(113)

Mabel	=	<i>Initiator</i>
big needle	=	<i>Co-initiator</i>
green dress	=	<i>Non-initiator</i>
canoe	=	<i>Location</i>

An ***Initiator*** is anything that initiates, or causes, an event to come about. In (109)-(113) Mabel is the one doing the sewing, so she is the *Initiator* of each sewing event. In K^wak^wala, *Initiators* appear (in active clauses) in subject position.¹ A ***Location*** is the place where an event occurs. In (112), a canoe is the place where Mabel sews, so it is the *Location* of the event. In K^wak^wala, *Locations* are introduced by the preposition *la* followed by =ǰ.² The remaining event roles *Co-initiator* and a *Non-initiator* are tied to object case realization, and will be introduced in the next section. To understand the semantic criteria these event roles are defined by, however, we'll first need to understand what *subevental structure* is.

In addition to having participants, event consist of up to two linguistically relevant parts, which in the literature are called subevents (e.g. Dowty 1979, Parsons 1990, Tenny 1994, Pustejovsky 1995, Rappaport-Hovav & Levin 1998, Rothstein 2004, Ramchand 2008, Tatevosov 2008, and many others). The internal structure of events is referred to as subevental structure.³ In some theories, events are argued to consist of as many as three linguistically relevant subevents (Ramchand 2008, Tatevosov 2008). However, for the purpose of capturing object case patterns in K^wak^wala, we only need to consider events as consisting of up to two linguistically relevant subevents.

Levin & Rappaport-Hovav (2005: p. 78-130) single out three types of semantic information which have been found to be especially relevant for conceptualizing event structure. The first source of information is an event's causal structure. Thinking about event structure in causal terms, events can have *causal* subevents and *effect* or *result* subevents. The second source of information is a event's inner temporal (or aspectual) structure. In temporal terms, events can be conceptualized as having *initial* subevents and *final* subevents, corresponding to what is intuitively the beginning phase (or initial bound) of an event, and the end phase (or final bound) of an event. The third source of information is an event's spatial and locative structure. In this

¹ Note, though, that not all subjects are *Initiators*. For instance, in the sentence *təp̄idux̄da k̄wəʔsta* 'The cup broke', the cup is a subject of the sentence, but it is not an *Initiator*.

² To be precise, the preposition *la* is occasionally realized as a 'dummy' preposition, and so it is not the case that all *la* phrases are *Locations*. *Locations* may also be mapped to subject position with certain verbs, such as Weather Verbs.

³ Alternatively, the internal structure of events is referred to as "subevent structure", though I more readily interpret this phrase as meaning "structure internal to subevents", which is not the intended meaning.

mode of conceptualization, events are seen in terms of the relative location and movements of different event participants.

For the purpose of defining subevents here, I've combined the first two of these ways of thinking about event structure.⁴ Thus, if an event has a linguistically encoded part which is causally-relevant and/or temporally initial, I'll say it has an **initiating subevent**, and if it has a linguistically encoded part indicating some result and/or a part which is temporally final, I'll say it has a **non-initiating subevent**. These event-structural categories are summarized in Figure 4.1.⁵

	Initiating subevent	Non-initiating subevent
<i>Temporal dimension:</i>	initial bound / beginning	final bound / end
<i>Causal dimension:</i>	cause	effect / result

Figure 4.1: *Initiating versus non-initiating subevents*

What I refer to as an *initiating* subevent is typically referred to in the literature as an **initial subevent**, and what I refer to as a *non-initiating* subevent is typically referred to as a **final subevent**. In general, the terms *initial* and *final* are equally good descriptors for these categories and should be considered synonyms. My reason for adopting the terms *initiating* and *non-initiating* here is expository, since these terms more transparently reflect the content of Claim-II of the Initiating Subevent Theory, a point which will make more sense once we get to Section 4.3.

With the relevant theoretical background in place, we're now ready to delve into how, precisely, the distribution of K^{wakwala}'s two object cases is grounded in event structure.

4.2.2 Semantic correspondences

The first claim of the Initiating Subevent Theory is stated in (115). The gist of the claim is that a particular set of semantic correspondences hold between particular object cases, event roles, and aspects of subevental structure.

- (115) **Initiating Subevent Theory, Claim-I:**
 Instrumental case (=s) is associated with internal arguments that participate in an *initiating* subevent (*Co-initiators*), while accusative case (=x̄) is associated with internal arguments that participate in a *non-initiating* subevent (*Non-initiators*).

This statement makes reference to two new event roles, which were mentioned in Section 4.2.1. First, there is the event role *Co-initiator*, which refers to an internal argument that participates in an *initiating* subevent.⁶ Second, there is the event role *Non-initiator*, which refers to an internal

⁴ We'll see in Section 4.2.3 that the spatial/locational dimension is relevant also, insofar as it relates to the notion of abstract possession by an *Initiator*. For the discussion here, however, this dimension adds unnecessary complications due to its relational nature.

⁵ Figure 4.1 is identical to Figure 1.1.

⁶ The *Co-initiator* event role is a novel contribution of this dissertation to the theoretical linguistics literature.

argument that participates in a *non-initiating* subevent. From now on, I'll frequently employ the terminology of event roles when referring to instrumental and accusative objects.

One aspect of (115) remains indeterminate at this point, and that is how the word 'participate' is understood in the statement of (115). Note that the interpretation of this word is of central importance to the theory, since it determines how we should go about classifying internal arguments as *Co-initiators* and *Non-initiators*. In the next section, I discuss what exactly it means for an argument to participate in an *initiating* or *non-initiating* subevent.

4.2.3 Identifying event roles

For an internal argument to qualify as participating in a subevent, it's not enough for the argument to merely exist within that subevent. For instance, the Patient argument in a cutting event ('what gets cut') necessarily exists during both the *initiating* and *non-initiating* phases of a cutting event (116a); nevertheless, this argument cannot take instrumental (=s) case (116b).⁷ Similarly, the Theme in a leaving event ('what gets left') typically continues existing into the *non-initiating* subevent, once it has been left (117a). Nevertheless, this argument cannot appear in accusative (=x̃) case (117b).

(116) a. $\acute{t}us\acute{?}idi$ Karen $\acute{x}a$ $\acute{?}ab\acute{o}ls$
 $\acute{t}us-x\acute{?}id$ =i Karen = $\acute{x}=a$ $\acute{?}ab\acute{o}ls$
 cut-BEC =3DIST Karen =ACC=DET apple
 'Karen is cutting/cut the apple (ACC).' (VF)

b. # $\acute{t}us\acute{?}idi$ Karen s_a $\acute{?}ab\acute{o}ls$
 $\acute{t}us-x\acute{?}id$ =i Karen =s=a $\acute{?}ab\acute{o}ls$
 cut-BEC =3DIST Karen =INST=DET apple
Speaker's comment: "You're literally saying she 'used the apple to cut with'." (JF)

(117) Context: Mabel left her husband.

a. $b\acute{o}wux\acute{s}is$ $\acute{?}aw\acute{a}n\acute{o}m$
 $b\acute{o}w$ =u \acute{x} =s=is $\acute{?}aw\acute{a}n\acute{o}m$
 leave =3MED =INST=3REFL.POSS husband
 'She left her husband (INST).' (VF)

b. * $b\acute{o}wux\acute{x}is$ $\acute{?}aw\acute{a}n\acute{o}m$
 $b\acute{o}w$ =u \acute{x} = \acute{x} =is $\acute{?}aw\acute{a}n\acute{o}m$
 leave =3MED =ACC=3REFL.POSS husband
 'She left her husband (ACC).' (JF)

Speaker: " $b\acute{o}wux\acute{x}is...? \acute{k}i$." ['No.']

⁷ What is happening in (116b), specifically, is that Instrumental case is coercing an instrumental interpretation onto the strict-accusative argument of $\acute{t}us$ - 'cut'.

Were mere existence a sufficient criterion for participating in a subevent, case alternation would be possible in far more situations than it actually is. Participation in a subevent, then, must be more stringently defined than this.

Instead, for an argument to qualify as participating in a subevent, it must play a role in *defining* that subevent by ensuring that the event satisfies a particular description. The question of how an argument defines a subevent has been extensively explored in the literature concerning how objects relate to interpretations of event culmination, or telicity (Kratzer 2004; Krifka 1989, 1992, 1998; Ramchand 1997, 2008; Tenny 1994). This literature is exclusively concerned with how internal arguments define *non-initiating* subevents by “measuring out” the event in various ways (to adopt Tenny’s 1994 terminology); it therefore only partially addresses the problem of what it means for an internal argument to define a subevent. I defer substantial discussion of this topic until Chapter 6; however, for our purposes here, this literature provides one crucial, general insight, which I will now explain.

On the one hand, there are an infinite number of ways for an object to be mapped onto the temporal extent of an event, and thereby come to define its culmination conditions. For instance, in a ‘cleaning the house’ event, the culmination conditions of this event will depend crucially on what ‘the house’ refers to. Sometimes for the house to be clean, all I need to do is tidy the kitchen and the front entrance; other times however, I need to clean every room from top-to-bottom. The same thing can be said about ‘climbing a mountain’ events, or ‘fixing a fence’ events, *etc.*. Yet even though there are an infinity of specific ways for an object to define the culmination conditions of an event, when we abstract away from the particulars of context and look at commonalities in object interpretation, a small number of clear, general patterns emerge in how culmination conditions are defined by objects. For instance Ramchand (1997: 113-143), expanding on the system in Krifka (1989, 1992), focuses on the following three ways in which an object can define a *non-initiating* subevent: an object can be mapped onto an event in terms of its extent (e.g. ‘mow the lawn’); an object can be mapped onto an event in terms of some scalar property it possesses (e.g. ‘dry the huckleberries’); or an object can be mapped onto an event in terms of its location along a path (e.g. ‘run to the store’). Similar to how Ramchand defines a few abstract ways for objects to measure out an event, what I will do below is propose a few abstract ways that an object can define either an *initiating* or a *non-initiating* subevent. The major difference will be that here, I’m concerned with what it means to participate in one or the other subevent construed broadly, and not solely on how internal arguments define the culmination conditions of events.

I will therefore propose an analysis of what it means to participate in an *initiating* subevent or in a *non-initiating* subevent, which in addition to helping clarify my statement of Claim-I (Section 4.3.2), will provide a means for identifying event roles. My analysis below will bear some resemblance to Dowty’s (1991) analysis of argument selection in terms of Agent Proto-Roles and Patient Proto-Roles, as well as more recent incarnations of the same approach such as Grimm (2011). Dowty’s (1991) core innovation is the two sets of properties in (118), which he takes to define two cluster-concepts or ‘Proto-Roles’: the Agent Proto-Role, and the Patient Proto-Role. Arguments with more Proto-Agent properties tend to be realized as subjects, while arguments with more Proto-Patient properties tend to be realized as objects.

(118) Dowty's (1991) Proto-Role analysis (p. 572)

- I. Contributing properties for the Agent Proto-Role
 - a. volitional involvement of the event or state
 - b. sentience (and/or perception)
 - c. causing an event or change of state in another participant
 - d. movement (relative to the position of another participant)
 - e. exists independently of the event named by the verb)⁸

- II. Contributing properties for the Patient Proto-Role
 - a. undergoes change of state
 - b. incremental theme
 - c. causally affected by another participant
 - d. stationary relative to movement of an other participant
 - e. does not exist independently of the event, or not at all)

While Dowty's analysis focuses on the question of what semantic factors underly whether an argument is realized as a subject or an object, my analysis below is focused instead on what semantic factors underly whether an argument is realized as one of two kinds of objects — instrumental or accusative. To the extent that Dowty's and my analyses are similar, my analysis can be seen as constituting an extension of Dowty's analysis into the domain of internal argument selection.⁹

Out of the potentially infinite ways for an internal argument to define an *initiating* or *non-initiating* subevent, I will propose a handful of ways that this can be done. Specifically, I'll propose three semantic conditions for identifying *Co-initiators*, and three semantic conditions for identifying *Non-initiators*. Two sets of these conditions will relate to the ways of conceptualizing events mentioned in Section 4.2.1 — namely, the causal and aspectual dimensions of events. The final set of conditions will involve the notion of abstract possession. First, I'll analyze what it means to be a *Co-initiator*, and then I'll analyze what it means to be a *Non-initiator*.

Let's begin with the *Co-initiator* conditions. Viewing events in terms of their causal subcomponents, we can recognize an *initiating* subevent as the part of an event associated with the event's cause. An event's *Initiator* instigates the event, while *Co-initiators* play a role in instigating the event but are incapable of operating independently of the *Initiator*. Because *Co-initiators* depend on the *Initiator* for their efficacy, the first condition for identifying *Co-initiators* is referred to as *dependent cause* (119).

⁸ Concerning the parentheses on the 'e' examples here, Dowty (1991: p. 572) states "...I am not sure to what extent they [the properties in parentheses] should be attributed to the discourse associations of subjecthood ... rather than proto-role definition."

⁹ There are some important differences between Dowty's (1991) analysis and mine to be aware of. First, Dowty's analysis is concerned exclusively with how verbal entailments determine argument selection, whereas my analysis takes into account any entailments related to event structure, whether they derive from the verb or from other sources of event structure modification (this is discussed in Chapter 5). Relatedly, Dowty's analysis is aimed at accounting for the way that argument selection is lexicalized, while my analysis aims to account both for case assignment that is driven by lexical entailments, and case assignment that arises productively via event structure modification (this is also discussed in Chapter 5).

(119) Co-initiator Condition 1:

dependent cause: The argument is a means by which an *Initiator* instigates an event

The most obvious examples of arguments which satisfy *dependent cause* are thematic Instruments. Two examples of arguments which satisfy this condition include the Instrument of a writing event (120) and the Instrument of a peeling event (121).

(120) katuḥ Tedsa gamala kadayu
kat =uḥ Ted =s=a gamala kat-,ayu
write =3MED Ted =INST=DET strange write-INST.PASS
'Ted's writing with a strange pen (INST).' (VF)

(121) qʷəcəmdaluḥ Abbyḥsa həməyu laḥʷa ʔayəndzisiḥ
qʷəs-(ḡ)əm-xʔid-la =uḥ Abby=ḥ =s=a
peel-face-BEC-CONT =3MED Abby=VIS =INST=DET
həmə-,ayu la =ḥ=w=a ʔayəndzis=ḥ
eat-INST.PASS PREP =ACC=3MED=DET orange=VIS
'Abby's peeling an orange (INST) with a fork.'¹⁰ (VF)

In (120), Ted is the *Initiator* of a writing event which is brought about through the use of a strange pen, its *Co-initiator*. In (121), Abby is the *Initiator* of a peeling-an-orange event, which is brought about with the help of a fork, the event's *Co-initiator*.

Turning now to the aspectual conceptualization of events, recall that an *initiating* subevent is associated with an event's onset, or initial bound. For an internal argument to be associated with an *initiating* subevent in this aspectual sense, it must delimit the initial bound of the event in some significant way. Because the *Initiator* also delimits the initial bound of the event, the internal arguments' presence with the *Initiator* at the event's onset is crucial. I refer to this aspectual criterion for being a *Co-initiator* as *initial bound* (122).

(122) Co-initiator Condition 2:

initial bound: The argument's existence or presence with the *Initiator* delimits the initial bound of the event

The clearest examples of arguments which satisfy *initial bound* are abstract Sources (note that purely locative Sources are introduced by the preposition *la*, not =s). Two examples of arguments which satisfy this condition are the internal argument of *bəw-* 'leave' ('what is left') (123), and the internal argument of *ʔiʔkila* 'heal' [also 'bless'] in (124).

¹⁰ This example involves a dummy use of the preposition *la*. In general, whenever both a *Co-initiator* and a *Non-initiator* are expressed in the same sentence, and the *Co-initiator* is mapped to object position, dummy *la* gets inserted to carry the *Non-initiator* argument at the right periphery. This pattern is briefly discussed in Appendix C.

(123) *bəwux̣ Mabeləx̣sa gukʷdzi*
 bew =u^{x̣} Mabel=^{x̣} =s=a gukʷdzi
 leave =3MED Mabel=VIS =INST=DET **Bighouse**
 ‘Mabel left **the Bighouse** (INST).’ (VF)

(124) *ʔiʔkilakʷənsa cancer*
 ʔiʔkila-kʷ =ən =s=a cancer
 heal/bless-PART =1 =INST=DET **cancer**
 ‘I’ve been healed from **cancer** (INST).’ (VF)

The verb *bəw-* ‘leave’ refers to a transition event (Greene 2013) in which an *Initiator* transitions from being ‘at’ something to being not ‘at’ that thing. The =*s*-marked argument in (123) defines the *initiating* subevent in the described leaving event because it is present with the *Initiator* prior to the transition.¹¹ In (124), the predicate is a passive participle formed from the verb *ʔiʔkila* ‘heal, bless’; in this example, the =*s*-marked argument, *cancer*, defines an *initiating* subevent because it is present with the *Initiator* prior to the transition into their being healed.

The third semantic condition for identifying *Co-initiators* involves the notion of abstract possession.¹² A third way for an internal argument to define an *initiating* subevent is for that argument to be possessed by the *Initiator* at the beginning of the event, on the assumption that the possessive relation is in some way relevant to the structure of the event and is not merely an incidental relation. I refer to this condition as *possession (initial bound)* (125).

(125) *Co-initiator Condition 3*

possession (initial bound): The argument is possessed by an *Initiator* at the initial bound of the event

Examples of arguments which satisfy *possession (initial bound)* include the argument of *ʔəx̣ənugʷad* ‘own, be endowed with’ (126) and the argument of *čəx̣qa* ‘be sick’ (127).

(126) *ʔəx̣ənugʷadida gənanəmesa kačənaq*
 ʔəx̣-nukʷ-ad =i=da gənanəmə =s=a kačənaq
 do-have-have =3DIST=OST child =INST=DET **spoon**
 ‘The child owns **a spoon** (INST).’ (VF)

(127) *ʔax̣ʔidaŋakʷəli Betti leʔ čəx̣qasida cancer*
 ʔax̣-xʔid-a-ŋakʷla =i Betty lə=a čəx̣qa
 bad-BEC-A-GRAD.ADV =3DIST Betty AUX=EMBED sick
 =s=i=da cancer
 =INST=3DIST=OST cancer
 ‘Betty died slowly when she was sick **with cancer** (INST).’ (VF)

¹¹ The =*s* marked argument in (123)-(124) is also not present with the *Initiator* after the transition, but this is not relevant to the question of whether or not the argument defines the *initiating* subevent.

¹² Readers familiar with Jackendoff (1990) and related work will notice that this third condition is related to the localist conceptualization of events mentioned in Section 4.2.1, in which events are seen in terms of the relative locations of their participants in space.

In (126), the spoon is physically possessed at the event's initial bound, while in (127), cancer can be described as something which is possessed abstractly.

With three semantic conditions in place for identifying *Co-initiators*, I'll now move on to defining the conditions for *Non-initiators*.

On the causal conceptualization of events, *non-initiating* subevents are associated with a result or effect that's been brought about through the causal application of force (Talmy 1988, Croft 1991, Harley & Copley 2015). Internal arguments of *non-initiating* subevents, on the causal view, undergo some sort of change as a result of their participation in the event. For this reason, the first *Non-initiator* condition is referred to as *change* (128).

(128) *Non-initiator* Condition 1:

change: The argument undergoes causally-induced change

Examples of arguments which satisfy *change* include the internal argument of *tus-* 'cut' (129) and the internal argument of *hił-* 'fix' (130).

(129) *tus*?idi Karen**ǰa ʔabəls**

<i>tus-x</i> ?id	=i	Karen	=ǰ=a	ʔabəls
cut-BEC	=3DIST	Karen	=ACC=DET	apple

'Karen is cutting/cut **the apple** (ACC).' (VF)

(130) *hił*?iduǰ Sara**ǰwa kiłəməǰ**

<i>hił-x</i> ?id	=uǰ	Sara	=ǰ=w=a	kiłəməǰ
fix-BEC	=3MED	Sara	=ACC=3MED=DET	net=VIS

'Sara is fixing/fixing **the net** (ACC).' (VF)

In (129), the apple undergoes a change in its physical integrity, while in (130), the net undergoes a change in its physical structure which have repercussions for its functionality.

Turning now to an aspectual view of event structures, *non-initiating* subevents are associated with the final bound of an event. Internal arguments associated with *non-initiating* subevents in this aspectual sense function to delimit the event's final bound by measuring out the event (Tenny 1994). I refer to this condition as *final bound* (131).

(131) *Non-initiator* Condition 2:

final bound: The argument's existence or presence delimits the final bound of the event

Arguments may satisfy *final bound* in a variety of ways, some of which were mentioned near the beginning of this section and relate specifically to the notion of an Incremental Theme (Dowty 1991). Thus, an argument can measure out an event in terms of its physical extent, such as the argument of a Creation Verb like *ǰən-* 'sew' (132); or it can measure out the event in terms of its location on a path, like the argument of *qasənd* 'walk across' (133); or it can measure out the event in terms of some inherent scalar property, like the argument of *ləmx"ʔid* 'dry' (134) (which also satisfies *change*).

(132) q̇ən-xʔidən x̃^wa k̃^wəmdzu^yu
 q̇ən-xʔid =ən =x̃=^wa k̃^wəmdzu^yu
 sew-BEC =1 =ACC=3MED=DET dress
 ‘I am sewing/sewed a [new] dress (ACC).’ (VF)

(133) qasəndi Vickiyə x̃a loʔs qaʔs leʔ la x̃a ʔəpsud
 qas-ʔ¹³-xʔid =i Vicky =x̃=a loʔs qa =is
 walk-ʔ-BEC =3DIST Vicky =ACC=DET tree PREP =3REFL.POSS
 la=iʔ la =x̃=a ʔəpsud
 go=NMZ PREP =ACC=DET other.side
 ‘Vicky is walking/walked across the tree (ACC) to get to the other side.’ (VF)

(134) ləmx^wʔidu x̃da λ̃isəla x̃ən səỹa
 ləmx^w-xʔid =u x̃=da λ̃is-la =x̃=ən səỹa
 dry-BEC =3MED=OST sun.shine-CONT =ACC=1POSS hair
 ‘The sun is drying/dried my hair (ACC).’

Another set of arguments which satisfy the condition *final bound* are Goals. While not obviously incremental like the internal arguments in (132)-(134), Goal arguments serve to define an event’s terminal point, thereby satisfying the condition in (131). In (135) for instance, the table defines the final bound of the event.

(135) x^wəsʔidən λa x̃^wa həm̃əʔdzu x̃^wasa kadayu
 x^wəs-xʔid =ən λa =x̃=^wa həm̃-_wdzu=x̃
 smack-BEC =1 CONN =ACC=3MED=DET eat-flat.surface=VIS
 =s=a kat-_wayu
 =MEANS=DET write-INST.PASS
 i. ‘I’m smacking the table (ACC) with a writing utensil’
 ii. ‘I’m smacking at/towards the table (ACC) with a writing utensil.’ (VF)

Note that even though the arguments in examples (132)-(135) function to define the final bound of these events (or in other words, these events’ culmination conditions), culmination is not actually entailed in these examples. I return to discuss this topic in Chapter 6.

The third *Non-initiator* condition involves the notion of possession. In particular, I propose that an internal arguments may define a *non-initiating* subevent by its coming into the possession of the *Initiator* by the event’s *final bound*. I refer to this condition as *possession (final bound)* (136).

(136) Non-initiator Condition 3:

possession (final bound): The argument comes to be possessed by the *Initiator* by the final bound of the event

¹³ The form of -xʔid here (-nd) indicates the presence of a lexical suffix on the root qas- ‘walk’, though no suffix is phonologically apparent.

Examples of arguments which satisfy *possession (final bound)* include the internal argument of *da-* ‘take in hand’ (137) and the internal argument of *loλ-* ‘obtain’ (138).

(137) *həlaχdzəmənsən ʔump qən leʔ daxʔiχa pət'eʔ laχa pədilas*
həlaχs-_{nmz}əm =ən =s=ən ʔump qa =ən la=iʔ
 send-NMZ =1 =O.POSS=1POSS dad PREP =1POSS go=NMZ
da-xʔid =χ=a pət'eʔ la =χ=a pədilas
 take.in.hand-BEC =ACC=DET **medicate**=NMZ PREP =ACC=DET drugstore
 ‘I was sent by my dad to go get **medicine** (ACC) at the drugstore.’ (VF)

(138) *loλən λaχi kadək^w*
loλ =ən λa =χ=i kat-_{kw}
 obtain =1 CONN =ACC=3DIST **write**-PART
 ‘I received a **letter** (ACC).’ (VF)

In (137) and (138), the internal argument comes to be with the *Initiator* only by the end of the event. It’s worth asking, then, whether *Non-initiator* Condition 3 is just a specific instance of *change*, where the specific kind of change involved is change in possession. A reason for keeping the conditions *possession (final bound)* and *change* as separate conditions is that undergoing a change in possession is not exactly the same thing as acquiring a possessor. Thus while a verb like *čo-* ‘give’ entails that its Theme undergoes a change from one possessor to another possessor in the course of an event, a verb like *loλ-* ‘obtain’ merely entails that its internal argument acquires a possessor in the course of an event. In any case, since my broader purpose here is to define a set of semantic conditions that aid in identifying event roles, no serious harm is done if these conditions overlap in certain instances.

In summary, I’ve proposed a set of semantic conditions for use in identifying *Co-initiators* and *Non-initiators*, which are provided in Table 4.1. These conditions constitute an analysis of what it means for an internal argument to participate in an *initiating* subevent (= be a *Co-initiator*) or participate in a *non-initiating* subevent (= be a *Non-initiator*). Given that these conditions are abstract, we expect the particular way that any given semantic argument will instantiate one or more of these conditions will vary in detail depending on the verb involved and the nature of the event being described.

<i>Co-initiator</i> Conditions	<i>Non-initiator</i> Conditions
i. <i>dependent cause</i> : The argument is a means by which an <i>Initiator</i> instigates the event	i. <i>change</i> : The argument undergoes some causally-induced change
ii. <i>initial bound</i> : The argument's existence or presence with an <i>Initiator</i> delimits the initial bound of the event	ii. <i>final bound</i> : The argument's existence or presence delimits the final bound of the event
iii. <i>possession (initial bound)</i> : The argument is possessed by an <i>Initiator</i> at the initial bound of the event	iii. <i>possession (final bound)</i> : The argument comes to be possessed by the <i>Initiator</i> by the final bound of the event

Table 4.1: Semantic conditions for identifying *Co-initiators* and *Non-initiators*

A question which naturally arises at this point is the question of how exactly the conditions in Table 4.1 are evaluated with respect to particular semantic arguments. For instance, it could be the case that some conditions are more heavily weighted than others, or that the order in which the conditions are evaluated is important. My overall sense is that the manner in which the conditions above are evaluated with respect to any given argument is underdetermined by the available language data. In the absence of clear evidence for any particular evaluation strategy, I suggest we think of the conditions for identifying *Initiators*, *Co-initiators*, and *Non-initiators* in a manner similar to how Dowty (1991) treats the properties associated with Proto-Agents and Proto-Patients: as conditions which combine to form two cluster-concepts, *Co-initiator* and *Non-initiator*, which serve in helping us make predictions about which case any given internal argument can appear in. These cluster-concepts serve to simplify what is essentially an infinite number of ways for an argument to instantiate the event roles of *Co-initiator* or *Non-initiator*, and thereby provide us with the means of predicting the distribution of object case.

Note that as things stand, the analysis I've outlined in this section can be used to predict when a particular verb-argument relation will be strict-instrumental (=s) or strict-accusative (=x̃). In particular, an argument which only qualifies as a *Co-initiator* must be strict-instrumental (=s), while an argument which only qualifies as a *Non-initiator* must be strict-accusative (=x̃). But what about arguments which meet conditions for being both *Co-initiators* and *Non-initiators*? This is the topic of the next section.

4.2.4 Accounting for case alternation

Up to this point I've been primarily concerned with accounting for when it is possible for an argument to appear in either instrumental or accusative case, and have been ignoring the question of what semantic conditions license instrumental-accusative case alternation. In fact, to account for case alternation, all we need to do is recognize that arguments which undergo case alternation are precisely those which simultaneously meet the semantic conditions for being both *Co-initiators* and *Non-initiators*. This is stated as the Alternation Condition in (139).

(139) **Alternation Condition:**

An argument which satisfies the conditions for being both a *Co-initiator* and a *Non-initiator* may appear in either instrumental (=s) or accusative (=x̃) case.

Since an argument satisfies the Alternation Condition by satisfying any one of the *Co-initiator* conditions together with any one of the *Non-initiator* conditions, different combinations of conditions should give rise to different kinds of alternating arguments, semantically-speaking. Some of the different ways *Co-initiator* and *Non-initiator* conditions can be satisfied by a single argument are exemplified below.

One way the Alternation Condition can be met is for an argument to simultaneously satisfy the *Co-initiator* criterion *dependent cause*, and the *Non-initiator* criterion *change*. This combination of conditions is satisfied by the internal argument of Manipulation/Change Verbs, such as *qəs-* ‘wind, coil’ (140).

(140) An alternating argument satisfies *dependent cause*, *change*

qəsida bəgʷanəme {sa, x̃a} dənəm
qəs =i=da bəgʷanəm {=s=a, =x̃=a} dənəm
coil/wind =3DIST=OST man {=INST=DET, =ACC=DET} rope
‘The man is coiling/winding rope {INST, ACC}.’ (VF, VF)

The rope in (140) satisfies *dependent cause* because it what the man is using to wind with. The rope in this event also satisfies *change*, because it undergoes a change in configuration, becoming wound. A similar sort of reasoning explains why alternation is possible with the internal arguments of Stir/Tow Verbs. I will return to discuss a related phenomenon, the licensing of case alternation in events where an argument is manually manipulated by an *Initiator*, in Chapter 5, Section 5.2.

Another way for the Alternation Condition to be met is for an argument to simultaneously satisfy the *Co-initiator* criterion *possession(initial bound)* and the *Non-initiator* criterion *change*. For instance, the internal argument of Transfer Verbs such as *čo-* ‘give’ (141) realize this possibility.

(141) An alternating argument satisfies *possession(initial bound)*, *change*

Context: Ted’s family had a potlatch. Ted went around and gave oranges to everyone in attendance.

ləm̩i Ted çicola {sa, x̃a} ʔiʔayəndzis laxa liləlqʷəlaʔe?
lə=ʔm =i çi~čo-la {=s=a, =x̃=a}
AUX=VER =3DIST REDUP~give-CONT {=INST=DET, =ACC=DET}
ʔi~ʔayəndzis la =x̃=a liləlqʷəlaʔe?
REDUP~orange PREP =ACC=DET tribes
‘Ted gave out oranges {INST, ACC} to the people [tribes].’ (VF)

The oranges in (141) satisfy *possession(initial bound)* because they begin the event in Ted’s possession, and satisfy *change* because they subsequently undergo a change in possession.

Similar reasoning explains why the Theme arguments of Bodily Process Verbs and Put Verbs undergo alternation. I will return to discuss the related phenomenon of case alternation with internal arguments of caused motion predicates in Chapter 5, Section 5.3.

Verbs of Communication name events which are somewhat abstract, which makes their internal structure less transparent to introspection. Nevertheless, I think its possible to construct a coherent line of reasoning about why these verbs' internal argument undergoes case alternation. In particular, I propose that the Message argument of Communication Verbs, such as like *ník-* 'say, tell' (142), undergoes case alternation because it simultaneously satisfies the *Co-initiator* condition *dependent cause*, and the *Non-initiator* criterion *final bound*. More specifically, this argument satisfies *dependent cause* because it serves as the Means by which the *Initiator* communicates content, and it satisfies *final bound* because it also serves as an Incremental Theme which measures out the speech event.¹⁴

(142) An alternating argument satisfies *dependent cause*, *final bound*

<i>ník</i> lā	{ s=us	, = ǎ=us }	waldəm=ǎ	ʔwa=ʔm=a	ʔulaq ^w a
say-IMP	{=INST=2POSS	, =ACC=2POSS}	word=VIS	SO=VER=A	quietly
'Say what you said {INST, ACC}, just quietly.' (VF, VF)					

The same line of reasoning can plausibly be extended to explain why the internal arguments of Think Verbs, as well as at least some Performance Verbs (e.g. *dənǎ-* 'sing'), undergo case alternation. I return to discuss case alternation with Performance Verbs in Chapter 5, Section 5.4.

Verbs of emotion are similarly abstract, and therefore somewhat difficult to characterize in event-structural terms. Nevertheless, a plausible story can be told explaining their internal arguments' alternation as well. For instance, I propose that the internal argument of Jealousy Verbs like *ǎiq-* 'be jealous' (143) satisfies the *Co-initiator* criterion *dependent cause* together with the *Non-initiator* condition *final bound*. More specifically, this argument satisfies *dependent cause* because it helps cause the emotional state of jealousy (though the more proximate cause is the *Initiator*'s own mental processes; this is why the internal argument is not itself expressed as the event's *Initiator*). Then this argument satisfies the criterion *final bound* because it serves metaphorically as a target or Goal out in the world towards which the emotion is directed.

¹⁴ Alternatively, we could extend the theory so that arguments denoting the Content of an utterance (or a thought) are a fourth variety of *Non-initiator*. The fact that Know Verbs take a strict-accusative argument suggests this might be necessary. I have left details surrounding the event structure of psych verbs in K^wak^wala mostly to future research.

(143) An alternating argument satisfies dependent cause, final bound

Context: Shelly admires long hair, but she's never been able to grow her own hair very long. Hope has really long hair, and Shelly is jealous of it.

ʃiːquːx Shelliːx {sa, ʃa} gəltə səyaʔs Hope
 ʃiːq =uːx Shelly=x {=s=a, =x=a} gəltə
 jealous =3MED Shelly=VIS {=INST=DET, =ACC=DET} long
 səy=aʔ =s Hope
 hair=INVIS =3POSS Hope
 ‘Shelly’s jealous of Hope’s long hair {INST, ACC}.’ (VF, JF)

A similar line of reasoning can be constructed to explain case alternation with Annoy Verbs¹⁵ and Anger Verbs.

Note that in all of the examples just shown, the Alternation Condition is met because the verb involved possesses entailments about a particular internal argument which enables it to satisfy both *Co-initiator* and *Non-initiator* conditions. With verb-argument relations of this sort, case alternation is possible *in every context* that the verb is used.¹⁶ This is significant, because it explains why speakers consistently report sentence pairs like the one shown in (F) to be synonymous: since these verbs entail that a single internal argument is both a *Co-initiator* and a *Non-initiator*, semantically-speaking it doesn’t matter which case the argument is in: verbal entailments are consistent with the argument appearing in either case. We predict then, on the basis of the Alternation Condition, that substituting one case for the other (in an alternating environment) should never alter the truth conditions of the sentence, and indeed, this prediction is borne out. This is perhaps most vividly illustrated by situations in which a speaker volunteers a sentence with one case marker, and then a few moments later repeats back the same sentence with the other case marker. This is exemplified in (144); here, the speaker is in the middle of volunteering a sentence when her attention is broken by forgetting a word. Then, when she resumes volunteering the sentence, she uses the other case marker. It’s unclear here whether the speaker notices that she’s used two different case markers.

- (144) **KS:** “Katie is hanging the hat on the door handle.”
Speaker: “Mhm [‘Yes’]. ǰixʷʔid... ǰixʷaʎəluduːx... Who’s doing it? Katie?”
KS: “Katie.”
Speaker: “Hm.”
KS: “ʔoʔəm həyulis.” [‘Always.’]
Speaker: “ǰixʷaʎəluduːx Katiyəːxʷa ʎətəml laxʷa... [(a)] I don’t even know what ‘door handle’ is. There is a name. kisən məlqʷəla.” [‘I don’t remember.’]
KS: “It could be any kind of knob. Or ‘hook’ even.”
Speaker: “Okay, okay, um... ǰixʷaʎəluduːx Katiyəːxʷa ʎətəml laxʷa... ǰixʷaʎəla... ǰixʷaʎəluduːx Katiyəːxʷa ʎətəml laxʷa ǰixʷaʎəʔas.” [(b)]

¹⁵ Cf. English, where Annoy Verbs allow more than one preposition to introduce their internal argument (e.g. *Shelly is annoyed by the dog* versus *Shelly is annoyed at the dog*).

¹⁶ Assuming, that is, that the Monotonicity Hypothesis holds, which states that components of lexical meaning cannot be deleted from semantic representations (Koontz-Garboden 2012).

- a. $\check{g}i\check{x}^w a \lambda \lambda u d u \check{x} K a t i y \check{x}^w a \lambda \check{a} t \check{a} m \check{l} l a \check{x}^w a \dots$
 $\check{g}i\check{x}^w - a \lambda - l a - x \check{?} i d = u \check{x} K a t i e = \check{x} = ^w = a$
hang-on-CONT-BEC =3MED Katie =ACC=3MED=DET
 $\lambda \check{a} t \check{a} m \check{l} l a = \check{x} = ^w = a \dots$
hat PREP =ACC=3MED=DET...
‘Katie is hanging **the hat** (ACC) on the... [unfinished].’ (VF)
- b. $\check{g}i\check{x}^w a \lambda \lambda u d u \check{x} K a t i y \check{x}^w s a \lambda \check{a} t \check{a} m \check{l} l a \check{x}^w a \check{g}i\check{x}^w a \lambda \check{?} a s$
 $\check{g}i\check{x}^w - a \lambda - l a - x \check{?} i d = u \check{x} K a t i e = \check{x} = s = a$
hang-on-CONT-BEC =3MED Katie=vis =INST=DET
 $\lambda \check{a} t \check{a} m \check{l} l a = \check{x} = ^w = a \check{g}i\check{x}^w - a \lambda - \check{?} a s$
hat PREP =ACC=3MED=DET hang-STAT-LOC.PASS
‘Katie is hanging **the hat** (INST) on the line (*Literally*: hanging-place).’ (VF)

Speakers will also often insist that there is no difference between sentences in which one case marker has been substituted for another, sometimes finding the sentences so similar that they hardly register the difference (145).¹⁷

(145) **KS:** “So let’s say Ted gave a bracelet to Hope. How would we say, ‘Hope put on her bracelet’...?”

Speaker: “*qax’canux’ Hope x’is qax’cane?* [(a)].”

KS: “...*’canux’, qax’, qax’... qax’canux’w...*”

Speaker: “...*Hope x’is qax’cane?*”

KS: “...*x’is qax’...*”

Speaker: “She just put it on, she put it on her wrist.”

KS: “Kay. *qax’canux’ Hope x’is...*”

Speaker: “...*qax’cane?* *ʔe?*”

KS: “*qax’cane?* Kay.”

- a. $q \check{a} x \check{c} a n u \check{x} H o p e \check{x} i s q \check{a} x \check{c} a n e \check{?}$
 $q \check{a} x \check{c} a n a = u \check{x} H o p e = \check{x} = i s q \check{a} x \check{c} a n = e \check{?}$
ring-hand =3MED Hope =ACC=3REFL.POSS ring-hand=NMZ
‘Hope put **her bracelet** (ACC) on her wrist.’ (VF)

KS: “And is it any different to say, *qax’canux’ HopeSIS qax’cane?* [(b)]...?”

Speaker: “Didn’t we say that?”

KS: “No, we said *qax’canux’ Hope x’is qax’cane?*”

Speaker: “Oh, yeah, it’s okay.”

KS: “Kay.”

Speaker: “That’s another variation, that’s fine.”

KS: “Mkay.”

Speaker: “No different.”

¹⁷ When speakers make comments like the ones in (145), I will typically re-read the sentences to the speaker with emphasis on the case markers; this is to make sure that the speaker’s reason for judging the sentences as sounding the same was not that I said the case markers too quietly or indistinctly.

- b. qəx̣c̣anụx̣ Hopesis qəx̣c̣ane?
 qəx̣-c̣ana =ụx̣ Hope =s=is qəx̣-c̣an=e?
 ring-hand =3MED Hope =INST=3REFL.POSS ring-hand=NMZ
 ‘Hope put **her bracelet** (INST) on her wrist.’ (JF)

The synonymy of sentence pairs like (144a)-(144b) and (145a)-(145b) makes sense in light of the fact that the Alternation Condition is met in these instances as a result of verbal entailments. In Chapter 5, I’ll show that case alternation can also be licensed by non-lexical semantic information, and thus that some internal arguments can undergo case alternation *only in particular contexts*. In Section 5.2, in particular, we’ll see that contexts do exist in which pairs of sentences involving alternating relations are not synonymous.

In summary, I’ve shown that we can account for instrumental-accusative case alternation through a simple extension of the theory developed in the previous sections. This extension is called the Alternation Condition, and the gist of it is that whenever an argument independently meets conditions for being marked with either instrumental or accusative case, it can in fact be marked with either case. Note that this finding has clear repercussions for how strict-instrumental and strict-accusative relations are understood. Namely, it predicts that arguments which satisfy one or more *Co-initiator* conditions, but don’t satisfy any *Non-initiator* conditions, should be strict-instrumental (=s). Likewise, arguments which satisfy one or more *Non-initiator* conditions, but don’t satisfy any *Co-initiator* conditions, should be strict-accusative (=x̣).

To see that these predictions about strict case relations hold, consider the sentences in (146)-(147) below (the ‘a’ sentences are repeated from Section 4.2.3). The instrumental object in (146a) is an Instrument and therefore satisfies the *Co-initiator* criterion *dependent cause*. It doesn’t, however, satisfy any of the *Non-initiator* conditions: it doesn’t undergo causally-induced change, it doesn’t define the final bound of the event, and it doesn’t come into the *Initiator*’s possession. The theory predicts it will be strict-instrumental, and it is; it cannot appear in accusative case (146b). Similarly, the accusative object in (147a) is a Patient, and satisfies the *Non-initiator* criterion *change*. However, it doesn’t satisfy any of the *Co-initiator* conditions: it doesn’t function as a means; it doesn’t define the initial bound of the event; and it doesn’t start out in the *Initiator*’s possession in a way that is relevant to event structure.¹⁸ Therefore, we predict it will be strict-accusative and it is, as shown by its inability to appear in instrumental case (147b).

- (146) a. ḳatụx̣ Tedsa gamalạ ḳadayu
 ḳat =ụx̣ Ted =s=a gamalạ ḳat-,ayu
 write =3MED Ted =INST=DET strange write-INST.PASS
 ‘Ted’s writing with **a strange pen** (INST).’ (VF)

¹⁸ In other words, the question of whether the apple belongs to the *Initiator* (or to someone else, or no one at all) at the moment she begins cutting it is irrelevant when it comes to ensuring that the event satisfies the description expressed in (147a).

- b. * $\acute{k}at\check{u}\check{x}$ $Ted\check{x}a$ $gamala$ $\acute{k}adayu$
 $\acute{k}at$ = $u\check{x}$ Ted = $\check{x}=a$ $gamala$ $\acute{k}at-$, ayu
 write =3MED Ted =ACC=DET **strange** **write**-INST.PASS
Literally: ‘Ted’s writing a strange pen (ACC).’ (JF)

Speaker: “No, it seems a little garbly.”

- (147) a. $\acute{t}us\check{?}idi$ $Karen\check{x}a$ $\check{?}ab\check{a}ls$
 $\acute{t}us-x\check{?}id$ = i $Karen$ = $\check{x}=a$ $\check{?}ab\check{a}ls$
 cut-BEC =3DIST $Karen$ =ACC=DET **apple**
 ‘Karen is cutting/cut **the apple** (ACC).’ (VF)

- b. # $\acute{t}us\check{?}idi$ $Karensa$ $\check{?}ab\check{a}ls$
 $\acute{t}us-x\check{?}id$ = i $Karen$ = $s=a$ $\check{?}ab\check{a}ls$
 cut-BEC =3DIST $Karen$ =INST=DET **apple**
Speaker: “You’re literally saying she ‘used the apple to cut with’.” (JF)

Strict relations like these arise whenever a semantic argument only qualifies as being a *Co-initiator* (= strict-instrumental) or *Non-initiator* (= strict-accusative). All of the grammatical examples presented in Section 4.2.3 qualify as strict relations in this sense.

I should note here that while the Alternation Condition can be used to predict when case alternation is possible, it does not predict which case will actually appear in any given utterance. The question of what factors determine case choice in alternating contexts is a fundamentally separate question from the question I pursue here, which is the question of where instrumental case and accusative case *can* appear. I’ll touch briefly upon the topic of case choice in alternating environments in Chapter 7, where I single it out as a topic for future research.

4.2.5 What Claim-I explains

At this time, it’s worth taking a moment to consider which phenomena can already be explained by the semantic theory in its current stage of development.

To begin with, the theory accounts for the puzzle laid out in Section 1.1. Namely, it provides us with a way of predicting and explaining, for any given internal argument, why that argument is expressible as an instrumental, accusative, or potentially alternating object. In particular, we now can say that strict-instrumental (=s) relations come about when an argument *only* meets the semantic conditions for being a *Co-initiator*; strict-accusative (=x̄) relations come about when an argument *only* meets the semantic conditions for being a *Non-initiator*; and alternating {=s, =x̄} relations come about whenever an argument meets the semantic conditions for being both a *Co-initiator* and a *Non-initiator* simultaneously.

The theory as it stands also explains the existence of regular and consistent correlations between lexical semantic verb classes and particular case frames, as reported in Section 3.2. If object case is semantically grounded in event structure, as I claim it is, then verbs with similar meanings should have similar case frames given that they describe similar kinds of events. The theory also makes sense of the array of particular correlations observed in Section 3.2 between particular case frames and particular thematic roles. Table 3.6, from Chapter 3, Section 3.5 is repeated here for convenience.

Verb-argument-case relation	Thematic roles
strict-accusative (=x̃)	Incremental Theme, Patient, Patient/Goal, Obtained Goods, Recipient, Object of Appraisal, Mental Content, Lost Mental Content, Stimulus
strict-instrumental (=s)	Instrument, Source of Emotion
alternating {=s, =x̃}	Locatum, Instrument/Patient, Theme, Expressed Theme, Message, Source/Target of Emotion, Thought

Table 3.6: Correlations between object case relations and thematic roles

Some of the thematic roles associated with strict-accusative (=x̃) relations in Table 3.6 are clearly aligned with the *Non-initiator* conditions *change* (Incremental Theme, Patient), *final bound* (Incremental Theme, Patient/Goal), and *possession(final bound)* (Recipient). The remaining thematic roles, being psychological in nature, are more difficult to account for, but at least a few of them (Object of Appraisal, Stimulus) plausibly qualify as satisfying *final bound*, while the remaining thematic roles (Mental Content, Lost Mental Content) might need to be distinguished as a new variety of *Non-initiator*. The strict-instrumental (=s) relations listed in Table 3.6 (Instrument, Source of Emotion) plausibly satisfy *dependent cause*. As for the alternating relations in Table 3.6, some of them satisfy *dependent cause/change* (Instrument/Patient), others satisfy *possession(initial bound)/change* (Locatum, Theme), and some of them plausibly satisfy *dependent cause/final bound* (Expressed Theme, Message, Source/Target of Emotion, Thought). While some of these associations may be more intuitively obvious than others, it should be apparent that the Initiating Subevent Theory is generally consistent with the observed case behaviour of many semantic verb classes.

The current theory also accounts for the data in Section 3.3, in which I illustrated correlations between the semantic perspective encoded by a verb, and case marking on its Theme. The generalization arrived at in that section is repeated below in (81).

(81) **Verb-Pair Generalization**

- i. Verb-argument relations in which the argument starts WITH the *Initiator* at the event's *initial bound* and ends up not WITH the *Initiator* at the event's *final bound* undergo case alternation {=s, =x̃};
- ii. Verb-argument relations in which the argument ends up WITH the *Initiator* at the event's *final bound* are strict-accusative (=x̃).

This generalization in (81) is easily accounted for by the Initiating Subevent Theory. The relations referenced in (81-i) satisfy the conditions *possession(initial bound)* and *change*, correctly predicting case alternation. The relations referenced in (81-ii) satisfy the condition *possession(final bound)*, correctly predicting they will be strict-accusative.

What the current theory cannot yet explain is the data in Section 3.4, where we looked at the interpretation of internal arguments in the vicinity of weak verbs. So far in this chapter, I've been concerned solely with the way object case patterns relative to contentful verbs. Since the meaning involved in generating such patterns can always be traced back to whichever verb is present, this has allowed me to ignore questions about the division of semantic labour within the overall system. Verbs like dummy $\lambda\check{x}$ -, on the other hand, don't contribute lexical entailments,

and so working with them forces us to confront the issue of how meaning is distributed between the lexicon and the grammar. The question of how semantic value is encoded in the system is the topic of the next section.

4.3 Claim-II: Interpretable and uninterpretable case

Up to this point, I've been developing a semantic theory which explains the distribution of K^{wakwala}'s two object cases in terms of subevental structure. What I have yet to do is provide an analysis of how these semantic distinctions are encoded in the grammar. *A priori* there are two possible analyses one could pursue here, which differ in terms of how semantic value is distributed between the lexicon and the grammar. On a *symmetric analysis*, both instrumental and accusative case add semantic value, while on an *asymmetric analysis* only one object case adds semantic value while the other functions as a meaningless default. These analytical options are summarized in (148).

- (148) i. *Symmetric analysis*: Instrumental case and accusative case are both interpretable
- ii. *Asymmetric analysis*: One case, either instrumental or accusative, is interpretable, while the other case is uninterpretable.¹⁹

To implement the symmetric analysis, all we would need to do is associate instrumental (=s) case with the semantic value of being a *Co-initiator*, and accusative (=x̃) case with the semantic value of being a *Non-initiator*. This analysis would be consistent with the empirical data we've explored so far (with one exception, to be explained shortly). To implement the asymmetric analysis, on the other hand, we would need to first find evidence for only one case being interpretable, and then we would need to assess whether this analysis makes any incorrect empirical predictions.

I will present arguments below for an asymmetric analysis, specifically one in which instrumental case is interpretable and accusative case is uninterpretable. The adoption of an asymmetrical analysis is the second claim of the Initiating Subevent Theory, and is stated in (149).

(149) ***Initiating Subevent Theory, Claim-II:***

Instrumental case (=s) is interpretable, while accusative case (=x̃) is uninterpretable.

In fact, we have already encountered the evidence which will turn out to favour the asymmetric analysis in (148) — specifically, data involving the dummy root *ʔəx̃-* from Section 3.4, which are repeated in (150)-(154) for convenience. These data illustrate the interpretive possibilities for monotransitive predicates formed with dummy *ʔəx̃-*, which are summarized in Table 4.2.

¹⁹ Recall that I will eventually propose is interpreted by the grammar is not instrumental case itself, but the syntactic head which is responsible for instrumental case assignment — a proposal which I discuss in Chapter 6, Section 6.4.2. To simplify exposition however, I simply refer to instrumental case as an 'interpretable' case and accusative case as an 'uninterpretable' case.

Case frame	Possible interpretations
$\text{ʔə}\check{\text{x}}\text{-} + \text{INST}$	‘use <u>something</u> ’, ‘wear <u>something</u> ’
$\text{ʔə}\check{\text{x}}\text{-} + \text{ACC}$	‘use <u>something</u> ’, ‘wear <u>something</u> ’, ‘take <u>something</u> ’, ‘obtain <u>something</u> ’, ‘do to <u>something</u> ’

Table 4.2: Possible interpretations of monotransitive bare $\text{ʔə}\check{\text{x}}\text{-}$ predicates

(150) USE (something): =s (VF), = $\check{\text{x}}$ (JF)

Context: Everybody knew that Eddie wanted an axe for Christmas, and he got two — one red, and one black. He’s outside chopping wood, and I ask you which one he’s using. You tell me:

- a. $\text{ʔə}\check{\text{x}}\text{əlo}\check{\text{x}}$ Eddiyə $\check{\text{x}}$ sis $\check{\text{ʔ}}$ a $\check{\text{x}}^{\text{w}}$ stu subayu
 $\text{ʔə}\check{\text{x}}\text{-la}$ =o $\check{\text{x}}$ Eddie= $\check{\text{x}}$ =s=is $\check{\text{ʔ}}$ a $\check{\text{x}}^{\text{w}}$ stu subayu
DO-CONT =3MED Eddie=VIS =INST=3REFL.POSS red.colour axe
‘Eddie’s using **his red axe (INST).**’ (VF)
- b. $\text{ʔə}\check{\text{x}}\text{əlo}\check{\text{x}}$ Eddiyə $\check{\text{x}}$ is $\check{\text{ʔ}}$ a $\check{\text{x}}^{\text{w}}$ stu subayu
 $\text{ʔə}\check{\text{x}}\text{-la}$ =o $\check{\text{x}}$ Eddie= $\check{\text{x}}$ = $\check{\text{x}}$ =is $\check{\text{ʔ}}$ a $\check{\text{x}}^{\text{w}}$ stu subayu
DO-CONT =3MED Eddie=VIS =ACC=3REFL.POSS red.colour axe
‘Eddie’s using **his red axe (ACC).**’ (JF)

(151) WEAR (something): =s (VF), = $\check{\text{x}}$ (JF)

Context: It’s picture day, so Monica got dressed up nice for school.

- a. $\text{ʔə}\check{\text{x}}\text{əlo}\check{\text{x}}$ Monica $\check{\text{x}}$ sa dzastu $\check{\text{q}}^{\text{w}}$ əmdzu $\check{\text{y}}$ u
 $\text{ʔə}\check{\text{x}}\text{-la}$ =o $\check{\text{x}}$ Monica= $\check{\text{x}}$ =s=a dzastu $\check{\text{q}}^{\text{w}}$ əmdzu $\check{\text{y}}$ u
DO-CONT =3MED Monica=ACC =INST=DET blue.colour dress
‘Monica’s wearing **a blue dress (INST).**’ (VF)
- b. $\text{ʔə}\check{\text{x}}\text{əlo}\check{\text{x}}$ Monica $\check{\text{x}}$ a dzastu $\check{\text{q}}^{\text{w}}$ əmdzu $\check{\text{y}}$ u
 $\text{ʔə}\check{\text{x}}\text{-la}$ =o $\check{\text{x}}$ Monica= $\check{\text{x}}$ = $\check{\text{x}}$ =a dzastu $\check{\text{q}}^{\text{w}}$ əmdzu $\check{\text{y}}$ u
DO-CONT =3MED Monica=ACC =ACC=DET blue.colour dress
‘Monica’s wearing **a blue dress (ACC).**’ (JF)

(152) TAKE (something): # =s (JF), =ǰ (VF)

Context: Shelly has a throat infection and needs to take medicine every morning.

- a. # ʔǰǰidi Shellyyǰsis ʔǰteʔ ǰǰalaxdeʔ
 ʔǰǰ-xʔid =i Shelly =s=is ʔǰteʔ
 DO-BEC =3DIST Shelly =INST=3REFL.POSS medicate=NMZ
 ǰǰala-xd=eʔ
 morning-R.PST=INVIS

Intended: ‘Shelly took her medicine (INST) this morning.’ (JF)

- b. ʔǰǰidi Shellyyǰǰis ʔǰteʔ ǰǰalaxdeʔ
 ʔǰǰ-xʔid =i Shelly =ǰ=is ʔǰteʔ
 DO-BEC =3DIST Shelly =ACC=3REFL.POSS medicate=NMZ
 ǰǰala-xd=eʔ
 morning-R.PST=INVIS

‘Shelly took her medicine (ACC) this morning.’ (VF)

(153) OBTAIN (something): # =s (JF), =ǰ (VF)

Context: Eddie sees a box by the side of the road, labelled “free stuff”. He goes over and finds some new pants!

- a. # ʔǰǰidi Eddiyǰsa dzǰmba
 ʔǰǰ-xʔid =i Eddie =s=a dzǰmba
 DO-BEC =3DIST Eddie =INST=DET jeans
Intended: ‘Eddie got a pair of jeans (INST).’ (JF)

- b. ʔǰǰidi Eddiyǰǰa dzǰmba
 ʔǰǰ-xʔid =i Eddie =ǰ=a dzǰmba
 DO-BEC =3DIST Eddie =ACC=DET jeans
‘Eddie got a pair of jeans (ACC).’ (VF)

(154) DO-TO (something): # =s (JF), =ǰ (VF)

Context: I planted a bunch of flowers by the road, and they’re just starting to bloom. One day I look out my window and I see a strange man standing by my flowers and picking at them. I try to see what he’s doing to them, but I can’t tell.

- a. # ʔǰǰidoǰda bǰgʷanǰmasǰn ʔǰlawas
 ʔǰǰ-xʔid =oǰ=da bǰgʷanǰm =s=ǰn ʔǰlawas
 DO-BEC =3MED=OST man =INST=1POSS flower
Intended: ‘The man is doing something to my flowers (INST).’ (JF)

- b. $\lambda\check{x}\lambda idoxda$ $b\acute{e}g^{wan\acute{e}m\acute{x}\acute{n}}$ $p\acute{o}lawas$
 $\lambda\check{x}-x\lambda id$ $=o\acute{x}=da$ $b\acute{e}g^{wan\acute{e}m}$ $=\acute{x}=\acute{n}$ $p\acute{o}lawas$
DO-BEC $=3MED=OST$ man $=ACC=1POSS$ **flower**
‘The man is doing something to **my flowers** (ACC).’ (VF)

Recall that since $\lambda\check{x}$ - contributes no entailments of its own, any constraints on the interpretation of bare $\lambda\check{x}$ - predicates we see must be added by object case, given that case is the only thing which differentiates the sentence pairs in (150)-(154). Table 4.2 shows that the range of possible interpretations of bare $\lambda\check{x}$ - predicates containing instrumental (=s) objects is a subset of the range of possible interpretations of bare $\lambda\check{x}$ - predicates containing accusative (=x) objects. To assess the significance of this pattern, I will first walk through how it can be accounted for by an asymmetric analysis. Following this, I’ll explain why a symmetric analysis runs into problems accounting for the data.

First, let’s consider how an asymmetric analysis explains the pattern in Table 4.2. On an asymmetric analysis, the reason that bare $\lambda\check{x}$ - predicates with instrumental objects have only two possible interpretations is that these are the only interpretations within the set of five that are consistent with the semantic value added by instrumental (=s) case. In other words, these are the only possible interpretations of bare $\lambda\check{x}$ - predicates out of the five listed in Table 4.2 in which the internal argument qualifies as a *Co-initiator*. On the other hand, the reason that bare $\lambda\check{x}$ - predicates with accusative objects (=x) can receive any interpretation out of the five listed in Table 4.2 is that accusative case (=x) doesn’t add any semantic value. In other words, bare $\lambda\check{x}$ - predicates are semantically restricted when an instrumental object is present, while $\lambda\check{x}$ - predicates are not semantically restricted at all when an accusative object is present. In short, the subset pattern in Table 4.2 is exactly what we’d expect on an analysis in which semantic value is asymmetrically distributed and verbal entailments are factored out.

Now, let’s consider how a symmetric analysis fares. To begin with, the symmetric analysis is able to account for much of the data in Table 4.2. Namely, the fact that $\lambda\check{x}$ - predicates with the interpretations ‘take (something)’, ‘obtain (something)’, and ‘do-to (something)’ require an accusative object is straightforward on a symmetric analysis, since the internal argument of these predicates is a clear *Non-initiator*. The specific problem that a symmetric analysis faces is in explaining why the internal argument in ‘using’ events and ‘wearing’ events can appear in accusative case. In order to understand the problem in some depth, I’ll walk through how it arises with respect to ‘using’ and ‘wearing’ interpretations separately.

Let’s start with ‘using’ events. The internal argument in a ‘using’ event satisfies (at least) the condition *dependent cause*, making it an obvious *Co-initiator*. However, its status as a *Non-initiator* is far less clear. Does something that’s ‘used’ undergo causally-induced change? Not obviously. At best, it might undergo non-scalar change in tandem with the *Initiator*, but its not obvious why this should qualify as causally-induced change.²⁰ Does the internal argument in a ‘using’ event define the event’s final bound, by measuring out the event? No.²¹ Does the internal argument in a ‘using’ event come into the possession of the *Initiator* by an event’s final bound? No. In short, the internal argument in a ‘using’ event doesn’t seem to qualify as a

²⁰ For example: if the *Initiator* is wielding a hammer, the *Initiator*’s arm and the hammer undergo motion in tandem. On the differences between scalar and non-scalar change see, for instance, Rappaport Hovav & Levin 2010: p. 28-33.

²¹ In English, the internal argument of ‘use up’ does meet this criteria. However, I have not observed any $\lambda\check{x}$ - predicate with this interpretation.

Non-initiator, and yet on the symmetric analysis, an argument should only take accusative case if it *does* qualify as a *Non-initiator*. This means that the data in (150) are problematic for the symmetric analysis.

The same line of reasoning can be applied in relation to ‘wearing’ events expressed with *ʔəǎ-*. In an event in which someone ‘wears a dress’, the fact that the dress is ‘with’ the *Initiator* makes this argument satisfy at least one of the *Co-initiator* Conditions *initial bound* or *possession (initial bound)*, thereby qualifying it as a *Co-initiator*. Again however, the status of this argument as a *Non-initiator* is far less clear. Does something that’s being worn undergo causally-induced change? No. Does it define the event’s final bound? No. Does it come into the possession of the *Initiator* by the event’s final bound? No.²² Once again, we have a situation where an internal argument does not qualify as a *Non-initiator*, and yet it is able to appear in accusative case (B). On the symmetric analysis where accusative adds semantic value, all accusative-marked arguments are necessarily *Non-initiators*. The data in (151) therefore pose a problem for the symmetric analysis.

The data in (150)-(151) therefore generate problems for a symmetric analysis. On the other hand, they are easily explained on an asymmetric analysis, since on the asymmetric analysis accusative case does not add any semantic value to these predicates. On this basis, I conclude that we should adopt an asymmetric analysis. In addition, it’s worth pointing out that the asymmetric analysis is favourable from the perspective of Occam’s Razor, since a two-object case system with one interpretable case is simpler than a two-object system with two interpretable cases. A third point in the asymmetrical analysis’ favour is the fact that there exists at least one other language with a two-object system that is similarly asymmetrical — namely, Finnish. In Chapter 6 I will return to this topic and argue that the object case system in Kwakwaka is in fact the mirror opposite of the one in Finnish.

In anticipation of the syntactic analysis of instrumental case assignment I will propose in Chapter 6, Section 6.4.2, I will simply assume the existence of a syntactic head here — call it $F_{[inst]}$ — which is responsible for assigning instrumental case, along with a semantic interpretation, to the argument appearing in its specifier. The semantics associated with $F_{[inst]}$ is stated in (155).²³

$$(155) \llbracket F_{[inst]} \rrbracket = \lambda R_{\langle e, vt \rangle} . \lambda x_e . \lambda e_v . R(x)(e) = 1 \ \& \ x \text{ is } Co\text{-initiator of } e$$

This $F_{[inst]}$ head denotes a function which takes a relation between individuals and events, an individual, and an event, and relates the individual to the event in such a way that it is interpreted as the event’s *Co-initiator*. The *Co-initiator* predicate in (155) is analyzed in (156), where it is shown to relate an individual to an event so that the individual is interpreted as a participant in the event’s *initiating* subevent in one of the senses discussed in Section 4.2.3.

$$(156) \ \lambda x_e . \lambda e_v . x \text{ is } Co\text{-initiator of } e \\ = (x \text{ is a dependent cause of } e) \vee (x \text{ defines the initial bound of } e) \vee (x \text{ is in the possession of an } Initiator \text{ at the initial bound of } e)$$

²² Note that the way I’ve defined *possession (final bound)* is crucial here. In particular, I’ve assumed that to satisfy this semantic condition, an argument cannot have been possessed at the initial bound of the event.

²³ The compositional semantic analysis in (155) is illustrated with respect to an example in Chapter 6, Section 6.4.2.

Note that the specific interpretation any given *Co-initiator* receives relative to a specific event will be determined, ultimately, by the content contributed by the verb together with information provided in context and real world knowledge.

Accusative case, in contrast to instrumental case, is not associated with a semantic interpretation. This means that the concept of *Non-initiator*-hood, while still a useful cluster concept for predicting the distribution of object case, is not a grammaticalized notion in K^{wak}wala.

4.4 The role of syntactic features

The assumption that accusative case is uninterpretable generates a problem for our theory in its current stage of development. Specifically, the theory now runs into problems accounting for the coexistence of strict-instrumental (=s) and alternating {=s, =x̃} relations in the grammar.

To understand the problem, consider the verb *bəw-* ‘leave’, which is an example of a verb in K^{wak}wala that takes a strict-instrumental argument (157). Instrumental case is semantically interpretable in our system, though with verbs like *bəw-*, the semantic value of instrumental case is redundant with respect to lexical entailments of the verb. Since there is no real semantic necessity for instrumental case in sentences like (157a), and since accusative case doesn’t add semantic value, we might predict accusative case should be possible in these environments as well. More specifically, in a system where accusative case is uninterpretable, we need some way of explaining why sentences like (157b) are ruled out.

(157) *Context: Mabel left her husband.*

- a. *bəwux̃sis ləwənəm*
bəw =uḥ =s=is ləwənəm
 leave =3MED =INST=3REFL.POSS husband
 ‘She left her husband (INST).’ (VF)
- b. * *bəwux̃xis ləwənəm*
bəw =uḥ =x̃=is ləwənəm
 leave =3MED =ACC=3REFL.POSS husband
 ‘She left her husband (ACC).’ (JF)

Speaker: “*bəwux̃ x̃is...? k̃i.*” [‘No.’]

The assumption that accusative case is meaningless seems to undermine the potential for a purely semantic explanation of strict-instrumental (=s) relations. In a system where accusative case is uninterpretable, how do we explain why accusative case isn’t possible in examples like (157b)?

A possible semantic solution to this problem is to appeal to a principle like Maximize Interpretability (Kratzer 2004). This principle states that whenever the semantic conditions are met for using an interpretable case, an interpretable case must be used; elsewhere, an uninterpretable case may be used. Since the internal argument of a verb like *bəw-* will always satisfy the semantic conditions for being marked with instrumental case, this principle would succeed in guaranteeing that this argument is strict-instrumental. Assuming Maximize

Interpretability would therefore solve the problem as outlined, while also maintaining a purely semantic theory of object case distribution.

However, adopting Maximize Interpretability would also generate a new, very serious, problem for the theory as it stands. This is because whenever the Alternation Condition is met, Maximize Interpretability would force the grammar to choose instrumental case over accusative. This, in turn, would prevent accusative from ever being realized in environments where the Alternation Condition is met, making case alternation impossible in examples like (158), with *ǵiǵ^w-* ‘hang’. This prediction goes against the data in (158b), as well as many similar data presented elsewhere.

- (158) a. *ǵiǵ^wʔidi Mabelesa nǵx^wǵneʔ laǵa ǵiǵ^wdǵna*
ǵiǵ^w-xʔid =i Mabel =s=a nǵx^w-(k)ǵn=eʔ
 hang-BEC =3DIST Mabel =INST=DET **wrap-body**=NMZ
la =ǵ=a ǵiǵ^wdǵna
 PREP =ACC=DET clothesline
 ‘Mabel hung up **a blanket** (INST) on a clothesline.’ (VF)
- b. *ǵiǵ^wʔidi Mabeleǵa nǵx^wǵneʔ laǵa ǵiǵ^wdǵna*
ǵiǵ^w-xʔid =i Mabel =ǵ=a nǵx^w-(k)ǵn=eʔ
 hang-BEC =3DIST Mabel =ACC=DET **wrap-body**=NMZ
la =ǵ=a ǵiǵ^wdǵna
 PREP =ACC=DET clothesline
 ‘Mabel hung up **a blanket** (ACC) on a clothesline.’ (JF)

In short, if we adopt Maximize Interpretability, the data in (157b) is successfully ruled out, but the possibility of (158b) now requires explanation.

In fact, assuming Maximize Interpretability runs into another empirical difficulty, namely a difficulty in trying to account for the data involving bare *ʔǵǵ-* predicates discussed in Sections 3.4 and 4.3. Recall that in monotransitive bare *ʔǵǵ-* predicates, *ʔǵǵ-* contributes no entailments of its own, so any semantic constraints on the interpretation of the predicate must be added by case. The problem here is that either object case can appear in *ʔǵǵ-* predicates interpreted as ‘using’ and ‘wearing’ events; yet since only instrumental case is interpretable, Maximize Interpretability predicts that only instrumental case should be possible in these environments. Once again, adopting Maximize Interpretability makes a prediction which goes against the empirical evidence.

Since Maximize Interpretability makes the wrong empirical predictions, it must be rejected. The original problem therefore remains, which is how to account for the ungrammaticality of (157b) in a system where accusative case is uninterpretable.

In order to guarantee the existence of strict-instrumental (=s) relations, what is required is that certain verbs in *K^wak^wala* — namely, those verbs which take strict-instrumental objects — possess a syntactic feature which forces these verbs to take only instrumental objects. To implement this syntactic analysis, I will assume that verbs with strict-instrumental case relations like *bǵw-* ‘leave’ possess a syntactic feature, call it [inst], which forces the verb to appear in the complement of $F_{[inst]}$ whenever its internal argument is expressed.²⁴ Note that verbs which take

²⁴ Alternatively, this syntactic analysis could be implemented by assuming that verbs like *bǵw-* ‘leave’ assign lexical instrumental case to the internal argument in their complement. On this alternative analysis, the presence of $F_{[inst]}$

alternating objects, like *ǵiǵw-* ‘hang’, must lack [inst] features, since their presence would prevent case alternation from ever occurring. In conclusion, a semantic theory is not sufficient, on its own, to account for the grammatical distribution of object case in K^wak^wala. In order to enable strict-instrumental relations to exist in a system where accusative case is meaningless, some syntactic stipulation is necessary.

Note that despite of the need for syntactic features to account for strict-instrumental case relations, it’s still true that the distribution of object case in K^wak^wala can be described in broadly semantic terms. The generalization still holds, for instance, that arguments which satisfy one or more conditions for being *Co-initiators* are realized as instrumental objects, that arguments which satisfy one or more conditions for being *Non-initiators* are realized as accusative objects, and that arguments which realize both event roles undergo case alternation. Even for a child acquiring K^wak^wala, nothing precludes the acquisition of [inst] features on verbs with strict-instrumental relations from being a semantically-driven process. Verbs with strict-instrumental arguments describe events which are inherently co-initiated; a child acquiring K^wak^wala encodes this semantic generalization in terms of a formal property in the syntax, but this does not, thereby, undermine the semantic generalization that instrumental case marks *Co-initiators*.²⁵ In conclusion, while the K^wak^wala’s object case system can be described generally in terms of semantic notions, the grammatical implementation of this system requires more than just these semantic notions. Syntactic case features play a role as well.²⁶

4.5 Conclusion

To conclude this chapter, I’ll begin by providing a concise outline of the Initiating Subevent Theory to serve as a reference (Section 4.5.1). Following this, I’ll take a moment to reflect on the evolution of ideas surrounding K^wak^wala’s object cases and how advances in linguistic theory have made the development of a semantic theory of case in this language possible.

4.5.1 Chapter summary

The aim of this chapter has been to develop a semantic theory of object case in K^wak^wala which accounts for the distribution of strict-instrumental, strict-accusative, and alternating relations in the language, and also explains the data we’ve seen in previous chapters. With this goal in mind, I developed a theory called the Initiating Subevent Theory, which centres on two claims.

The first claim of the theory concerns about the grounding of object case distinctions in subevental structure. Specifically, instrumental case marks internal arguments which participate in *initiating* subevents (*Co-initiators*), while accusative case marks internal arguments which

with verbs like *bəw-* ‘leave’ would be optional, since the meaning it adds would be redundant. This analysis is empirically equivalent to the one I adopt. I favour the other analysis only because it is more similar to Kratzer’s (2004) analysis of accusative case in Finnish, which my syntactic analysis of instrumental case in K^wak^wala is modelled after.

²⁵ In Chapter 6, I will argue that K^wak^wala and Finnish possess object case systems which are semantic mirror images of each other. It is worth pointing out that the existence of inherently co-initiated verbs in K^wak^wala (which obligatorily take instrumental objects) has a direct analogue in Finnish: namely, the existence of inherently telic verbs which obligatorily take accusative objects.

²⁶ In Chapter 7, I will present some preliminary evidence that pragmatics also plays a role, specifically in terms of case choice in alternating environments.

participate in *non-initiating* subevents (*Non-initiators*). These correspondences are summarized in (159).

(159) Event role	Semantic description	Syntactic realization
<i>Co-initiator</i>	participant in <i>initiating</i> subevent	= <i>s</i> object
<i>Non-initiator</i>	participant in <i>non-initiating</i> subevent	= <i>ǰ</i> object

To participate in a subevent, its not enough for an argument to merely exist in that subevent; instead, it must define the subevent in some significant way. To clarify what this means, I proposed an analysis of what it means to participate a subevent by outlining three semantic conditions which can be used to determine whether an internal argument is a *Co-initiator* or a *Non-initiator*. These semantic conditions were inspired by causal and aspectual frameworks for conceptualizing event structure, and also utilized the notion of possession; they are summarized in Table 4.1, repeated from Section 4.2.3.

<i>Co-initiator</i> Conditions	<i>Non-initiator</i> Conditions
i. <i>dependent cause</i> : The argument is a means by which an <i>Initiator</i> instigates an event	i. <i>change</i> : The argument undergoes some causally-induced change
ii. <i>initial bound</i> : The argument's existence or presence with an <i>Initiator</i> delimits the initial bound of the event	ii. <i>final bound</i> : The argument's existence or presence delimits the final bound of the event
iii. <i>possession (initial bound)</i> : The argument is possessed by an <i>Initiator</i> at the initial bound of the event	iii. <i>possession (final bound)</i> : The argument comes to be possessed by the <i>Initiator</i> at the final bound of the event

Table 4.1: Semantic conditions for identifying *Co-initiators* and *Non-initiators*

Arguments which undergo case alternation turn out to be precisely those arguments which simultaneously meet the semantic conditions for being both a *Co-initiator* and a *Non-initiator*. This was stated as the Alternation Condition in (139).

(139) ***Alternation Condition***:

An argument which satisfies the conditions for being both a *Co-initiator* and a *Non-initiator* may appear in either instrumental (=s) or accusative (=ǰ) case.

Having established the semantic grounding of object case distinctions, I then moved on to consider the second claim of the Initiating Subevent Theory, concerning the distribution of semantic value within the system. On the basis of data involving monotransitive bare *ǰǰ*-predicates, I argued that semantic value is distributed asymmetrically. While instrumental case is interpretable, accusative case is an uninterpretable default. The semantic value of instrumental case is interpreted on the head $F_{[inst]}$ as shown in (155); the specific semantic value of *Co-initiator*-hood is presented in (156).

(155) $[[F_{[inst]}]] = \lambda R_{\langle e, vt \rangle} \cdot \lambda x_e \cdot \lambda e_v \cdot R(x)(e) = 1 \ \& \ x \text{ is } Co\text{-initiator of } e$

(156) $\lambda x_e \cdot \lambda e_v \cdot x \text{ is } Co\text{-initiator of } e$
 $= (x \text{ is a dependent cause of } e) \vee (x \text{ defines the initial bound of } e) \vee (x \text{ is in the possession of an } Initiator \text{ at the initial bound of } e)$

Finally, I discussed how the assumption that accusative case is meaningless generates a problem for a purely semantic theory which is that it cannot, on its own, guarantee the existence of strict-instrumental relations. I proposed a syntactic solution to this problem, in which strict-instrumental relations are enforced by the presence of syntactic features on verbs with strict-instrumental relations. This results in a system where strict-instrumental, strict-accusative, and alternating relations can coexist, and in which syntactic stipulation plays a small role in addition to semantics.

4.5.2 Revisiting Boas' Puzzle

With a semantic theory of K^{wak}wala object case in place, it's worth taking a moment to revisit the history of scholarship on this language to reflect on how we got here. Recall that in Chapter 1, Section 1.3.1, I showed that Boas (1911, 1947) was puzzled by the distribution of instrumental case. He observed that while =s clearly functioned to mark semantic Instruments, it also marked many arguments that were more 'object-like', in the canonical sense. To Boas, this wider-than-expected distribution of instrumental case signalled an underlying difference in the way events are conceptualized. In particular, he imagined K^{wak}wala speakers to have a much broader conception of what an Instrument is than would seem obvious to a speaker of a Germanic language. For this reason, what counted as an Instrument to the K^{wak}wala speaker remained an impenetrable puzzle for Boas. This puzzle was subsequently inherited by scholars who read his works, and has remained unsolved until the present day. Now however, with a coherent semantic theory of object case in place, we're well positioned to reflect on why object case was puzzling in the first place and why the evolution of ideas on this topic matters.

There seem to be two primary reasons why the semantic factors underlying object case distribution in K^{wak}wala were obscure for Boas, and have only come to light in the present day: one reason is empirical and the other is theoretical. The empirical reason was mentioned earlier (in Chapter 1, Section 1.3.2), and that is that instrumental-accusative case alternation appears to have been far less obvious in Boas' era (or at least, that is what his grammars in 1900, 1911, 1947 would lead us to believe). This contrasts with what we see in the modern language, where case alternation is common and constraints on case alternation provide some of the most compelling clues available to us regarding the meaning of object case. Boas seems, therefore, to have lacked an important source of evidence for the semantic basis of object case distinctions. In light of this, it's worth acknowledging that Boas' intuition about certain =s objects semantically resembling =x̃ objects (e.g. Boas 1947: p. 285) was clearly ahead of its time, since in the modern language, it is these same =s objects which can be alternatively expressed as =x̃ objects. However, the fact that Boas didn't discuss case alternation in his grammars (1900, 1911, 1947) made this phenomenon easy to miss in subsequent K^{wak}wala research. The empirical discovery of case alternation, brought to light in the present work, was then a necessary precursor for the development of a semantic theory of object case.

The second reason that the semantic basis of object case distinctions has only recently come to light is that the conceptual apparatus for making sense of the difference between *Co-initiators* and *Non-initiators* was only recently developed; as such, the semantic distinctions relevant for distinguishing =s and =x̃ objects would not have been easy to conceptualize for researchers working in earlier theoretical frameworks. In particular, Boas and his contemporaries (in the late 19th, early 20th century) didn't have at their disposal concepts like that of an event, event structure, subevent, or event role. The idea that events can be divided into parts, and that these parts are relevant for describing linguistic generalizations, doesn't appear in the literature until decades after Boas' death (in 1942). It's worth taking a moment to appreciate, then, how recent developments in linguistic theory have made it possible to state a coherent semantic theory of object case in K^wak^wala.

This observation is important because it provides a clear example of how advances in linguistic theory can enrich our efforts to document languages. By providing the concepts needed to make observations about object case precise, linguistic theory has played an essential role in making K^wak^wala's object case system something that can be comprehended, argued over, written about, and ultimately taught to the next generation of speakers.

5

Case Alternation and Event Structure Modification

5.1 Introduction

In most of the data we've come across in previous chapters, the semantic contribution of object case has been redundant with respect to entailments contributed by the verb. In other words, internal arguments which qualify as *Co-initiators* on the basis of verbal entailments are marked with instrumental (=s) case, while internal arguments which qualify as *Non-initiators* on the basis of verbal entailments are marked with accusative (=x̃) case. With data of this sort, we can't actually tell whether object case possibilities are determined by event structure, or by the meaning of the verbs involved. Thus while this data is *consistent* with an event-structural theory, it's also consistent with a theory in which object case possibilities are determined by verb meaning alone.

To establish an association between object case possibilities and event structure, we need to look at data which shows that case marking is constrained by event structure, and not by the content of particular verbs. One example of such evidence was already discussed in Sections 3.4 and 4.3; here I showed that in transitive predicates headed by weak verbs, case marking on objects is tied to the difference between *initiating* and *non-initiating* subevents, as predicted by an event-structural theory.

In this chapter, I'll provide additional evidence to support the claim that object case distinctions are determined by distinctions in event structure, rather than by verb meaning alone. In particular, I'll show that when event descriptions are modified, the object case-marking possibilities relative to these events shift accordingly. Crucially, we'll see that it is possible, via event structure modification, to license object case in ways that are unexpected given the meaning of the verbs involved. Case licensing of this sort clearly demonstrates the separability of event structure from verb meaning and shows that object case is specifically sensitive to distinctions in event structure.

The rest of the chapter is organized into four sections, as follows.

- In Section 5.2, I discuss how internal arguments which we would expect to be strict-accusative (=x̃) on the basis of verbal semantics acquire the ability to be marked instrumental (=s) in contexts where they are directly manipulated by the *Initiator*. This phenomenon is referred to as the **Direct Manipulation Alternation**.
- In Section 5.3, I discuss case marking on internal arguments in constructions denoting caused motion in a direction. I show that when a verbal predicate is modified by a path-denoting PP, an internal argument acquires the ability to undergo case alternation, even when we would not expect this given the meaning of the verb involved. This phenomenon is referred to as the **Caused Motion Alternation**.
- In Section 5.4, I discuss case marking in the context of semantic incorporation of with -(g)ila 'make'. I show that while -(g)ila predicates formed using the dummy root ʔax̃- take a strict-accusative (=x̃) internal argument, the argument acquires the ability to

undergo case alternation when *-(g)ila* incorporates a nominal stem. I argue that this comes about because semantic incorporation derives predicates denoting properties of events having to do with the simultaneous expression and creation of an object.

- Finally, in Section 5.5 I summarize the findings of the previous three sections, and reiterate how they provide support for the Initiating Subevent Theory of object case. I also comment on the separability of event-structural meaning from verb meaning.

By the end of this chapter, the reader will be familiar with three new types of empirical evidence for the event-structural basis of object case marking in this language.

5.2 The Direct Manipulation Alternation

In a canonical event involving a thematic Agent, Instrument, and Patient, these three semantic arguments instantiate three separate event roles, as schematized in (159) (where the symbol ‘|’ indicates linking).

(159)	Event role:	<i>Initiator</i>	<i>Co-initiator</i>	<i>Non-initiator</i>
	Syntax:	Subject	=s object	=x̄ object
	Interpretation:	<i>x</i> utilizes <i>y</i> to bring about some change in <i>z</i> (<i>x</i> is an <i>Initiator</i> ; <i>y</i> a <i>Co-initiator</i> ; <i>z</i> is a <i>Non-initiator</i>)		

In this section, I’ll discuss events which are identical to the ones in (159) in terms of the number and type of semantic categories involved, but which differ in their number of expressed arguments. In particular, these events are ones in which the same internal argument which undergoes change (i.e. the Patient) is also directly manipulated by the *Initiator* in the course of the event. We’ll see that being direct manipulated by an *Initiator* qualifies an argument as a *Co-initiator*. Therefore, in terms of event structure, the events in question are ones in which the same individual functions simultaneously as the event’s *Co-initiator* and its *Non-initiator*, as schematized in (160).

(160)	Event role:	<i>Initiator</i>	<i>Co-initiator/Non-initiator</i>
	Syntax:	Subject	=s object/=x̄ object
	Interpretation:	<i>x</i> manipulates <i>y</i> to bring about some change in <i>y</i> (<i>x</i> is an <i>Initiator</i> ; <i>y</i> is both a <i>Co-initiator</i> and a <i>Non-initiator</i>)	

Instances of case alternation which fit the pattern in (160) will be referred to as instances of the **Direct Manipulation Alternation**.

In Section 5.2.1, I’ll discuss cases where the Direct Manipulation Alternation is licensed by verbal entailments. Then in Section 5.2.2, I’ll show that the Direct Manipulation Alternation can also be licensed independently of verb meaning by the presence of contextual information.

5.2.1 Licensing the Direct Manipulation Alternation by lexical entailments

There are at least two classes of verbs in K^wak^wala which license the Direct Manipulation Alternation via lexical entailments: the Manipulation/Change Verbs, and the Stir/Tow Verbs.¹

Manipulation/Change Verbs entail that their single internal argument is both directly manipulated by the *Initiator* and undergoes some change in configuration. Three examples of verbs with this property are *muk^w*- ‘tie’ (161), *ku^χw*- ‘fold’ (162), and *qəs*- ‘wind, coil’ (163).

(161) *muk^wu^χ* Simon {**sa**, **χa**} **dənəm**
muk^w =u^χ Simon {=s=a, =χ=a} **dənəm**
 tie =3MED Simon {=INST=DET, =ACC=DET} **rope**
 ‘Simon tied **the rope** {INST, ACC}.’ (VF, VF)

(162) *ku^χwən* {**sada**, **χada**} **mama**
ku^χw =ən {=s=a=da, =χ=a=da} **mama**
 fold =1 {=INST=DET=OST, =ACC=DET=OST} **blanket**
 ‘I’m folding **blankets** {INST, ACC}.’ (JF, VF)

(163) *qəsida* bəg^wanəme {**sa**, **χa**} **dənəm**
qəs =i=da bəg^wanəm {=s=a, =χ=a}
 coil/wind =3DIST=OST man {=INST=DET, =ACC=DET}
dənəm
rope
 ‘The man is coiling/winding **rope** {INST, ACC}.’ (VF, VF)

The fact that these arguments are directly manipulated qualifies them as *Co-initiators*. In particular, the rope in (161), the blanket in (162), and the rope in (163) serve as the means by which the *Initiator* instigates the events in question, allowing them to satisfy the *Co-initiator* condition *dependent cause*. The fact that these arguments also undergo a change in configuration allows them to satisfy the *Non-initiator* condition *change*. These arguments thereby satisfy the Alternation Condition and undergo case alternation.²

The second class of verbs which license the Direct Manipulation Alternation via entailments are the Stir/Tow Verbs, which take two internal arguments: an Instrument and a Patient. The defining property of these verbs is that they describe events in which the Instrument and Patient are spatially contiguous, which results in them both undergoing the exact same caused motion, in tandem. Take for instance the verb *dap*- ‘tow’, which is used in (164) to

¹ Another class of verbs which we might expect to license the Direct Manipulation Alternation via entailments is verbs naming voluntary bodily motions. I’ve come across one such, *sax?id* ‘reach’, which does indeed allow its internal argument *ʔəʔsu* ‘hand/arm’ to be realized in either instrumental or accusative case, but other members of this class require further research. Related to this, Russian possesses a small set of movement verbs (e.g. *dvigat* ‘move’) which take complements in the accusative unless the complement denotes the subject’s own body part, in which case instrumental case appears instead (Tretiak 2013: p. 37-51).

² While it is technically possible to explicitly mention the part of the *Initiator*’s body that is used to manipulate the internal argument of these verbs (e.g. =sis *ʔəʔsu* ‘with their hands’), speakers typically find it pragmatically odd to do so on account of these being implicit arguments (Williams 2015: p. 94-116). I will return to briefly discuss how this relates to pragmatic constraints on realizing instrumental case in the Direct Manipulation Alternation in Chapter 7, Section 7.3.2.

describe an event where a boy uses rope to tow a (toy) boat through the water. When both the rope and the boat are mentioned, the boat is most naturally expressed as a *Non-initiator*, and the rope as a Means adjunct (164a). However, in cases where only one of these arguments is expressed, the speaker allows the boat to be expressed as either a *Co-initiator* or a *Non-initiator* (164b), and the same goes for the rope (164c).

(164) *Context: Mabel is babysitting Simon, who's playing on the beach. She's watching him tow a toy boat through the water with a piece of rope.*

- a. dapaluḫ Simonḫuḫda ʔəmləmḫ kiɫaʕisida dənəm
dap-la =uḫ Simon =**ḫ=uḫ=da** ʔəml-_{„ə}m=**ḫ**
tow-CONT =3MED Simon =**ACC=3MED=OST** **play-NMZ=VIS**
 kiɫaʕi =s=i=da dənəm
 fishing.boat =**MEANS=3DIST=OST** rope
‘Simon is towing **the toy fishing boat** (ACC) with a rope.’ (VF)
- b. dapaluḫ Simonḫ {**suḫda, ḫada**} ʔəmləmḫ kiɫaʕiyaʔ
dap-la =uḫ Simon=**ḫ** {**s=uḫ=da** , =**ḫ=a=da**}
tow-CONT =3MED Simon=VIS {**=INST=3MED=OST** , =**ACC=DET=OST**}
 ʔəml-_{„ə}m=ḫ **kiɫaʕi-a**
 play-NMZ=VIS **fishing.boat-A**
‘Simon is towing **the toy fishing boat** {INST, ACC}.’ (JF, VF)
- c. dapaluḫ Simonḫ {**suḫda, ḫuḫda**} dənəmḫ
dap-la =uḫ Simon=**ḫ** {**s=uḫ=da** , =**ḫ=uḫ=da**}
tow-CONT =3MED Simon=VIS {**=INST=3MED=OST** , =**ACC=3MED=OST**}
 dənəm=ḫ
 rope=VIS
‘Simon is towing the **rope** {INST, ACC}.’ (VF, JF)

This pattern of alternation also manifests in question-answer pairs involving this verb. In Section 1.2, I mentioned that voice suffixes and object cases are in correspondence. The relevance of that discussion here is that *wh*-questions targeting *Non-initiators* are formed with the voice suffix *-səw'*, while *wh*-questions targeting *Co-initiators* are formed with the voice suffix *-ayu*. The data in (165) show that questions formed with either *-səw'* (165a) or *-ayu* (165b) are able to target either internal argument in a towing event, as indicated by the possible answers listed below the questions. Though there is a definite bias towards a *-səw'* question targeting the Patient, and towards an *-ayu* question targeting the Instrument, speakers nevertheless accept either answer for both *-səw'* and *-ayu* questions. This pattern indicates that both internal arguments in a ‘towing’ event qualify conceptually as being both *Co-initiators* and *Non-initiators* simultaneously.

(165) Wh-questions and their possible answers, with *dap-* ‘tow’

[Same context as (164)]

- a. $\acute{m}asi\ dap\acute{e}lasu\acute{w}e\text{?}su\check{x}\ Simon\check{x}$
 $\acute{m}as =i \quad \quad \quad \text{dap-la-}s\acute{a}w\acute{=}e\text{?} \quad \quad \quad =s=u\check{x} \quad \quad \quad Simon=\check{x}$
 what =3DIST tow-CONT-ACC.PASS=NMZ =O.POSS=3MED Simon=VIS
 ‘What is Simon towing (*-s $\acute{a}w\acute{}$*)?’ (VF, JF)
Literally: ‘That which is being towed by Simon is what?’

Possible answers: *\text{?}\acute{a}ml\acute{e}m\ kil\acute{a}ci* ‘toy fishing boat’ (preferred), *d\acute{a}n\acute{e}m* ‘rope’ (also possible)

- b. $\acute{m}asi\ dap\acute{e}lay\acute{u}we\text{?}su\check{x}\ Simon\check{x}$
 $\acute{m}as =i \quad \quad \quad \text{dap-la-}ayu\acute{=}e\text{?} \quad \quad \quad =s=u\check{x} \quad \quad \quad Simon=\check{x}$
 what =3DIST tow-CONT-INST.PASS=NMZ =O.POSS=3MED Simon=VIS
 ‘What is Simon towing with (*-ayu*)?’ (VF, JF)
Literally: ‘That which is being towed with by Simon is what?’

Possible answers: *d\acute{a}n\acute{e}m* ‘rope’ (preferred), *\text{?}\acute{a}ml\acute{e}m\ kil\acute{a}ci* ‘toy fishing boat’ (also possible)

Given that Instruments satisfy *dependent cause* and Patients satisfy *change*, the explanation for why the Instrument in a towing event can be marked instrumental (=s) and the Patient can be marked accusative (=x̄) is not in question. What is in need of explanation is why the Instrument can be marked accusative, and why the Patient can be marked instrumental. Thinking closely about the meaning of the verb *dap-* ‘tow’ provides the explanation we’re looking for. On the one hand, while only the Instrument in a towing event is in direct contact with the *Initiator*, the Patient is also manipulated by the *Initiator* — albeit somewhat less directly — on account of its being spatially contiguous with the Instrument and thereby undergoing the exact same type of motion as the Instrument undergoes. Apparently, this suffices to qualify the Patient as a *Co-initiator* (albeit not as good of one as the Instrument itself, hence the speaker preferences reference above), which licenses its ability to appear in instrumental case. On the other hand, both the Instrument and the Patient undergo the exact same type of caused motion, a type of change — in a towing event, for instance, they both get ‘towed’. This apparently suffices to qualify the Instrument as a *Non-initiator* (albeit not as good of one as the Patient, hence the speaker preferences referenced above), which licenses its ability to appear in accusative case. Note that the same line of reasoning can be applied to describe case patterns in *x̄^{nit}-* ‘stir’ events. The Instrument and the Patient in a stirring event are manipulated directly and in tandem by the *Initiator*, given that they are spatially contiguous; this apparently suffices to license instrumental case on the Patient. On the other hand, both the Instrument and the Patient undergo the same type of caused motion, and therefore change, in the course of getting stirred; this apparently suffices to license accusative case on the Instrument. Note that an analogous alternation in English occurs between the verb phrases ‘tow the rope’ versus ‘tow with the rope’ and ‘stir the spoon’ versus ‘stir with the spoon’.

Keep in mind that what is critical for explaining why with Stir/Tow Verbs, both the Instrument and Patient are able to alternate, is that both the Instrument and the Patient of these verbs undergo the *same* type of motion, in tandem. Concomitantly, with verbs that describe events in which the Instrument and Patient don't undergo the same motion, the Patient cannot be marked instrumental. Consider, for instance, the verb *q^wəcəm-* 'peel (something round)' and the sentences in (166). In (166a) the Patient, an orange, is accusative, and in (166b) the Instrument, a fork, is instrumental; examples (166a) and (166c) show that the Patient can be accusative, while (166d) shows it cannot be instrumental — unlike what we saw with Stir/Tow Verbs.

(166) a. *q^wəcəmdaluḥ Abbyḥ^wa ʔayəndzisiḥsa həməyū*
q^wəs-(ǧ)əm-xʔid-la =uḥ Abby =ḥ^w=a
 peel-face-BEC-CONT =3MED Abby =ACC=3MED=DET
ʔayəndzis=ḥ =s=a həmə_{-w}ayū
orange=VIS =MEANS=DET eat-INST.PASS
 'Abby's peeling **an orange** (ACC) with a fork.' (JF)

b. *q^wəcəmdaluḥ Abbyḥsa həməyū laḥ^wa ʔayəndzisiḥ*
q^wəs-(ǧ)əm-xʔid-la =uḥ Abby=ḥ =s=a
 peel-face-BEC-CONT =3MED Abby=VIS =INST=DET
həmə_{-w}ayū la =ḥ^w=a ʔayəndzis=ḥ
eat-INST.PASS PREP =ACC=3MED=DET orange=VIS
 'Abby's peeling an orange **with a fork** (INST).' (VF)

c. *q^wəcəmdaluḥ Abbiyəḥ^wa ʔayəndzisiḥ*
q^wəs-(ǧ)əm-xʔid-a-la =uḥ Abby =ḥ^w=a
 peel-face-BEC-A-CONT =3MED Abby =ACC=3MED=DET
ʔayəndzis=ḥ
orange=VIS
 'Abby's peeling **an orange** (ACC).' (VF)

d. #*q^wəcəmdaluḥ Abbisuḥ ʔayəndzisiḥ*
q^wəs-(ǧ)əm-xʔid-a-la =uḥ Abby =s=uḥ
 peel-face-BEC-A-CONT =3MED Abby =INST=3MED
ʔayəndzis=ḥ
orange=VIS

Speaker: "Um, if you were describing what she's USING to — but then you'd just use your hands to peel. If you were describing her using something to peel, then you could use =*sux*." (JF)

What makes the event described by *q^wəcəm-* 'peel (something round)' different from Stir/Tow Verbs is that the Patient and Instrument of a 'peeling' event do not necessarily undergo the same caused motion in tandem: rather, the Patient has something removed from it, while the Instrument is manipulated in order to remove the peel.³

³ The reader may find it curious that the Patient in (166d) cannot appear in Instrumental case, given that when someone is peeling an orange with their hands, they are directly manipulating the orange (see Section 5.2.2 for

In summary, because the relevant internal argument of Manipulation/Change Verbs and Stir/Tow Verbs meets the semantic conditions for undergoing the Direct Manipulation on the basis of verbal entailments, the semantic conditions for undergoing case alternation are met in every context of these verbs' use. In the next section we'll see, however, that verbal entailments are not the only means by which the Direct Manipulation Alternation can be licensed.

5.2.2 Licensing the Direct Manipulation Alternation by context

The Direct Manipulation Alternation can be licensed by context, independently of verb meaning. In particular, internal arguments which we would predict to be strict-accusative (=x̃) on the basis of verbal semantics are able to appear in either case in contexts where this same argument is directly manipulated by the *Initiator* in the course of the event.

The verb *təp'idi* 'break', for instance, takes an internal argument which undergoes causally-induced change.⁴ As we might predict, this argument is normally strict-accusative. This is shown for instance in (167), where in an out-of-the-blue context, the speaker volunteers a transitive sentence with an accusative-marked object (167a). Substituting instrumental (=s) for accusative (=x̃) in this sentence resulted in the internal argument being interpreted as an Instrument, leading to a judgment of infelicity (167b).

(167) *Context: Out-of-the-blue.*

- a. *təp'idi Karenxa k'wəʔsta*
təp-xʔid =i Karen =x̃=a k'wəʔsta
 broken-BEC =3DIST Karen =ACC=DET cup
 'Karen broke **the cup** (ACC).' (VF)
- b. # *təp'idi Karensa k'wəʔsta*
təp-xʔid =i Karen =s=a k'wəʔsta
 broken-BEC =3DIST Karen =INST=DET cup
Literally: 'Karen broke with **the cup** (INST).' (JF)

Speaker: "...to translate it... properly into English is, doesn't make sense."

KS: "What would it mean? What would it be — what would the nonsensical translation be?"

Speaker: "If she broke the cup, then you would say, *təp'idi Karenaxa k'wəʔsta*."

KS: "Mhm ['Yes']."

Speaker: "x̃a is 'the'."

KS: "Mhm ['Yes']."

Speaker: "Yeah."

KS: "Does *təp'idi Karensa k'wəʔsta*... Does that mean that she broke WITH a cup?"

relevant discussion). I will return in Chapter 7, Section 7.3 to briefly discuss pragmatic factors which constrain the Direct Manipulation Alternation; I will bring up this example again there.

⁴ In its transitive use, that is. The verb *təp'idi* is derived from an underlyingly stative root, *təp-* 'broken', which becomes an unaccusative when suffixed with *-xʔid* (*təp'idi* 'get broken'). If an external argument is added (via zero-morphology), the verb denotes an externally-caused event (*təp'idi* 'break (something)').

Speaker: “Yeah.”
KS: “So like, using it?”
Speaker: “Yeah.”
KS: “Okay. So that’s weird.”
Speaker: “Yeah.”

On the other hand, in a context where the internal argument is directly manipulated by the *Initiator*, we find that it can be marked by either instrumental (=s) or accusative (=x̃) case. This is illustrated with the same verb *təp̄id* ‘break’ in (168). In this context, where the *Initiator* picks up a cup in her hand, smashes the cup against something, and in doing so breaks the cup, ‘cup’ can appear in either case, contrary to what we saw in (167) above.

(168) *Context: A woman picked up a cup in her hand and smashed it down on her (clam) digging stick, causing the cup to break.*

təp̄idida	çədaqe	{sa, x̃a}	k̄wəʔsta	la	x̄is	dzigayu	
təp-xʔid	=i=da		çədaq	{=s=a	, =x̃=a}		
broken-BEC	=3DIST=OST	woman	{=INST=DET	, =ACC=DET}			
k̄wəʔsta	la	=x̃=is	dzik- _v ayu				
cup	PREP	=ACC=3REFL.POSS	dig-INST.PASS				

‘The woman broke **a cup** {INST, ACC} on her digging stick.’ (VF, VF)

Nothing about the verb’s meaning is different in (168); what *is* different is the context. The event is now one in which the same event participant is both directly manipulated by the *Initiator* and undergoes caused change, making it both a *Co-initiator* and a *Non-initiator*. This is an instance of the Direct Manipulation Alternation, though this time it’s licensed by context, rather than by verb meaning alone.

Another example in which the Direct Manipulation Alternation is licensed by context is shown below with the verb *yaḥʔid* ‘melt’.⁵ The context of (169) is one where a man melts some snow over a fire; here, the speaker rejects instrumental (=s) marking on the internal argument.

(169) *Context: Ted’s camping. So he builds a fire, and he melts some snow over it in a pot to make water for him to drink.*

a. ləm̄is yaḥʔidx̄a k̄wis qəs naq̄ideʔ

lə=ʔm=is	yaḥ-xʔid	=x̃=a	k̄wis	qa	=is
AUX=VER=and	melt-BEC	=ACC=DET	snow	PREP	=3REFL.POSS

naq-xʔid=eʔ
 drink-BEC=NMZ

‘Then he melted **some snow** (ACC) to drink.’ (VF)

⁵ The verb *yaḥʔid*, like *təp̄id*, is derived from an underlying stative root, *yaḥ-* ‘melted’, which becomes an unaccusative when suffixed with *-xʔid* (*yaḥʔid* ‘get melted’) and becomes an externally-caused event (*yaḥʔid* ‘melt (something)’) when an external argument is added.

- b. # yaḥʔiduḥsa kʷis qəs naqide?
 yaḥ-xʔid =uḥ =s=a kʷis qa =is
 melt-BEC =3MED =INST=DET snow PREP =3REFL.POSS
 naq-xʔid=e?
 drink-BEC=NMZ
Intended: ‘He melted **some snow** (INST) to drink.’ (JF)

However, in a context where the *Initiator* melts ice by holding it in the palm of her hand — in other words, where the argument is directly manipulated by the *Initiator* — the internal argument is now able to appear in either case (170).

(170) *Context: Monica held a piece of ice tight between her palms and melted it.*

- yaḥʔidi Monica {sa, ḫa} ʔuḥw laḥis ʔiʔəyəsü
 yaḥ-xʔid =i Monica {=s=a , =ḫ=a}
 melt-BEC =3DIST Monica {=INST=DET , =ACC=DET}
 ʔuḥw la =ḫ=is ʔi~ʔəyəsü
frozen PREP =ACC=3REFL.POSS REDUP~hand/arm
 ‘Monica melted **the ice** {INST, ACC} in her hands.’ (JF, VF)

Once again, nothing about the meaning of the verb is different in (170) versus (169); what is different is that the event being described is now one in which the verb’s internal argument counts as both a *Co-initiator* and a *Non-initiator*. This allows it to alternate.

Two additional examples where the Direct Manipulation Alternation is licensed with verbs we wouldn’t expect are shown in (171)-(172).⁶ In (171), the internal argument of *kuxʷsʔənd* ‘snap in half’ undergoes alternation in a context where the *Initiator* snaps it with her hands; in (172), the internal argument of *qʷapʷid* ‘rip’ undergoes alternation in a context where the *Initiator* rips it with his hands.

(171) *Context: Hope picks up a piece of firewood, holds it in both of her hands, and snaps it in half.*

- a. kuxʷsʔəndi Hopeḫa ləqʷa
 kuxʷ-(x)sʔ-xʔid =i Hope =ḫ=a ləqʷa
 snap-across-BEC =3DIST Hope =ACC=DET **firewood**
 ‘Hope snapped **the firewood** (ACC) in half.’ (VF)
- b. kuxʷsʔəndi Hopesa ləqʷa
 kuxʷ-(x)sʔ-xʔid =i Hope =s=a ləqʷa
 snap-across-BEC =3DIST Hope =INST=DET **firewood**
 ‘Hope snapped **the firewood** (INST) in half.’ (JF)

⁶ I have not elicited negative data with these particular verbs showing that the Patient cannot be instrumental in contexts without direct manipulation. Such data is, however, predicted on the basis of the meaning of these verbs.

(172) Context: *Simon had to rip-up some pants to make a costume for a play he's in at school. He doesn't have a tool to use, so he just uses his hands.*

- a. q^wapidi Simone^{x̃}a dzəmba
 q^wap-xʔid =i Simon =^{x̃}=a dzəmba
 ripped-BEC =3DIST Simon =ACC=DET jeans
 'Simon ripped (a pair of) jeans (ACC).' (VF)
- b. q^wapidi Simonesa dzəmba
 q^wap-xʔid =i Simon =s=a dzəmba
 ripped-BEC =3DIST Simon =INST=DET jeans
 'Simon ripped (a pair of) jeans (INST).' (JF)

The verbs in these examples, *kux̃^wsʔənd* 'snap in half' and *q^wapid* 'rip', are Change Verbs: they entail that their internal argument undergoes causally-induced change, so we expect them to be marked accusative (=x̃) on account of their satisfying the *Non-initiator* condition *change*. On the other hand, the fact that this same internal argument can appear in instrumental (=s) case can only be explained by referring to the contexts in which these sentences occur. To begin with, the event described in (171) is one in which the firewood is directly manipulated by the *Initiator*. In addition to undergoing *change*, this argument thereby serves, simultaneously, as a means by which the *Initiator* instigates the event, allowing this argument to satisfy the *Co-initiator* condition *dependent cause* in addition to *change*. Analogously, the jeans in (172) undergo direct manipulation in the context mentioned and thereby satisfy *dependent cause*. Since these arguments meet the Alternation Condition in these contexts, they can appear in either case.

In summary, we've seen that arguments which we'd expect to be strict-accusative (=x̃) on the basis of verbal entailments are able to undergo case alternation in contexts where the argument is directly manipulated by an *Initiator*.⁷ This is because the internal argument in these events has something 'done *with*' it and 'done *to*' it at the same time. The data in this section show that the Direct Manipulation Alternation can be licensed by the presence of contextual information which restricts the type of event being described. More generally, this demonstrates one way in which a change in event structure leads directly to a change in object case-marking potential. This finding thereby supports the claim that object case distinctions are grounded in event structure.

5.3 Caused Motion Alternation

In English, the caused motion construction expresses a relationship between a thematic Agent, a Theme, and a Location, such that the Agent causes the Theme to be in the Location (Goldberg 1995, Levin & Rappaport-Hovav 1995). Since the Location in this construction is interpreted as the endpoint of caused motion, we can also refer to it as a Path. A construction analogous to the one described for English exists in K^wak^wala, and is schematized in (173).

⁷ I will return to discuss pragmatic constraints on the realization of instrumental case in the Direct Manipulation Alternation in Chapter 7, Section 7.3.2.

(173)	Event role:	<i>Initiator</i>	<i>Co-initiator/Non-initiator</i>	<i>Location</i>
	Syntax:	Subject	=s object/=x̃ object	<i>la</i> phrase
	Interpretation:	<i>x</i> causes <i>y</i> to be at <i>z</i> (<i>x</i> is an <i>Initiator</i> ; <i>y</i> is a <i>Co-initiator</i> and a <i>Non-initiator</i> ; <i>z</i> is a <i>Location</i>)		

In terms of event roles, the Theme in a caused motion event is simultaneously a *Co-initiator* and *Non-initiator* due to its satisfying both the *Co-initiator* condition *possession (initial bound)*, and the *Non-initiator* condition *change*. Whenever an argument undergoes case alternation on account of its instantiating the dual *Co-initiator/Non-initiator* event role in the schema in (173), I'll say that this argument undergoes the **Caused Motion Alternation**.

In Section 5.3.1, I'll discuss cases where the Caused Motion Alternation is licensed by verbal entailments. Then in Section 5.3.2, I'll show that the Caused Motion Alternation can also be licensed by event modification, in particular by adding a Path-denoting PP which modifies the structure of the event to match the schema in (173).

5.3.1 Licensing the Caused Motion Alternation by lexical entailments

A class of verbs in Kwakwala which licenses the Caused Motion Alternation via lexical entailments is the class of Transfer Verbs.⁸ These are verbs which entail that an internal argument starts out in the *Initiator*'s possession and is subsequently transferred to the possession of a Recipient. Though the nature of caused motion entailed in events involving Recipients is somewhat more specific than what is schematized in (173), the syntactic frame involved is the same. For this reason, I haven't differentiated verbs which entail transfer to a Location from verbs which entail transfer to a Recipient here.⁹ Some examples of Transfer Verbs are *nəp-* 'throw' (174), *laḥ-* 'sell' (175), and *ḥawənt-* 'bestow, give charitably' (176).

(174)	<i>nəp</i> idida	<i>babaḡwəme</i>	{ <i>sa</i> , <i>ḡa</i> }	<i>siwayu</i>	<i>laḡa</i>	<i>ḡaḡadaḡəm</i>
	<i>nəp-x?</i> id	=i=da		<i>babaḡwəmə</i>	{=s=a	, =x̃=a}
	throw-BEC	=3DIST=OST		little.boy	{=INST=DET	, =ACC=DET}
	<i>siḡ-</i> _w <i>ayu</i>			<i>la</i>	=x̃=a	<i>ḡaḡadaḡəm</i>
	paddle-INST.PASS			PREP	=ACC=DET	little.girl
	'The little boy is throwing/threw a paddle {INST, ACC} at/to the little girl.' (VF, JF)					

⁸ Communication Verbs also license the Caused Motion Alternation on the assumption that they are metaphorically extended from Transfer Verbs (Lakoff & Johnson 1980: p. 10-13). I leave the topic of metaphorical extensions of the caused motion construction in (173) to future research.

⁹ Verbs like *nəp-* 'throw' and *həlaḡs-* 'send' can occur either with a Location or Recipient, while verbs of Giving (e.g. *ḡo* 'give', *yaḡ-* 'give in Potlatch') can only take a Recipient. Transfer Verbs with Recipient internal arguments can occur in two syntactic frames: the one shown here, and one in which the Recipient is realized as an accusative (=x̃) object and the Theme is realized in a Means adjunct. Examples of this latter frame were shown in Chapter 3, Section 3.2.1 in relation to Transfer Verbs and Communication Verbs.

(175) laḵuduḵ Mabela {ḵa, sa} ḳʷəmdzuḳu laḵ Abbi
 laḵ-u-xʔid =uḵ Mabel {=s=a , =ḵ=a}
 sell-off/out-BEC =3MED Mabel {=INST=DET , =ACC=DET}
 ḳʷəmdzuḳu la =ḵ Abby
 dress PREP =ACC Abby
 ‘Mabel sold a dress {INST, ACC} to Abby.’ (VF, VF)

(176) ḷaʷəntən {sada, ḵada} həmə? laḵ Fuzzy
 ḷaʷənt =ən {=s=a=da , =ḵ=a=da} həmə=e?
 bestowed =1 {=INST=DET=OST, =ACC=DET=OST} eat=NMZ
 la =ḵ Fuzzy
 PREP =ACC Fuzzy
 ‘I bestowed food {INST, ACC} on Fuzzy.’ (JF, VF)

Whenever the Theme of these verbs is expressed in canonical object position, it undergoes the Caused Motion Alternation. This ability to alternate in any context these verbs are used arises because the Theme satisfies the conditions for being a *Co-initiator* and a *Non-initiator* as a result of entailments inherited from the verb. We’ll see in the next section, however, that the Caused Motion Alternation can also be licensed by means other than verbal entailments.

5.3.2 Licensing the Caused Motion Alternation by modification with Path-denoting PPs

The Caused Motion Alternation is licensed whenever an event description is modified to fit the schema outlined in (173). In this section, I’ll show that this can be accomplished through the addition of Path-denoting PPs. To understand why internal arguments are consistently able to undergo case alternation in the vicinity of a Path-denoting PP, I’ll first need to introduce some theory about how Path arguments interact with internal arguments in predicates expressing motion.

Path arguments in motion predicates denote a scale along which movement is measured (Ramchand 1997: p. 117; Zwarts 2005).¹⁰ When a path-denoting PP modifies an event description which has an internal argument, a relation is established between this argument, the run-time of the event, and the spatial path denoted by the PP. This relation is one in which there is a homomorphic mapping between the location of the internal argument and the run-time of the event. This is illustrated in (177), where each unique point of time in the event is associated with a unique location on the spatial path such that when the scales are aligned, their initial and final points match up.

(177) Event-Path homomorphism

t ₁	t ₂	t ₃	...	t _n	‘time line’
loc ₁	loc ₂	loc ₃	...	loc _n	‘spatial path’

(adapted from Ramchand 1997: p. 117)

¹⁰ Researchers like Tenny (1994: 72-78, 195-198), Ramchand (2008: 50-51), and Beavers (2008) define Paths more abstractly like this, as referring to scales along which an event is measured in both motion and non-motion predicates. For my purposes here, I am only concerned with spatial Paths in motion predicates.

Ramchand (1997), extending the framework in Krifka (1992), calls this relation Mapping to Locations (MAP-L), and describes it informally as follows:¹¹

“MAP-L says that every single moment on the temporal trace of the event is associated crucially with a different *location* of the object. The intuition is that the objects of motion verbs follow a spatio-temporal path as a result of the action of the verb, and that it is *this* property that is criterial of verbs of this type.” (Ramchand 1997: p. 117)

When a Path-denoting PP modifies an event description with an object, what happens is that a scale is established which extends from the temporal initial bound of the event, to the temporal final bound of the event. The property Mapping to Locations then ensures that a homomorphic mapping is established between this temporal scale, and the location of the event’s internal argument.¹² The addition of a Path-denoting PP to an event is significant, then, precisely because it changes the structure of the event, and concomitantly, changes the way in which the internal argument relates to the event. Specifically, the event becomes one of caused motion like in (173), and the internal argument comes to function as both a *Co-initiator* and a *Non-initiator* (that is, by satisfying the *Co-initiator* criterion *possessed (initial bound)* and the *Non-initiator* criterion *change*). It’s in this way that modifying an event with a Path-denoting PP licenses the Caused Motion Alternation. In the remainder of this section, I’ll walk through a variety of specific examples to illustrate this licensing.

One environment where we see the addition of a Path-denoting PP licensing the Caused Motion Alternation is in the formation of Put Verbs. In K^wak^wala, many verbs with meanings related to ‘put’ are derived compositionally by adding an external argument to an otherwise stative unaccusative predicate indicating location (in a manner similar to that proposed in Hale & Keyser 2002: p. 7-8 for English). In these constructions, the addition of an external argument also gives rise to an interpretation of the leftmost PP as a Path. The derivational relationship between locative unaccusative predicates and ‘put’ predicates is illustrated in (178)-(179), where the unaccusative predicates in the ‘a’ examples differ from the caused motion (‘put’) predicates in the ‘b’ examples in the two ways just mentioned: only the ‘b’ examples possess an external argument; and the prepositional *la* phrase in the ‘b’ examples is interpreted as a Path, while in the ‘a’ examples it is interpreted as a Location.¹³

¹¹ Ramchand (1997: p. 221-237) also outlines a formal calculus of event structure in which Mapping to Locations is formally fleshed out and related to other kinds of relations between events and properties of objects. Readers interested in the formalization of these notions should consult this work, as well as Ramchand (2008) and Krifka (1992, 1998).

¹² It’s important to note that just because an event includes a delimiting Path argument, this doesn’t mean that any event in which a Path is expressed is necessarily interpreted as delimited in the context in which it is uttered. Whether or not the event is interpreted as delimited will depend on other factors, such as grammatical aspect (e.g. Tenny 1994: p. 72).

¹³ There happens to be a third difference between the ‘a’ and ‘b’ examples in (178)-(179), namely in aspectual marking. However, this difference is not crucial. Unaccusatives like these ‘a’ examples can also contain *-x?id*, and *-x?id* is not necessary in the derivation of ‘put’ predicates.

(178) ǵiǵ^w- ‘be hanging (a); hang (b)’

- a. ǵiǵ^wałən qəsəne? laǵuǵda ǵiwayuǵ
ǵiǵ^w-ał =ən qəsəne? la =ǵ=uǵ=da
hanging-STAT =1POSS shirt PREP =ACC=3MED=OST
ǵiǵ^w-_wayu=ǵ
hanging-INST.PASS=VIS
‘My shirt is hanging on the clothesline.’ (VF)
- b. ǵiǵ^w?idi Mabele {sa, ǵa} nǵx^wəne? laǵa ǵiǵ^wdəna
ǵiǵ^w-x?id =i Mabel {=s=a , =ǵ=a}
hanging-BEC =3DIST Mabel {=INST=DET , =ACC=DET}
nǵx^w-(k)ən=e? la =ǵ=a ǵiǵ^wdəna
wrap-body=NMZ PREP =ACC=DET clothesline
‘Mabel hung up a blanket {INST, ACC} on a clothesline.’ (VF, JF)

(179) ?əǵaǵ- ‘be on surface (a); put on surface (b)’

- a. ?əǵaǵida digilǵci laǵuǵda həmxdəmiłiǵ
?əǵ-aǵ =i=da di-(g)ila-_haǵi
DO-on.surface =3DIST=OST tea-make-container
la =ǵ=uǵ=da həmxdəmił=ǵ
PREP =ACC=3MED=OST table=VIS
‘The teapot is on the table.’ (VF)
- b. ?əǵaǵuduǵ Katiyəǵ {suǵda, ǵ^wa} ǵətəmił laǵuǵ ?aǵayaǵsa k^wačowas
?əǵ-aǵ-x?id =uǵ Katie=ǵ {=s=uǵ=da , =ǵ=a}
DO-on.surface-BEC =3MED Katie=VIS {=INST=3MED=OST , =ACC=DET}
ǵətəmił la =ǵ=uǵ ?aǵa=i?ǵ =s=a
hat PREP =ACC=3MED back=NMZ=VIS =3POSS=DET
k^wa-čə-?as
sit-inside-LOC.PASS
‘Katie is putting/put the hat {INST, ACC} behind the chair.’ (VF, VF)

The productive nature of ‘put’ predicates is vividly illustrated by examples like (180)-(181), which were innovated by a speaker during an elicitation session. Example (180) shows a ‘put’ predicate in which the root denotes a Location (here, *k^wə?sta* ‘cup’; interestingly, its not necessary, in this example, to express the Location as a separate argument), while example (181) shows a ‘put’ predicate in which the root denotes a Locatum (here, *yawapsta* ‘curtain’).

- (180) kʷəʔstaçuduχ Hope {sida, χida} t̪isəmməniχʷ
 kʷəʔsta-çu-xʔid =uχ Hope {=s=i=da , =χ=i=da}
 cup-inside-BEC =3MED Hope {=INST=3DIST=OST , =ACC=3DIST=OST}
 t̪isəmməniχʷ
 stone=DIM.PL
 ‘Hope put **some little stones** {INST, ACC} into a cup.’ (JF, VF)

Literally: ‘Hope cupped **some little stones** {INST, ACC}.’

- (181) yawapstuduχ Hopiχ {suχda, χuχda} λaqʷaχ yawapstolaχuwa? laχuχ hənχsoləʔaçiχesa
 λasiksolił

yawapstu-xʔid =uχ Hope=χ {=s=uχ=da , =χ=uχ=da}
 curtain-BEC =3MED Hope=VIS {=INST=3MED=OST , =ACC=3MED=OST}
 λaqʷ-a=χ yawapstu-la-ayu-a la =χ=uχ
 red-A=VIS curtain-CONT-INST.PASS-A PREP =ACC=3MED,
 hənχ-(χ)so-la-çi=χ =s=a λasiksolił
 look-through-CONT-container=VIS =3POSS=DET front.room.in.house
 ‘Hope put **red curtains** {INST, ACC} on the windows of the front room.’ (VF, JF)

Literally: ‘Hope curtained **red curtains** {INST, ACC} on the windows of the front room.’

What’s significant about these compositionally-derived ‘put’ predicates is that they fit the schema in (173), and that their internal argument is thereby able to appear in either case. These examples demonstrate how the addition of a Path-denoting PP, together with an external argument, can license the Caused Motion Alternation.

Another way to license the Caused Motion Alternation is to add a Path-denoting PP to an event which already has an internal argument. In doing so, the event is transformed into a caused-motion event, resulting in a situation where an internal argument which was formerly ‘strict’ acquires the ability to undergo case alternation. A particularly clear example of the Caused Motion Alternation being licensed in this way is shown in (182), which is extracted from a narrative. The verb *dzup-* ‘can, jar’ occurs twice in this example: first in a transitive frame, where its argument is an accusative (=χ) object in a change-of-state event; and second, in a caused-motion frame with a Path-denoting PP, where the corresponding internal argument is marked instrumental (=s).

- (182) hēmi Stevie χʷaλaχada məlik, nugʷatā dzupaχada məlik, dzupçus laχida dəmχəsğəm
 he=ʔm =i Stevie χʷaλ-a =χ=a=da məlik
 be.3DIST=VER =3DIST Stevie fillet-A =ACC=DET=OST sockeye
 nugʷa=tā dzup-a =χ=a=da məlik dzup-çu
 be.1=but can-A =ACC=DET=OST sockeye can-inside
 =s la =χ=i=da dəmχəsğəm
 =INST PREP =ACC=3DIST=OST jar

‘It’s Stevie who fillets the sockeye, but I’m the one who cans **the sockeye** (ACC), canning **it** (INST) into jars.’ (VF)

In the next three examples, I'll show in more detail how arguments which are typically strict-accusative (=x̄) acquire the ability to alternate in the vicinity of a Path-denoting PP.

Example (183) involves the verb *q̄əȳak-* 'kick'. When used as a transitive Verb of Contact, *q̄əȳak-* takes a strict-accusative (=x̄) object (183a); the strict nature of this relation is shown by the fact that substituting instrumental case for accusative results in a different thematic construal for this argument (183b). On the other hand, when a 'kicking' event is modified by adding a Path-denoting PP, the verb's internal argument acquires the ability to undergo case alternation (183c).

(183) *q̄əȳak-* 'kick'

- a. *q̄əȳaxʔidi Simonax̄a luḥ̄səm q̄əȳakasu?*
q̄əȳak-xʔid =i Simon =x̄=a luḥ̄səm q̄əȳak-a-səw̄
 kick-BEC =3DIST Simon =ACC=DET **spherical** kick-A-ACC.PASS
 'Simon is kicking **a ball** (ACC).' (VF)

- b. # *q̄əȳaxʔidi Simonasa luḥ̄səm q̄əȳakasu?*
q̄əȳak-xʔid =i Simon =s=a luḥ̄səm q̄əȳak-a-səw̄
 kick-BEC =3DIST Simon =INST=DET **spherical** kick-A-ACC.PASS
Intended: 'Simon is kicking **a ball** (INST).' (JF)

Speaker: "Uhm, no. *q̄əȳaxʔidi sis guḡəyoʔsa* ['He kicked with his legs, with...']... You're saying that he used the ball to, uh, kick with, when you're saying it that way."

- c. *q̄əȳaksudi Simona {sa, x̄a} luḥ̄səm q̄əȳakasu? laḥ̄a hənḥ̄sol̄as*
q̄əȳak-(x)so-xʔid =i Simon {=s=a, =x̄=a}
 kick-through-BEC =3DIST Simon {=INST=DET, =ACC=DET}
luḥ̄səm q̄əȳak-a-səw̄ la =x̄=a hənḥ̄-(x)so-la-ʔas
spherical kick-A-ACC.PASS PREP =ACC=DET look-through-CONT-LOC.PASS
 'Simon kicked **the ball** {INST, ACC} through a window.' (VF, JF)

Speaker: [After hearing (c) with =x̄] "Oh yeah. *ḡ̄w̄ixʔidaʔasnux̄w̄əm* ['It can be done like that']."

The next example involves the verb *da-* 'take in hand, pick up' (184). In its typical use as a transitive Obtain Verb, *da-* takes a strict-accusative (=x̄) object (184a); the strictness of this relation is apparent from the fact that substituting instrumental (=s) case for accusative results in this argument being interpreted as a different argument, namely as an Instrument (184b). On the other hand, when a *da-* event is modified through the addition of a Path-denoting PP, the internal argument acquires the ability to undergo case alternation; the possibility of realizing this argument as an instrumental object is shown in the second sentence of (184c), which is extracted from a narrative.

(184) *da-* ‘take in hand, pick up’

- a. daluḥda cədaqeḥa kʷəʔsta
 da-la =uḥ=da cədaq =ḥ=a
 take.in.hand-CONT =3MED=OST woman =ACC=DET
 kʷəʔsta
 cup
 ‘The woman is holding **a cup** (ACC).’ (VF)

- b. # dali Karenesa pəlawas
 da-la =i Karen =s=a pəlawas
 take.in.hand-CONT =3DIST Karen =INST=DET flower
 Intended: ‘Karen’s holding **the flowers** (INST).’ (JF)

Speaker: “That means she’s ‘using the flowers to hold’.”

KS: “So is that weird?”

Speaker: “Yeah.”

- c. [The speaker is telling a story about a time when a woman came to retrieve her sick dog and take her (the dog) to the veterinary hospital for treatment.]

wa:lasən ḥənyasasa cədaqı? ʔekaqılaxʷa wəʔoçi, gaḥeʔe qəs daxʔideʔḥgən waciḥ...
 walas =ən ḥənyas-a =s=a cədaq=iʔ ʔekaqıla
 big/very =1 amazed-A =INST=DET woman=INVIS take.good.care
 =ḥ=w=a wəʔoçi gaḥ=a=i qa =is
 =ACC=3MED=DET dog.PL come=EMBED=3DIST PREP =3REFL.INST
 da-xʔid=eʔ =ḥ=g=ən waci=x
 take.in.hand-BEC=NMZ =ACC=3PROX=1POSS dog=VIS

‘I was really amazed by the woman who takes good care of dogs, when she came to **take my dog** (ACC)...’ (VF)

...λu:muḥ cəxqɑ, qəs leʔ daxʔisuḥ laḥada dagʷada.

λum =uḥ cəxqɑ qa =is la=iʔ
 really =3MED sick PREP =3REFL.POSS go=NMZ
 da-xʔid =s=uḥ la =ḥ=a=da dagʷada
 take.in.hand-BEC =INST=3MED PREP =ACC=DET=OST doctor

‘...she [the dog] was really sick, to go **take her** (INST) [**the dog**] to the doctor.’ (VF)

The next example involves the verb *laqʷ-* ‘push’ (185). The context of (185a)-(185b) is one in which the *Initiator* pushes on a bed to try and move it, but no movement results. In this situation, the verb’s internal argument can only appear in accusative (=ḥ) case. However, in a context where the *Initiator*’s pushing does result in the bed undergoing caused motion, and where this motion is interpreted relative to an expressed Path, the internal argument acquires the ability to undergo case alternation (185c).

(185) *λaq^w*- ‘push’

Context: Eddie and Shelly are moving furniture out of their room, so they can renovate. They have to get the bed into the kitchen. First, Eddie tries to push the bed — but it doesn’t budge.

- a. *λaq^{wi} Eddiḡa k^walás, kiʔstá weł yawixʔida*
λaq^w =i Eddie =ḡ=a k^wəl-ʔas kiʔs=tá
 push =3DIST Eddie =ACC=DET **prone-LOC.PASS** NEG=but
weł yawix-xʔid-a
 ABIL move-BEC-A
 ‘Eddie pushed **the bed** (ACC), but wasn’t able to move (it).’ (VF)

- b. # *λaq^{wi} Eddiesa k^walás*
λaq^w =i Eddie =s=a k^wəl-ʔas
 push =3DIST Eddie =INST=DET **prone-LOC.PASS**
Intended: ‘Eddie pushed the bed (INST).’ (JF)

Speaker: “No.”

- c. *Context: [continued from (185a)] Shelly joins Eddie, and together they manage to push the bed into the kitchen.*

- λaq^{wi} Eddi ləwí Shelli {sa, ḡa} k^walás laḡa həmiksiləʔas*
λaq^w =i Eddie λw =i Shelly {=s=a,
 push =3DIST Eddie, CONJ =3DIST Shelly {=INST=DET,
 =ḡ=a} **k^wəl-ʔas** la =ḡ=a
 =ACC=DET} **prone-LOC.PASS** PREP =ACC=DET
həm-ksi-la-ʔas
 eat-occupy-CONT-LOC.PASS
 ‘Eddie and Shelly pushed **the bed** {INST, ACC} into the kitchen.’ (VF, JF)

The previous three examples have shown cases involving strict-accusative (=ḡ) arguments which acquire the ability to be instrumental (=s) marked in the vicinity of a Path-denoting PP. I have also come across one example in which the Caused Motion Alternation is licensed in the other direction — namely, where a strict-instrumental (=s) argument acquires the ability to be realized in accusative (=ḡ) case. Example (186) illustrates this possibility with the verb *ḡals-* ‘paint’ (186). In non-caused motion contexts, this verb takes a strict-instrumental (=s) argument denoting the Medium that is used to paint with (186a); the strictness of this relation is shown by the fact that when accusative is substituted for instrumental, the nominal can no longer denote the Medium of painting, but can have two other meanings, both of which involve the object being interpreted as a *Non-initiator* (186b). However, in the vicinity of a Path-denoting PP, the Medium argument acquires the ability to appear in either case (186c).¹⁴

¹⁴ Example (186) seems to pose a problem for the claim in Chapter 4, Section 4.4 that strict-instrumental relations are encoded in the grammar by syntactic [inst] features on verbs. Namely, if the strict-instrumental relation in (186a) is syntactically encoded, we expect this relation to be expressed with instrumental case in all contexts, and

(186) *ǵals-* ‘paint’

- a. *ǵəlsuǰda cədaqəsa ǵiǵna*
ǵəls =uǰ=da cədaq =s=a ǵiǵna
 paint =3MED=OST woman =INST=DET **eulachon.grease**
 ‘The woman is painting/painted **with eulachon grease** (INST).’ (VF)
- b. *ǵəlsuǰda cədaqəǰa ǵiǵna*
ǵəls =uǰ=da cədaq =ǰ=a ǵiǵna
 paint =3MED=OST woman =ACC=DET **eulachon.grease**
 i. ‘The woman is painting/painted [an image of] **eulachon grease** (ACC).’ (VF)
 ii. ‘The woman is painting/painted (on) **eulachon grease** (ACC).’ (JF)
- c. *ǵəlsʔiduǰ Mabel {sada, ǰada} bada laǰa kʷənikʷ*
ǵəls-xʔid =uǰ Mabel {s=a=da, =ǰ=a=da}
 paint-BEC =3MED Mabel {=INST=DET=OST, =ACC=DET=OST}
bada la =ǰ=a kʷənikʷ
butter PREP =ACC=DET bread
 ‘Mabel’s painting **butter** {INST, ACC} on the bread.’ (JF, VF)

In summary, on the basis of verbal semantics alone, the internal argument in the examples above are strict-accusative (183)-(185) or strict-instrumental (186). These internal arguments can, however, undergo case alternation in the vicinity of a Path-denoting PP. These examples therefore once again illustrate the generalization that modifying event structure leads to changes in object case-marking possibilities.

An even starker example of how the Caused Motion Alternation can be licensed through the modification of event structure is shown below in (187), with the verb *puxʷ-* ‘blow’. With this verb, an expressed internal argument can denote a Goal (187a), but not a Theme (187a)-(187b). However, in the vicinity of a Path-denoting PP, it becomes possible to realize an alternating Theme argument with this verb (187c).

(187) *puxʷ-* ‘blow’

- a. *puxʷuǰ Mabel a ǰusaǰ*
puxʷ =uǰ Mabel =ǰ=ʷ=a ǰusa=ǰ
 blow =3MED Mabel =ACC=3MED=DET **soup=ACC**
Can only mean: ‘Mabel blew on **the soup** (ACC).’ (VF)

therefore for (186c) with accusative case to be ungrammatical. In fact, this is the sole example in my corpus where I have witnessed event structure modification changing a strict-instrumental relation into an alternating one. All of the other examples in this chapter illustrate case alternation being licensed with otherwise strict-accusative relations. The fact that (186) is the only example of its kind lessens the immediate severity of the problem, but doesn’t eliminate it.

b. # pux^wuǎ Mabelasa yusaǎ

pux^w =uǎ Mabel =s=a yusa=ǎ
 blow =3MED Mabel =INST=DET soup=ACC

Speaker: “*ki.* [‘No.’] pux^wuǎ Mabelax^wa yusaǎ [(a)].” (JF)

c. *Context: There’s a moth just inside the window, near the screen. Shelly doesn’t want it to be in the house, so she goes and blows it outside, through the open window.*

puk^wstowi Shelli {sa, ǎa} lolinoǎ hámumu laǎa ǎasanoyi
 pux^w-(ǎ)so =i Shelly {=s=a , =ǎ=a}
 blow-through =3DIST Shelly {=INST=DET , =ACC=DET}
 lolinoǎ hámumu la =ǎ=a ǎasanoyi
 ghost butterfly PREP =ACC=DET outdoors
 ‘Shelly blew **the moth** {INST, ACC} to the outdoors.’ (VF, JF)

What this example shows is that in addition to licensing case alternation on an existing internal argument (as shown above), modifying an event description with a Path-denoting PP can also license the presence of an object where we wouldn’t expect it on the basis of verbal semantics alone. This pattern is not unique to Kwakwala; English has its own caused motion construction in which the same semantic conditions that are relevant in Kwakwala can license a direct object where one is not expected on the basis of verbal entailments (Goldberg 1995, Levin & Rappaport-Hovav 1995). The English caused motion construction is illustrated in (188) with the intransitive verb ‘sneeze’ (188a). While this verb cannot take an object on its own (188b), an object can be realized in the presence of a Path-denoting PP (188c).

- (188) a. Fred sneezed.
 b. *Fred sneezed the napkin.
 c. Fred sneezed the napkin off the table. (Goldberg 1995: pg. 156)

A directly corresponding Kwakwala example is shown in (189), where the verb ʔaska ‘sneeze’ appears with an alternating Theme argument and a Path-denoting PP.

(189) ʔaska ‘sneeze’

Context: Monica has really bad allergies, and is sneezing all the time. There’s a tea-towel on the table. She sneezes so hard that she sneezes the tea-towel off the table, onto the floor!

lami Monica ʔaksʔi {sa, ǎa} diǎomyu laǎ^wa tebəl laǎa ʔawinaʔgwił
 lə=ʔm =i Monica ʔəsx¹⁵-xʔid {=s=a , =ǎa} diǎomyu
 AUX=VER =3DIST Monica sneeze-BEC {=INST=DET , =ACC=DET} tea.towel
 la =ǎ=^w=a tebəl la =ǎ=a ʔawinaʔgwił
 PREP =ACC=3MED=DET table PREP =ACC=DET floor.in.house
 ‘Monica sneezed **the tea-towel on the table** {INST, ACC} onto the floor.’ (VF, JF)

¹⁵ This root has undergone metathesis.

Modification with a Path-denoting PP is a form of secondary resultative predication, a phenomenon which is cross-linguistically associated with the ability to license objects (Rappaport-Hovav & Levin 2001, Rothstein 2004: p. 59-90, Beavers 2012, Williams 2015: p. 307-334). The existence of this phenomenon in Kwakwaka is significant because it illustrates yet again how modifying event structure changes the possibilities for object realization.

A final set of examples illustrating the Caused Motion Alternation is shown in (190)-(191) below, repeated from Chapter 3, Section 3.4.2. In these examples, the dummy root *ʔəx̣-* forms a verbal predicate with no lexical entailments. When combined with either an instrumental (190) or accusative (191) object and a Path-denoting PP however, an interpretation of caused motion in a direction results.

(190) PUT (something)(somewhere): =*s*, *la*

Context: [The speaker watches as KS puts a hat into the fridge]

lu ^{x̣}	Katiyə ^{x̣}	ʔə ^{x̣} ʔid	su^{x̣}da	ʔətəml	la ^{x̣} wa	wədəʔa ^{ci}	
lə	=u ^{x̣}	Katie= ^{x̣}	ʔə ^{x̣} -xʔid	=s= u^{x̣}=da		ʔətəml	
AUX	=3MED	Katie=VIS	DO-BEC	=INST=3MED=OST		hat	
la	= ^{x̣} = ^w =a		wəd- _h a ^{ci}				
	PREP	=ACC=3MED=DET	cold-container				

‘Katie is putting **the hat** (INST) into the fridge.’ (VF)

(191) PUT (something)(somewhere): =^{x̣}, *la*

Context: [The speaker watches as KS puts a hat into the fridge]

lu ^{x̣}	Katiyə ^{x̣}	ʔə ^{x̣} ʔid	x̣u^{x̣}da	ʔətəml	la ^{x̣} wa	wədəʔa ^{ci}	
lə	=u ^{x̣}	Katie= ^{x̣}	ʔə ^{x̣} -xʔid	= ^{x̣} = u^{x̣}=da		ʔətəml	
AUX	=3MED	Katie=VIS	DO-BEC	=ACC=3MED=OST		hat	
la	= ^{x̣} = ^w =a		wəd- _h a ^{ci}				
	PREP	=ACC=3MED=DET	cold-container				

‘Katie is putting **the hat** (ACC) into the fridge.’ (JF)

These examples are significant because they illustrate the constructional basis of the Caused Motion Alternation. In (190)-(191), the verb contributes no lexical entailments; the presence of a Path-denoting PP nevertheless modifies the event description by identifying the event’s temporal initial bound with the initial spatial point on the expressed Path and its temporal final bound with the endpoint on the same Path. Together with the addition of an external argument, this gives rise to an event description involving caused motion in a direction. The schema in (173) is thereby realized, and an internal object can be expressed in either case.

In summary, the data in this section show when an event description is modified so that it fits the frame in (173), case marking possibilities relative to the event change accordingly. This pattern constitutes a strong argument for the main claim this chapter set out to prove: namely, that modifications to event structure lead to changes in case-marking potential.

5.4 Semantic incorporation with *-(g)ila*

The verb *-(g)ila*¹⁶ is a lexical suffix meaning ‘make, create’, which optionally occurs with an incorporated nominal.¹⁷ When *-(g)ila* doesn’t incorporate a nominal, it attaches to the dummy root *ʔəx̣-* and can only take an accusative object (192a). On the other hand, when *-(g)ila* does incorporate a nominal, a hyponymous object can be expressed in either instrumental (=s) or accusative case (=x̣) (192b).

(192) Case marking in *-(g)ila* predicates

	Stem	Suffix	Object case	Gloss
a.	<i>ʔəx̣-</i>	<i>-(g)ila</i>	*INST, ACC	‘to make (something)’
b.	<i>N-</i>	<i>-(g)ila</i>	INST, ACC	‘to <i>N</i> -make an <i>N</i> ’

In this section, I’ll argue that the reason for this difference in object case possibilities derives from the semantic effects of nominal incorporation, which I will analyze as an instance of semantic incorporation (van Geenhoven 1998). In particular, I’ll propose that semantic incorporation of a nominal modifies the verb of pure creation in (192a) so that it becomes a verb of simultaneous creation and expression. In this way, stems consisting of *-(g)ila* and an incorporated nominal are analogous to verbs like *dən̄x̣-* ‘sing’, *yəx̣w-* ‘dance (in the Bighouse)’, and *ʔəmt-* ‘play (a game)’, which in Kwakwaka take alternating objects.

The argument will be developed in a somewhat different order than in Sections 5.2 and 5.3. I’ll begin by outlining the Kwakwaka pattern and providing a semantic analysis of it (Section 5.4.1). Then, I’ll proceed to explain why this semantic analysis predicts the licensing of case alternation on objects, with reference to the case-marking behaviour of Performance Verbs.

5.4.1 Licensing case alternation through incorporation

The verb *-(g)ila* ‘make’ is one of relatively few affixal predicates in Kwakwaka which allow productive incorporation of nominal stems. An example of a *-(g)ila* predicate with an incorporated nominal, *ʔubək^w* ‘BBQ-ed salmon’, is shown in (193). When a nominal is not incorporated, *-(g)ila* attaches to the dummy root *ʔəx̣-* ‘do’ (194).

¹⁶ The suffix *-(g)ila* may actually consist of two suffixes, *-(g)i* ‘make, do’ and *-la* ‘continuative’, though I’ve never seen *-(g)i* used on its own. Alternatively, it’s possible (and I think likely) that the suffix synchronically is *-(g)ila*, and that **(g)ila-la* is prevented by general constraints against haplology. I follow Boas (1947) in glossing *-(g)ila* as a single morpheme here.

¹⁷ The suffix *-(g)ila* can also incorporate verbs, in which case it behaves like a causative (e.g. *hm-* ‘eat’, *həmgila* ‘feed’). This causative use is only somewhat productive however, in contrast with fully productive causative *-mas*. I won’t have anything further to say about verbal incorporation with *-(g)ila* here.

(193) *Context: Abby is doing two things at once; she's cooking potatoes in the kitchen, and barbecuing salmon outdoors.*

hamiksiluḥ ḡa k^wuʔsiḥ luḥ ʔubək^wila laḡada ʔasanoʔi
 həm-i-ksi-la =uḥ =ḡ=a k^wuʔsi=ḡ la =uḥ
 eat-NMZ-occupy-CONT =3MED =ACC=DET potato=VIS AUX =3MED
 ʔubək^w-(g)ila-a la =ḡ=a=da ʔasanoʔi
BBQed.salmon-make-A PREP =ACC=DET=OST outdoors
 ‘She’s cooking potatoes and **BBQ salmon-making** outdoors.’ (VF)

(194) ləm̄isida ǰ^wəlyak^w ʔəḡilaḡada dustaq^waḡ ǰəʔənuʔḡ^w
 lə=ʔm=is =i=da ǰ^wəlyak^w ʔəḡ-(g)ila-a =ḡ=a=da
 AUX=VER=and =3DIST=OST elder **DO-make-A** =ACC=DET=OST
 dustaq^wa=ḡ ǰa =ənuʔḡ^w
 blackberry.dessert=VIS PREP =1EXCL
 ‘Then the old lady **made** black berry (ACC) dessert for us.’ (Cranmer & Janzen, p. 42)

When *-(g)ila* attaches to the dummy root *ʔəḡ-*, expression of an object is obligatory (195).

(195) * ʔəḡiloḡda ǰədaq
 ʔəḡ-(g)ila =oḡ=da ǰədaq
 DO-make =3MED=OST woman
Literally: ‘The woman is making.’ (JF)

Speaker: “But what is she *ʔəḡila*?”

Expression of an object is not obligatory, however, in *-(g)ila* predicates where a nominal is incorporated (193).

The crucial pattern for our purposes is illustrated in (196)-(197) below, where we observe a difference in object case-marking potential depending on whether or not a nominal has been incorporated. When there is no incorporation, *-(g)ila* ‘make’ takes a strict-accusative argument (196a). Evidence for the strictness of this relation comes from the fact that substituting instrumental (=s) results in the internal argument being interpreted as an Instrument (196b). On the other hand, when a nominal is incorporated, a hyponymous object can be expressed in either case, as shown in (197a) with the incorporated nominal *nəx^wəneʔ* ‘blanket’. The expression of the object is optional in these predicates, as shown in (197b).

(196) *ʔəḡ-(g)ila* takes a strict-accusative (=ḡ) object

a. ʔəḡʔiluḥ Hopəḡ^wa ǰulaḡ nəx^wəneʔ
 ʔəḡ-(g)ila =uḥ Hope =ḡ=w=a ǰula=ḡ nəx^w-(k)ən=eʔ
 DO-make =3MED Hope =ACC=3MED=DET **black=VIS** **wrap-body=NMZ**
 ‘Hope is making **a black blanket** (ACC).’ (VF)

- b. # ʔəḥʔiluḥ Hopiḥsuḥ ʔuliḥ nəxʷəneʔ
 ʔəḥ-(g)ila =uḥ Hope=ḥ =s=uḥ ʔula=ḥ nəxʷ-(k)ən=eʔ
 DO-make =3MED Hope=VIS =INST=3MED black=VIS wrap-body=NMZ
Intended: ‘Hope is making a **black blanket** (INST).’ (JF)

Speaker: “ki [‘No’].”

KS: “Kay. Does that mean she’s ‘using the blanket to make’, what else?”

Speaker: “Mhm [‘Yes’].”

(197) *N-(g)ila* (optionally) takes an alternating {s, =ḥ} object

- a. nəxʷəneʔgiluḥ Hopiḥ {sa, ḥa} ʔultu nəxʷəneʔ
 nəxʷ-(k)ən=eʔ-(g)ila =uḥ Hope=ḥ {=s=a, =ḥ=a}
 wrap-body=NMZ-make =3MED Hope=VIS {=INST=DET, =ACC=DET}
 ʔultu nəxʷ-(k)ən=eʔ
 black wrap-body=NMZ
 ‘Hope is blanket-making a **black blanket** {INST, ACC}.’ (VF, JF)
- b. nəxʷəneʔgiluḥ Hopiḥ
 nəxʷ-(k)ən=eʔ-(g)ila =uḥ Hope=ḥ
 wrap-body=NMZ-make =3MED Hope=VIS
 ‘Hope is blanket-making / Hope is making a blanket.’ (VF)

Examples like (197a) involving both nominal incorporation and expression of a hyponymous object are most naturally volunteered in contexts where information is being added which restricts the argument; in (197a) for instance, information is added that the blanket being made is black. When a hyponymous object is not expressed in a structure with nominal incorporation, its existence is nevertheless still implied. This is illustrated in (198), where we see an indefinite discourse referent introduced by the predicate *xʷakʷənaḡila* ‘canoe-make’ in the first sentence being referred back to by the pronominal object form =ḥʷ in the second sentence.

(198) *Context: I spent all afternoon working on building a canoe, but I didn’t finish it. At the end of the day someone phones and asks what I did all day.*

xʷakʷənaḡilən waxa. kəstən ḡʷaʔamasəḥʷ
 xʷakʷəna-(g)ila =ən wax-a kiʔs=ta =ən ḡʷaʔ-a-mas =ḥʷ
 canoe-make =1 try-A NEG=but =1 finish-A-CAUS =ACC=3MED
 ‘I was trying to make a canoe, but I didn’t finish **it** (ACC).’ (VF)

Something important to note about nominal incorporation with *-(g)ila* is that it only licenses case alternation in productive instances of nominal incorporation. For instance, with the verb stem *gukʷila* (literally: ‘house-make’), it isn’t possible to express an object in the instrumental case (199b), (200b). Presumably, this is because this verb has become at least somewhat conventionalized to mean ‘build’, as evidenced by the fact it can (somewhat marginally) take a non-hyponymous object (200a).

(199) *guk^wila* ‘build’ takes a strict-accusative (=ǰ) object

- a. *guk^wiluǰ Eddiyǰǰ ǰa ǰǰmeǰ guk^w*
guk^w-(g)ila =uǰ Eddie=ǰ =ǰ=a ǰǰm=eǰ guk^w
 house-make =3MED Eddie=VIS =ACC=DET **small=INVIS house**
 ‘Eddie is building **a small house** (ACC).’ (VF)
- b. **guk^wiluǰ Eddiyǰǰsa ǰǰmeǰ guk^w*
guk^w-(g)ila =uǰ Eddie=ǰ =s=a ǰǰm=eǰ guk^w
 house-make =3MED Eddie=VIS =INST=DET **small=INVIS house**
Intended: ‘Eddie is building **a small house** (INST).’ (JF)

Speaker: “*ki*.” [‘No.’]

(200) *guk^wila* ‘build’ can marginally take a non-hyponymous object

- a. ? *guk^wili Eddiǰǰ ǰǰǰuǰǰaǰas*
guk^w-(g)ila =i Eddie =ǰ=a ǰǰǰuǰǰaǰas
 house-make =3DIST Eddie =ACC=DET **school**
 ‘Eddie is building **a school** (ACC).’ (JF)
Literally: ‘Eddie is house-making a school.’
- Speaker:** “That’s okay. It’s understandable.”
KS: “Is it weird at all?”
Speaker: “Yeah, kind of, but it’s understandable.”¹⁸
- b. * *guk^wili Eddisa ǰǰǰuǰǰaǰas*
guk^w-(g)ila =i Eddie =s=a ǰǰǰuǰǰaǰas
 house-make =3DIST Eddie =INST=DET **school**
Intended: ‘Eddie is building **a school** (INST).’ (JF)

Speaker: [*shakes head, indicating no*]

These data are significant, then, because they show that it is specifically *productive* instances of nominal incorporation which work to license case alternation; stems like *guk^wila* on the other hand, which are partially conventionalized, do not license case alternation.

To explain why nominal incorporation with *-(g)ila* licenses an alternating object, we need to first figure out what kind of incorporation this is. A first possibility is that it’s syntactic incorporation, as discussed in Baker (1988). On Baker’s analysis, the nominal that is incorporated starts out as the verb’s syntactic object and undergoes head movement to adjoin to the verb. Crucially, there is only one nominal in the derivation, which is either expressed as an object, or incorporated into the verb. We therefore expect it to be impossible, on this analysis, to express both an object and an incorporated nominal at the same time, which makes this analysis problematic in light of data like (197a). Baker’s (1988) analysis does, however, allow for the

¹⁸ I suspect that speakers find examples like (200a) iffy because *guk^wila* is semantically transparent and this makes it so that the compositional meaning of this form (‘house-make’) competes with the conventionalized one (‘build’).

expression of a hyponymous nominal as a syntactic adjunct (p. 144-6). In Kwakwala, the instrumental/accusative-alternating object in data like (197a) is not clearly an adjunct. Therefore, I assume that incorporation with *-(g)ila* is not of the syntactic variety specifically discussed in Baker (1988).

Another type of incorporation, which is known to be instantiated within the Wakashan language family, is incorporation via head-movement at PF, or PF-incorporation (Wojdak 2008). The idea behind PF-incorporation is that with affixal predicates that allow incorporation, only the element that is linearly adjacent to the predicate at PF can incorporate. PF-incorporation is illustrated with data from the Southern Wakashan language Nuu-chah-nulth in (201)-(202) with an affixal verb meaning ‘consume’. In the data in (201), the verb is attached to a dummy root; this data shows that modifiers obligatorily precede the nominal in noun phrases. The data in (202), in which incorporation has occurred, illustrate how incorporation is constrained by linear adjacency rather than by syntactic or semantic relations. If only a nominal is present it can incorporate (202a), but if a modifier is also present, only the modifier can incorporate (202b)-(202c).

- (201) a. ʔuʔiicʔiʃʔaʔ haʔum ʔaapinis *Nuu-cha-nulth*
 ʔu-ʔiic-ʔiiʃ-ʔaʔ haʔum ʔaapinis
 ∅-**consume**-3.IND-PL tasty apples
 ‘They are eating delicious apples.’ (Wojdak 2008: p. 43)
- b. * ʔuʔiicʔiʃʔaʔ ʔaapinis haʔum *Nuu-cha-nulth*
 ʔu-ʔiic-ʔiiʃ-ʔaʔ ʔaapinis haʔum
 ∅-**consume**-3.IND-PL apples tasty
 ‘They are eating delicious apples.’ (Wojdak 2008: p. 43)
- (202) a. ʔaapiniyicʔiʃʔaʔ *Nuu-cha-nulth*
 ʔaapinis-ʔiic-ʔiiʃ-ʔaʔ
 apples-**consume**-3.IND-PL
 ‘They are eating apples.’ (Wojdak 2008: p. 44)
- b. * ʔaapiniyicʔiʃʔaʔ *Nuu-cha-nulth*
 ʔaapinis-ʔiic-ʔiiʃ-ʔaʔ haʔum
 apples-**consume**-3.IND-PL tasty haʔum
 Intended: ‘They are eating delicious apples.’ (Wojdak 2008: p. 44)
- c. haʔumʔicʔiʃʔaʔ ʔaapinis *Nuu-cha-nulth*
 haʔum-ʔiic-ʔiiʃ-ʔaʔ ʔaapinis
 tasty-**consume**-3.IND-PL apples
 ‘They are eating delicious apples.’ (Wojdak 2008: p. 43)

Though Kwakwala does possess a few predicate-modifying enclitics which incorporate their complement in this manner (Littell 2016: p. 549-551), the suffix *-(g)ila* is not one of them. This is shown in (203), where the speaker rejected attempts to incorporate either the adjective (203a) or the noun (203b)-(203c) in a *-(g)ila* predicate.

- (203) a. * $\acute{c}ultugilux$ Hopi \acute{x} a $nax^w\acute{a}ne?$
 $\acute{c}ultu$ -gila =u \acute{x} Hope= \acute{x} = \acute{x} =a nax^w -(k) $\acute{a}n=e?$
black-make =3MED Hope=VIS =ACC=DET wrap-body=NMZ
Intended: ‘Hope is making/made a **black** blanket (ACC).’ (JF)
Speaker: “That was really bad.”
- b. * $nax^w\acute{a}ne?$ gilux Hopi \acute{x} a $\acute{c}ultuwa?$
 nax^w -(k) $\acute{a}n=e?$ -gila =u \acute{x} Hope= \acute{x} = \acute{x} =a $\acute{c}ultu=a?$
wrap-body=NMZ-make =3MED Hope=VIS =ACC=DET **black**=INVIS
Intended: ‘Hope is making/made a black **blanket** (ACC).’ (JF)
- c. * $nax^w\acute{a}ne?$ gilux Hopisa $\acute{c}ultuwa?$
 nax^w -(k) $\acute{a}n=e?$ -gila =u \acute{x} Hope= \acute{x} =s=a $\acute{c}ultu=a?$
wrap-body=NMZ-make =3MED Hope=VIS =INST=DET **black**=INVIS
Intended: ‘Hope is making/made a black **blanket** (INST).’ (JF)

On the basis of this data, I conclude that nominal incorporation with *-(g)ila* is not PF-incorporation of the type documented by Wojdak.

Instead, I assume that nominal incorporation with *-(g)ila* is semantic incorporation, in particular the variety proposed in Chung & Ladusaw (2004). The idea is that the denotation of an incorporated element serves to restrict — rather than saturate — a semantic argument of the predicate. This restriction is modelled using a semantic operation which Chung and Ladusaw refer to by the name ‘Restrict’. The mechanics of Restrict are illustrated in (204) with the nominal stem *nax^wane?* ‘blanket’ from example (197) above. This nominal modifies the predicate by placing a restriction on its internal argument, though it does not saturate this argument.

- (204) i. Denotation of *-(g)ila*: $\lambda x_e.\lambda e_v.making(e) \ \& \ Patient(e, x)$
 ii. Denotation of *nax^wane?*: $\lambda x_e.blanket(x)$
 iii. Denotation of *nax^wane?gila*:
Restrict ($\llbracket -(g)ila \rrbracket, \llbracket nax^w\acute{a}ne? \rrbracket$)
 = **Restrict** [$\lambda x_e.\lambda e_v.making(e) \ \& \ Patient(e, x)$]($\lambda x_e.blanket(x)$)
 = $\lambda x_e.\lambda e_v.making(e) \ \& \ Patient(e, x) \ \& \ \mathbf{blanket}(x)$

If the predicate *nax^wane?gila* is used in a sentence without a syntactic object, as it is in (197b), existential closure applies and the object receives an indefinite interpretation. If on the other hand a syntactic object is expressed, as it is in (197a), then this object saturates the predicate via function application, just like any other object of a transitive verb. Note that an expressed object must satisfy whatever restriction was placed on the predicate via nominal incorporation; this explains why these objects are hyponymous with respect to the nominal stem.

With this semantic analysis of the effects of nominal incorporation in place, what remains to be explained is why incorporating a noun has the effect on object case realization that it does. What is it about placing a restriction on the internal argument of the Creation Verb, *-(g)ila*, that makes it possible to express this argument as an object in either case? In the next section, I’ll turn to another class of verbs with alternating objects for an answer.

5.4.2 Case alternation and the semantics of Performance Verbs

In order to understand how, exactly, nominal incorporation licenses case alternation, it's worth taking a moment to first consider how the case-marking behaviour of *-(g)ila* 'make' predicates *without* nominal incorporation can be explained by the Initiating Subevent Theory. The verb *-(g)ila*, on its own, is a pure verb of creation; in other words, the meaning of a predicate formed from *-(g)ila* and the dummy root *ʔəx̃-* is that of an event in which an internal argument is brought into existence through the creative action of an *Initiator*. The Initiating Subevent Theory correctly predicts that the internal argument of an *ʔəx̃ila* predicate will be strict-accusative (=x̃) on the basis that it satisfies the *Non-initiator* criterion *final bound*, while failing to satisfy any of the conditions for being a *Co-Initiator*. Similarly, recall that the predicate *guk^wila* (*Literally*: 'house-make') behaves like *ʔəx̃ila* in requiring an accusative object; this is explained by the fact that this predicate's meaning has been (at least somewhat) conventionalized in the modern language so that it, like *-(g)ila* predicates without an incorporated nominal, is a pure verb of creation, roughly meaning 'build' (= create a building').

How, then, can we explain the fact that restricting the denotation of *-(g)ila*'s internal argument suffices to license case alternation? I propose that the answer to this question relates to the semantics of another class of verbs in Kwakwaka which take an alternating internal argument: namely, the class of verbs I referred to as Performance Verbs in Section 3.2.3. These are verbs such as *dəñx̃-* 'sing', *ʔəml̃-* 'play' (as in 'play a game'), and *yəx̃^w-* 'dance (in the Bighouse)', shown in (205)-(207) below. Other members of this class include *gət-* 'draw, create (artwork)', *kakadək^wsila* 'read (aloud)', *lip-* 'play cards', and *nus-* 'tell history or legends'.

(205) *dəñx̃əlũx̃ Mabel̃{x̃a, x̃a} ʔəmdəm*
dəñx̃-la =ũx̃ Mabel̃=x̃ {=s=a , =x̃=a} ʔəmdəm
sing-CONT =3MED Mabel̃=VIS {=INST=DET , =ACC=DET} song
 'Mabel's singing **a song** {INST, ACC}.' (VF, VF)

(206) *yəx̃^wəx̃ Shellỹəx̃{x̃a, x̃a} ʔəlq^wala*
yəx̃^w =əx̃ Shellỹ=x̃ {=s=a , =x̃=a} ʔəlq^wala
dance =3.MED Shellỹ=VIS {=INST=DET , =ACC=DET} ladies'.dance
 'Shelly is dancing **the ladies' dance** {INST, ACC}.' (VF, VF)

(207) *ʔəml̃ən{x̃a, x̃a} Backgammon*
ʔəml̃ =ən {=s=a , =x̃=a} Backgammon
play =1 {=INST=DET , =ACC=DET} Backgammon
 'I'm playing **Backgammon** {INST, ACC}.' (VF, VF)

Verbs of this class involve meaning elements of both creation and expression; concomitantly, their internal argument can be taken to denote something that is created as well as expressed by an *Initiator* in the course of an event. It is these arguments' dual nature — the fact that they are simultaneously created and expressed in the course of an event — which I propose underlies their ability to undergo case alternation.

First, let's consider the sense in which these verbs entail creation. A first thing we can observe about the internal arguments of these verbs is that they serve to measure out the event. This is what leads Tenny (1994) to analyze the internal argument of verbs like 'dance' and 'sing'

as a kind of (non-spatial) Path argument. In describing the verb phrase ‘play a sonata’, she remarks:

“Direct arguments that are events or performances may also be path objects... This verb phrase [‘play a sonata’] describes an event of playing (say a piano or cello) which proceeds through the sonata in question from beginning to end. The end of the playing is the end of the sonata. **The sonata ... provides a measure of the event.** Like incremental themes, path objects have the property that increments of the object may be associated with temporal increments of the event. Unlike incremental themes, path objects do not necessarily undergo change during the event.” (Tenny 1994: p. 17-18) [*emphasis added*]

Translated into our framework here, the path-like nature of Performance Verbs’ internal argument qualifies them as *Non-initiators*, on account of their satisfying the criterion *final bound*. This observation explains why these arguments are able to appear in accusative (=x̄) case, and also highlights a significant way in which Performance Verbs resemble Creation Verbs: namely, both verb classes take an internal argument that measures out the event incrementally, hence one which satisfies *final bound*.

On the other hand, Performance Verbs are not pure Creation Verbs; their meaning also involves some sort of expression. Massam (1990) for instance writes that “with verbs of artistic action such as *dance* and *sing* the term ‘expression’ is appropriate, since one does not create Swan Lake by dancing it, but rather gives it a particular instantiation.” (p. 171) Intuitively, this sense of ‘expression’ is connected to the notion of a means. A song that is sung is in a sense, one’s means of singing — a dance, one’s means of dancing — and a game, one’s means of playing. These internal arguments denote, in other words, the particular *way* in which these event are instantiated. By denoting the means by which an event is instantiated, these arguments can be seen to satisfy *dependent cause*. This, in turn, explains why they can appear in instrumental (=s) case.

In summary, the reason that Performance verbs’ internal argument undergoes case alternation is that they function simultaneously as *Co-initiators* and as *Non-initiators* of their events. On the one hand, they denote the means by which the event is instantiated and are thereby expressed in the course of the event, and this qualifies them as *Co-initiators*. On the other hand, they measure out the temporal extent of the event, and this qualifies them as *Non-initiators*.

In short, I propose that the reason nominal incorporation with *-(g)ila* ‘make’ licenses case alternation is that restricting the internal argument of *-(g)ila* — a pure Creation Verb — transforms a *-(g)ila* predicate into one which expresses both creation and expression — just like Performance Verbs. Thus, in the same way that the internal argument of *dən̄x̄-* ‘sing’ name both the way in which the event is expressed or instantiated and functions to measure out the event, so too does the *nəx̄ʷəneʔ* (‘blanket’) in a *nəx̄ʷəneʔgila* (‘blanket-making’) event name the way that the event is expressed or instantiated while also defining the event’s final bound.

In summary, I’ve argued that placing a restriction on the internal argument in a creation event, achieved through semantic incorporation of a nominal stem with *-(g)ila* ‘make’, transforms a Creation Verb into a kind of Performance Verb. This verb then patterns like other Performance Verbs in allowing its internal object to undergo case alternation. In conclusion, this pattern provides yet another illustration of the general point this chapter set out to make, which is that modifying the structure of an event has repercussions for the realization of object case.

5.5 Conclusion

The purpose of this chapter was to provide supporting evidence for the Initiating Subevent Theory of object case in K^wak^wala, in particular for the claim that object case distinctions are grounded in event structure.

New evidence was provided throughout the chapter for the existence of correlations between verb meaning and particular case frames. In Section 5.2.1, I showed that the semantic notion of being directly manipulated by an *Initiator* is crucial for explaining why the internal arguments of Manipulation/Change Verbs and Stir/Tow Verbs can undergo case alternation in every context these verbs are used. Any internal argument which undergoes case alternation due to it being both directly manipulated by an *Initiator* and undergoing change, was said to undergo the Direct Manipulation Alternation. Then in Section 5.3.1, we saw that the semantic notions of caused motion relative to a Path are crucial for explaining case alternation with the internal argument of Transfer Verbs. Namely, any internal argument which undergoes alternation due to the fact that it undergoes caused motion along a Path is said to undergo the Caused Motion Alternation. Finally, in Section 5.4.2, we saw that the notions of creation and expression are both crucial for explaining why the internal argument of Performance Verbs undergoes case alternation (Section 5.4.2).

The strongest evidence presented in this chapter for a link between case and event structure came from observing a range of dynamic correlations between semantic factors and case — instances, that is, where we witnessed object case alternation being licensed by semantic factors independent of verb meaning. I presented three lines of empirical evidence of this sort, each of which demonstrated how modifying event structure leads to changes in object case possibilities. In Section 5.2.2, I showed that in contexts where an *Initiator* directly manipulates an object which also undergoes change, instrumental case can be licensed on that object, even when we'd expect it to be strict-accusative on the basis of verbal semantics alone. Here, the Direct Manipulation Alternation is licensed by context. Then, in Section 5.3.2, I showed that modifying an event with a Path-denoting PP consistently licenses an alternating internal argument — even in cases where we would expect only a strict internal argument to be possible, or for no internal argument to be possible at all. Here, the Caused Motion Alternation is licensed by PP-modification. Finally, in Section 5.4.1-5.4.2, I showed that placing semantic restrictions on the internal argument in a creation event transforms this event into one which involves simultaneous creation and expression of an object, thereby licensing case alternation. Here, case alternation is licensed by semantic incorporation of a nominal stem with the affixal verb *-(g)ila* 'make'. These three dynamic ways of licensing case alternation through event modification provide strong evidence for the claim that event structure determines case possibilities in K^wak^wala. They are summarized in Table 5.1.

Empirical phenomenon	Method of licensing (via event structure modification)	Effect on case marking possibilities
Direct Manipulation Alternation	Information is added by context, so that an internal argument which undergoes caused change is also interpreted as being directly manipulated by the <i>Initiator</i> in the course of the event	An otherwise strict-accusative (=x̄) argument acquires the ability to undergo {=s, =x̄} alternation
Caused Motion Alternation	An event description is modified by a Path-denoting PP (and in some cases, an external argument is added); this transforms the event into a caused-motion event, where the event's final bound is defined by the Path's endpoint	An otherwise strict-instrumental (=s) or strict-accusative (=x̄) argument acquires the ability to undergo {=s, =x̄} alternation; OR the presence of an alternating object is licensed where it otherwise wouldn't be possible
Semantic incorporation with <i>-(g)ila</i> 'make'	An incorporated nominal modifies a pure creation event by semantically restricting the way in which creation comes about; this transforms the event into one in which the internal argument is both expressed and created	An otherwise strict-accusative (=x̄) argument acquires the ability to undergo {=s, =x̄} alternation

Table 5.1: Summary of ways in which modifying events changes case-marking possibilities

The broader theoretical significance of these findings lies in the fact that they provide evidence for the separability of event-structural meaning from verb meaning. Thus, while we've seen ample evidence throughout this dissertation for the idea that verb meaning *constrains* object case possibilities, the empirical phenomena described in this chapter show that verbs nevertheless fail to *determine* object case possibilities. The distribution of object case in K^{wakwala} is determined, rather, by event structure. In the next chapter, I'll propose an analysis of how exactly the event structural distinction between *initiating* and *non-initiating* subevents is grammaticalized in K^{wakwala}. To do this, I'll need to zoom out and consider K^{wakwala}'s object case system from a wider, cross-linguistic perspective.

6

K^wak^wala's Object Case System in Cross-Linguistic Perspective

6.1 Introduction

The previous five chapters have been focused on developing a semantic theory that accounts for the distribution of object case in K^wak^wala. The purpose of the current chapter is to zoom out and see K^wak^wala's object case system in cross-linguistic perspective, to understand what the K^wak^wala system reveals about language in general.

The first finding that emerges when we begin to compare K^wak^wala's object case system with case systems in other languages is that the K^wak^wala system is, in some ways, unique. To the best of my knowledge, K^wak^wala is the first language reported which possesses a two-object case system consisting of an interpretable instrumental-like case, opposed to an *uninterpretable* accusative-like case — or in other words, where a marked object category is semantically associated with *initial* subevents, while an unmarked object category is associated with *final* subevents. This particular pattern of markedness appears to be otherwise unattested in the current literature on two-object case systems.¹ One achievement of the current study, then, is that it expands our knowledge about what a possible object case system looks like.

Abstracting away from the particular properties of K^wak^wala's object case system, however, we find plenty of other languages which tie object encoding to properties of event structure. What is striking about these other languages, however, is that they all involve an association between some aspect of object encoding and the *final* bound of events — more specifically, between objects and telicity. For instance, accusative case on an object is tied to telicity in Finnish (Leino 1982, Heinämäki 1984, 1984, Vainikka 1989, Kratzer 2004), and the head-marking equivalent of this same pattern is seen in Skw^wmesh (Salish), where telicity is tied to the position of object agreement (Jacobs 2011). An object's position in syntax is also associated with telicity in Scottish Gaelic (Ramchand 1997), Hindi (Mahajan 1990), Turkish (Aydemir 2004), German (Kratzer 2004), and English (Kratzer 2004, Ramchand 2008). In fact, the association between object interpretation and telicity is so widespread that it is often built into models of the syntax-semantics interface (e.g. Borer 2005: p. 72, Ramchand 2008: p. 32-40, Travis 2010: p. 9-11, 118-122). In short, while languages which manifest an association between object-encoding and *final* subevents are well-attested, K^wak^wala shows that it is also possible for a language to manifest the opposite association, namely between object-encoding and *initial* subevents.

In order to clearly understand how K^wak^wala's object case system manifests the opposite object-encoding pattern from the languages cited above, I'll devote the first part of this chapter to developing an in-depth comparison between K^wak^wala's object case system and the partitive-accusative object case system in Finnish, which I'll show is, semantically-speaking, the mirror

¹ To be clear: it's possible that this pattern is attested somewhere, but I've missed it. It's also possible there are case systems already described in the literature which would, on closer inspection, turn out to resemble K^wak^wala's in the relevant respects.

opposite of K^wak^wala's instrumental-accusative system. We'll see that this mirroring explains a stark difference between the two languages in how telicity is encoded: that while telicity is tied to object case in Finnish, object case is independent of telicity in K^wak^wala.² On the basis of mirror-image similarities between these two languages in the semantics of object case, I will propose a syntactic analysis of K^wak^wala object case that is based off of the analysis Kratzer (2004) provides for Finnish.

Seen in the light of this mirror opposition, K^wak^wala illuminates the existence of a higher-order pattern: namely, a pattern whereby languages have a tendency to tie object-encoding to event structure, but differ in terms of which part of event structure they grammaticalize. Later in this chapter, I'll discuss how this finding fits into Ritter & Rosen's (2000) claim that languages are bifurcated into two types — I(nitiator)-languages and D(elimiting)-languages — depending on whether they grammaticalize the *initial* or *final* bound of events. Previous to the current study, being an I-language has been defined solely in relation to how subjects are encoded; K^wak^wala, on the other hand, manifests the property of being an I-language in terms of how objects are encoded, in addition to how subjects are. By validating the typological theory of Ritter & Rosen (2000), we'll see that K^wak^wala's object case system, while unique, is far from anomalous: it is, in fact, exactly the type of system we'd expect to see instantiated in some language or other on the basis of already-attested patterns.

The rest of this chapter is organized into four sections, as follows:

- In Section 6.2, I provide an overview of the Finnish object case system as analyzed in Leino (1982), Heinämäki (1984, 1994), Vainikka (1989), and Kratzer (2004), in which accusative case is interpretable and partitive case is uninterpretable. I show that accusative objects entail telicity, while partitive object implicate atelicity. Atelicity in Finnish also arises in connection with the expression of bare plural and mass noun objects.
- In Section 6.3, I discuss some semantic consequences of the fact that in K^wak^wala, as opposed to Finnish, accusative case is *uninterpretable*. In particular, I show that in K^wak^wala, interpretations of telicity arise independently of object case. I also show that the semantic properties of nominals in object position have no apparent effect on the distribution of object case in K^wak^wala.
- In Section 6.4, I enumerate the specific ways in which the K^wak^wala and Finnish object case systems are semantically mirrored. I then extend this semantic mirroring into the syntactic domain, by adapting the syntactic analysis of Finnish object case Kratzer (2004) to account for object case in K^wak^wala. I show that this syntactic analysis can account for the findings of previous chapters and finish by discussing the sense in which instrumental case in K^wak^wala is a hybrid structural-inherent case.
- In Section 6.5, I show that K^wak^wala's case system fits squarely within Ritter & Rosen's (2000) event-structural typology of I-languages and D-languages. I argue, however, that

² In Appendix D, I provide an overview of various mechanisms K^wak^wala speakers have at their disposal for communicating telicity. I argue there that there is no compelling evidence for telicity being grammaticalized at all in K^wak^wala.

their proposal must be extended to allow for languages to be classified as I-languages on the basis of object properties, not just subject ones, to accommodate the K^wak^wala pattern.

- Finally, in Section 6.5, I discuss the broader significance of the findings in this chapter, including implications for how the category of aspect is realized in K^wak^wala.

By the end of this chapter, the reader should understand how K^wak^wala's object case system fits in relative to wider cross-linguistic patterns, both in terms of how it is unique, and how it is abstractly similar to other attested systems.

6.2 Object case and telicity in Finnish

Finnish, like K^wak^wala, has two object cases: partitive and accusative.³ In this section, I'll provide an outline of the semantic analysis of these cases developed in work by Leino (1982),⁴ Heinämäki (1984, 1994), Vainikka (1989) and Kratzer (2004). On this analysis, partitive is an uninterpretable default object case, while accusative case is an interpretable case which adds an element of meaning that is variously referred to as *boundedness* (Leino 1982, Heinämäki 1984, 1994), *completeness* (Vainikka 1989), *culmination*, or *telicity* (Kratzer 2004).⁵ For our purposes here, these terms will be considered interchangeable, though I will mostly make use of the term *telicity*. I should note that Kiparsky (1998) offers an interesting alternative analysis in which partitive case is interpretable and adds the meaning of *unboundedness* to events, while accusative is the uninterpretable default. However, this analysis cannot explain why partitive case only implicates unboundedness (as discussed below), so I do not adopt it here.

A first indication that Finnish accusative is associated with interpretations of telicity comes from looking at inherently telic verbs — verbs, that is, which entail the existence of some inherent bound or endpoint, such as the verbs in (208). What we find is that inherently telic verbs require accusative objects. This is shown in (209) with the telic verb *löytää* 'find'.⁶

(208) Telic verbs (strict-accusative)

(Kiparsky 1998, p. 281)

ostaa 'buy', *ottaa* 'take', *pudottaa* 'drop', *suorittaa* 'carry out', *kadottaa*, *menettää*, *hukata* 'lose (possession)', *hävitä* 'lose (game, fight)', *löytää* 'find', *hyväksyä* 'accept', *panna*, *asettaa* 'put', *tappaa* 'kill', *antaa*, *lahjoittaa* 'give', *kaataa* 'fell', *mainita* 'mention', *siepata* 'catch', *omaksua* 'appropriate', *ripustaa* 'hang', *istuttaa* 'plant'

³ Accusative here refers to a syntactic category, not a morphological one. Morphologically, only personal pronouns have distinct accusative forms; elsewhere, accusative objects are morphologically syncretic with genitive (when singular and in the domain of certain subjects) or syncretic with nominative (elsewhere) (Kiparsky 2001: pg. 332).

⁴ Heinämäki (1984: p. 155) cites Leino (1982) as the first analysis of Finnish object case developed along the lines discussed here. Since I have not been able to access and read Leino's work myself, I cite this work here to give it credit, but not below.

⁵ Strictly-speaking, Kratzer (2004) refers to case *features* as being interpretable/uninterpretable, rather than to case itself being so. To maintain consistency with how I've used this term throughout the dissertation, I will continue to refer to case as (in)interpretable in this chapter, despite the fact that what is really interpreted is not case itself, but the syntactic head which is responsible for case assignment.

⁶ There do turn out to be two specific circumstances in which inherently telic verbs can take partitive objects (namely, when the nominal is a mass term or indefinite plural and under the scope of negation). The appearance of partitive in these environments can be explained by outside factors, and crucially do not interfere with the generalization here. I'll return to discuss these uses of partitive below.

(209) a. löysin virheen Finnish
 I-found mistake.ACC
 ‘I found a/the mistake (ACC).’ (Heinämäki 1994: p. 212)

b. * löysin virhettä Finnish
 I-found mistake.PART
Intended: ‘I was finding a/the mistake (PART).’ (Heinämäki 1994: p. 212)

In contrast with inherently telic verbs, verbs which are inherently atelic require partitive objects. A list of inherently atelic verbs is provided in (210). The use partitive is illustrated in (211)-(212) with the verbs *odotta* ‘wait’ and *pelätä* ‘fear’.

(210) Atelic verbs (strict-partitive) (Kiparsky 1998, p. 281)⁷

- a. **Psychological states, attitudes:** *halveksia* ‘despise’, *ihailaa* ‘admire’, *ikävöidä* ‘yearn for’, *harrastaa* ‘be interested in (as a hobby)’, *huvittaa* ‘amuse’, *ikävystyttää* ‘bore’, *inhota* ‘feel revulsion towards’, *kadehtia* ‘envy’, *karttaa* ‘avoid’, *kehua*, *ylistää* ‘praise’, *kiinnostaa* ‘interest’, *kiittää* ‘thank’, *kunnioittaa* ‘honor’, *moittia* ‘blame, reprimand’, *onnitella* ‘congratulate’, *pelätä* ‘fear’, *rakastaa* ‘love’, *sietää* ‘tolerate’, *siunata* ‘bless’, *toivoa* ‘hope for’, *valittaa* ‘complain about’, *vihata* ‘hate’, *väsyttää* ‘tire’
- b. **Various intensional verbs:** *koettaa*, *yrittää* ‘try’, *pyytää* ‘ask for’, *merkitä*, *tarkoittaa* ‘mean’, *ajatella*, *pohtia* ‘think about’, *harkita* ‘consider’, *matkia* ‘imitate’, *odotta* ‘wait’, *paeta* ‘flee’, *kysyä* ‘ask for’
- c. **Continuous motion or contact:** *heiluttaa* ‘swing back and forth’, *ravistaa* ‘shake’, *keinuttaa* ‘rock’, *nyökyttää* ‘nod’, *suudella* ‘kiss’, *hyväillä* ‘caress’, *koskettaa* ‘touch’, *nussia* ‘fuck’, *hieroa* ‘massage’

(211) odotin bussia Finnish
 I-waited bus.PART
 ‘I was waiting for the bus (PART).’ (Heinämäki 1994: p. 218)

(212) peläsin maanjäristystä Finnish
 I-feared earthquake.PART
 ‘I was afraid of an earthquake (PART).’ (Heinämäki 1994: p. 219)

Heinämäki (1994) does not provide negative data with the verbs *odotta* ‘wait’ and *pelätä* ‘fear’ which would show that accusative case is impossible with these verbs; however, these data are implied by Heinämäki’s (ibid.) statement that “Sentences [211] and [212] are state-like descriptions. Accusative objects would make the sentences unacceptable, because waiting vs. fearing have no conventional end points” (p. 219).

In general then, we see a correlation between whether a verb entails telicity or atelicity, and whether that verb requires an accusative or partitive object. This correlation provides clear evidence for a relationship between telicity and accusative case, and atelicity and partitive case; however, it does not tell us anything yet about how these semantic values are encoded in the grammar.

⁷ The verb *odotta* ‘wait’ has been added in to this list.

The semantic contribution of accusative case and partitive case can be diagnosed by looking at data involving verbs which allow their object to be expressed in either case. A list of verbs which take alternating objects is provided in (213), and an example of case alternation with the verb *lukea* ‘read’ is provided in (214).

(213) Alternating telic/atelic verbs (accusative or partitive) (Kiparsky 1998, p. 281-2)

- a. **Verbs of creation and destruction:** *syödä* ‘eat’ (partitive: *söi piirakkaa* ‘ate pie, some of the pie’, accusative: *söi piirakan* ‘ate a/the pie’), *leikata* ‘cut’, *kaivaa* ‘dig’, *kirjoittaa* ‘write’
- b. **Other verbs with Incremental Themes:**⁸ *lukea* ‘read’ (partitive: ‘read (at least part of)’, accusative: ‘read up to some point’, usually ‘finish reading’), *tutkia* ‘investigate’, *siirtää* ‘move’, *sekoittaa* ‘mix’
- c. **Verbs with different lexical meanings depending on the case of the object:** *lyödä* ‘beat up’ (partitive: ‘beat or hit (at) someone’, accusative: ‘beat someone at something’), *nimittää* ‘name’ (partitive: ‘call (by a name)’, accusative: ‘nominate’), *muistaa* ‘remember’ (partitive: ‘commemorate’, ‘remember someone with a gift or greeting on a special occasion’, accusative: ‘recall’)

(214) a. Terttu luki kirjaa *Finnish*
 Terttu read book.PART
 ‘Terttu was reading a book (PART).’ (Heinämäki 1994: p. 212)

b. Terttu luki kirjan *Finnish*
 Terttu read book.ACC
 ‘Terttu read (all) the book (ACC).’ (Heinämäki 1994: p. 212)

We can see in (214) that the interpretation of the sentence differs depending on whether the object is partitive (214a) or accusative (214b). Heinämäki (1994: p. 213) notes that the most likely interpretation of (214a), with partitive, is that Terttu did not finish reading the book, and that the most likely interpretation of (214b), with accusative, is that Terttu read the whole book — in other words, that (214a) is atelic and (214b) is telic. However, these are pragmatic inferences rather than semantic ones. For one thing, (214a) with partitive implicates but does not entail atelicity. Heinämäki states:

“[214a],⁹ with a partitive object, is compatible with a situation where Terttu in fact read the whole book, but, for some reason or other, the speaker did not choose to present the situation as bounded. The partitive object leaves it open whether in fact the end point of the activity has been reached or not, as Leino (1982: 137) remarks. The naturalness of the inference from [214a] that Terttu did not read all the book follows from Grice’s (1975) maxim of quantity, which says that the speaker is expected to make the strongest statement that he or she can. But semantically, the sentence [214a] is non-committal as to whether the situation itself had some bound or not. In other words, [214a] is a non-bounded situation description.” (Heinämäki 1994: p. 213)

⁸ This is phrased in Kiparsky (1998: p. 281) as ‘other verbs denoting events whose progress is mapped out into the parts of the object’.

⁹ Heinämäki cites example number (7a) in the original text, but I’ve substituted (214a) to make this passage more readable here.

The range of interpretations available for data like (214a) indicate that partitive case does not impose a semantic atelicity requirement. This in turn suggests that partitive case is *uninterpretable*.

On the other hand, accusative case is interpretable, and its presence on an object entails the existence of a bound for the event being described. However, while the existence of a bound is entailed, the particular *nature* of the bound is not determined semantically, but pragmatically (Heinämäki 1984: p. 156-8, 160, 162; Heinämäki 1994: p. 213, 226; Kratzer 2004: p. 394). Thus while (Sb), with an accusative object and no explicit bound, tends to be interpreted as an event in which Terttu read the whole book, this is not the only value that reading events with accusative objects can have. An accusative object is also consistent with the range of interpretations in (215) containing explicit bounds ('only half-way through' and 'to pieces'), which themselves are actually inconsistent with the interpretation that the whole book has been read. What (214a), (215a), and (215b) have in common is the existence of a bound: in (215a) it is the point at which the book has been read halfway; in (215a) it is the point at which the book is in pieces; and in (214a), the hearer is left to infer that the event's bound corresponds with the natural bound of the event — the point at which the whole book has been read.

(215) a. Terttu luki kirjan vain puoliväliin *Finnish*
 Terttu read book.ACC only half.way.to
 'Terttu read the book (ACC) only half-way through.' (Heinämäki 1994: p. 213)

b. Terttu luki kirjan hajalle *Finnish*
 Terttu read book.ACC pieces.to
 'Terttu read the book (ACC) to pieces.' (Heinämäki 1994: p. 213)

In summary, partitive case is uninterpretable but implicates atelicity, while accusative case is interpretable and entails the existence of a bound. This bound may then either be spelled out explicitly, as it is in (215a)-(215b), or determined pragmatically, based on the properties of event being described.

The data we've seen so far are consistent with an analysis in which the distribution of accusative case is entirely determined by verbal semantics. In fact however, accusative objects can also be licensed via event modification, by adding a natural bound to an event description. One way this can be done is shown in (V) with the verb *ravistaa* 'shake'. While there is a conventional understanding of carpet-shaking as a telic event (namely, in which dust is removed from the carpet by shaking it) (216a), there is no conventional way of understanding leg-shaking (216b). However, when an explicit bound is added to this event, an accusative object can be expressed (216c).

(216) a. ravistin matot *Finnish*
 I-shook carpets.ACC
 'I shook the carpets (ACC).' (Heinämäki 1994: p. 214)

b. * ravistin jalkani *Finnish*
 I-shook legs.ACC.my
 'I shook my legs (ACC).' (Heinämäki 1994: p. 215)

- c. ravistin jalkani rennoiksi *Finnish*
 I-shook legs.ACC.my relaxed.to
 ‘I shook my legs (ACC) so that they became relaxed.’ (Heinämäki 1994: p. 215)

Another example of event structure modification licensing an accusative object is shown in (217) with the verb *lukea* ‘read’. The first sentence (217a) shows that when there is no explicit bound, it is impossible to realize an accusative object that is coreferent with the subject. One way of providing an explicit bound to an event of this sort is to add a resultative phrase like *juristiksi* ‘to lawyer’, as in (217b); the intended meaning of this sentence is that Johanna read (i.e. studied) until she became a lawyer. Significantly, the sentence in (217c) shows that the presence of this explicit bound makes it possible to realize an object coreferent with the subject (217c).¹⁰

- (217) a. *Johanna luki itsensä *Finnish*
 Johanna read herself.ACC
 ‘Johanna read herself (ACC).’ (Heinämäki 1994: p. 215)
- b. Johanna luki juristiksi *Finnish*
 Johanna read lawyer.to
 ‘Johanna read (herself) (to be) a lawyer.’ (Heinämäki 1994: p. 215)
- c. Johanna luki itsensä juristiksi *Finnish*
 Johanna read herself.ACC lawyer.to
 ‘Johanna read herself (ACC) to lawyer.’ (Heinämäki 1994: p. 215)

In summary, while the data in (208)-(215) show that verb meaning constrains the distribution of object case, the data in (216)-(217) show that verb meaning does not determine it. Rather, it is the structure of an event, and in particular whether an event can be interpreted as bounded or not, which determines object case possibilities. Whenever an event can be interpreted as bounded, accusative case is possible; partitive can be used in these instances as well, but is more typically used to indicate that an event is unbounded.

Up to this point, I’ve been ignoring two obligatory uses of partitive case which are not accounted for by the semantic analysis developed so far. Specifically, these include the obligatory use of partitive on objects in the scope of negation, and the obligatory use of partitive on objects that are interpreted as “quantitatively indeterminate” (Kiparsky 1998: p. 267). I will now review evidence these instances of partitive should be analyzed separately from the object partitive discussed above.

The first environment where partitive objects are obligatory is under the scope of negation. According to Heinämäki (1984: p. 167), previous research on Finnish object case (for instance Leino 1982) assumed that there was a semantic explanation for why the partitive is obligatory in the scope of negation. The idea is that negating a bounded event description invariably gives rise to an unbounded event description (see for instance Verkuyl 1993: p. 162-167), and therefore, only partitive objects should be possible in negated environments. This explanation works to explain the data in (218), for instance, where negation of the telic event description in (218a) gives rise to an atelic event description in (218b). Nothing would need to be added to the

¹⁰ The licensing of so called “fake reflexive” objects in resultative constructions such as these is also attested in English; see for instance Levin & Rappaport-Hovav (1995: p. 33-78).

semantic theory of object case stated above to explain the obligatory use of partitive in this example.

- (218) a. luin kirjan / kirjaa *Finnish*
 I-read book.ACC / book.PART
 ‘I read (all) the book (ACC) / I was reading the book (PART).’
 (Heinämäki 1994: p. 221)
- b. en lukenut *kirjan / kirjaa *Finnish*
 NEG-I read book.ACC / book.PART
 ‘I did not read the book (*ACC)(PART).’ (Heinämäki 1994: p. 221)

Heinämäki 1984 (p. 168-169) nevertheless argues that negated sentences do not, in fact, always describe unbounded situations. For instance in (219), the ‘when’ clause contains a negation, but can also take modifiers like *viiteen mennessä* ‘by five’ and *päivässä* ‘in a day’, indicating boundedness. The sentence in (219) then shows that partitive case is obligatory under the scope of negation even when the event description in (219) is bounded.

- (219) Kun Ulla ei lähettänyt meille kirjaa viiteen *Finnish*
 When Ulla not sent us.to book.PART five
 mennessä / päivässä, päätimme ostaa sellaisen
 by / day.in we.decided buy such
 ‘When Ulla did not send us the book (PART) by five/in a day, we decided to buy a copy.’
 (Heinämäki 1984: p. 169)

Heinämäki (1984) goes on to argue that in negative environments, partitive case is syntactically determined (see Heinämäki 1984: p. 167-170 for additional arguments on this point). Assuming this to be the case, the obligatory use of partitive under the scope of negation does not interfere with the semantic analysis of object case presented above.

The second environment where partitive case is obligatory is with objects that are interpreted as quantitatively indeterminate. More specifically, this includes all objects that are interpreted as bare plurals and mass nouns. According to Kratzer (2004: p. 401), the reason these objects are obligatorily partitive is that these are not instances of the ‘object’ partitive at all, but of a separate NP-partitive, a DP-internal semantic case used to indicate part-whole meanings and quantitative indefiniteness. The existence of a DP-internal partitive makes sense of data like (220), where an accusative DP is conjoined with a (morphologically) partitive DP (220). In particular, it allows us to analyze the partitive on ‘book’ in (220) as a DP-internal partitive which gives rise to the interpretation that this conjunct as a bare plural, while the accusative on ‘newspaper’ is analyzed as a VP-level object case which gives rise to an interpretation that the event as telic.

- (220) ost-i-n lehde-n ja kirjo-j-a *Finnish*
 buy-PST-1SG newspaper-SG.ACC and book-PL-PART
 ‘I bought the/a newspaper (ACC) and books (PART).’ (Kiparsky 1998: p. 275)¹¹

¹¹ This example is cited in Kratzer 2004: p. 21, to make this argument.

Finnish morphology disallows case-stacking of either object case on top of the NP-partitive. Thus while ‘book’ in (220) is morphologically partitive, the fact that the event description in (220) is bounded means that ‘book’ must also have covert accusative case. This also means that it is impossible to tell just from looking at the morphology whether an example like (221), with partitive case on the object, also has covert accusative case or covert partitive case, since neither would be pronounceable if this is the NP-partitive. If the object has NP-partitive and covert accusative, reading (221a) results; if the object has NP-partitive and covert object partitive, reading (221b) results; and if the object has only the object partitive, reading (221c) results.

- (221) hän kirjoitt-i kirje-i-tä *Finnish*
 he/she write-PAST.M.3SG letter-PL-PART
 a. He wrote (some) letters (...and left)
 b. He was writing letters (...when I came)
 c. He was writing the letters (...when I came) (Kiparsky 1998: p. 272)¹²

Recall that with inherently telic verbs, only accusative case is possible on objects.¹³ Yet even with these verbs, partitive case is obligatory whenever the object is a bare plural (as in 222b) or mass noun (as in 223b).¹⁴ The possibility of realizing partitive case in these instances is straightforwardly explained if these are instances of a DP-internal semantic case.

- (222) a. saa-n karhu-t *Finnish*
 get-1SG bear-PL.ACC
 ‘I’ll get the bears (ACC).’ (Kiparsky 1998: p. 268)

- b. saa-n karhu-j-a *Finnish*
 get-1SG bear-PL-PART
 ‘I’ll get bears (PART).’ (Kiparsky 1998: p. 268)

- (223) a. löysin veden *Finnish*
 I-found water.ACC
 ‘I found the water (ACC).’ (Heinämäki 1994: p. 212, 223)

- b. löysin vettä *Finnish*
 I-found water.PART
 ‘I found water (PART).’ (Heinämäki 1994: p. 212, 223)

¹² This example is cited in Kratzer 2004: p. 23, to make this argument.

¹³ On Kratzer’s (2004: p. 403) analysis, this is due to the existence of a general principle, Maximize Interpretability, which forces accusative to be used whenever doing so would not conflict with the speaker’s intended meaning. The idea is that since inherently telic verbs cannot be construed as atelic, the speaker’s intended meaning will always determine the use of accusative case with these verbs. This leads to them being strict-accusative.

¹⁴ Heinämäki (1994: p. 222-3) goes on to show that with inherently telic verbs such as those in (222)-(223), the presence of partitive case does not coerce an unbounded interpretation onto the event. To do so, Heinämäki uses the Finnish adverbial phrases *tunnissa* ‘in an hour’ and *tunnin* ‘for an hour’, as these phrases diagnose bounded and unbounded events, respectively (Vendler 1967: p. 98-107; Dowty 1979: p. 332-336). Heinämäki’s argument is significant insofar as it supports the analysis of NP-partitive adopted here, and provides evidence against Kiparsky’s (1998) opposing analysis, wherein partitive is analyzed as an interpretable object case that signals unboundedness at the VP level.

6.3 Object case and telicity in K^wak^wala

We've just seen that in Finnish, accusative case is interpretable and entails telicity. In K^wak^wala on the other hand, accusative case is uninterpretable. We might expect, then, for K^wak^wala to differ significantly from Finnish in how it encodes telicity. In this section, I'll demonstrate two ways that K^wak^wala differs from Finnish in this regard. First, I'll provide three types of empirical evidence showing that the realization of object case is independent of telicity in K^wak^wala (Section 6.3.1). Following this, I'll show that the semantic properties of nominal objects have no effect on object case realization in K^wak^wala (Section 6.3.2).

6.3.1 The independence of object case and telicity

Given the existence of an association in K^wak^wala between instrumental case and *initiating* subevents and accusative case and *non-initiating* subevents, if there were a relationship between object case realization and telicity, we would expect it to manifest as an association between instrumental objects and atelicity, and/or between accusative objects and telicity; in other words, we'd expect at least one of the statements in (225) to be true.

- (225)
- i. Sentences with instrumental objects describe atelic events
 - ii. Sentences with accusative objects describe telic events

In fact, neither of the statements in (225) hold in K^wak^wala. I'll now show three types of empirical evidence which show this to be the case. These types of evidence include evidence from alternating case environments (6.3.1.1), evidence from case-marking with inherently telic verbs (6.3.1.2), and evidence from non-culminating accomplishments (6.3.1.3).

6.3.1.1 Case alternation and telicity

The first problem for (225) concerns alternating case environments. If instrumental objects were associated with atelicity and/or accusative objects with telicity, we would expect the interpretation of sentences with potentially alternating objects to differ in accordance with which case is chosen in a given utterance. Contrary to this prediction, in sentences where an object may appear in either case, the case that is chosen has no effect whether the event is interpreted as telic or not. This is illustrated in (226) and (227) below with the verbs *qəp'id* 'pour' and *ʔəxʔaλ-* 'put down on surface', both of which take an alternating Theme. The context in (226) is one demanding an atelic interpretation, yet we see that the Theme can be expressed in either case. The context in (227) is one demanding a telic interpretation, and here again, the Theme can be expressed in either case.

(226) Context: *Mabel found some milk in her fridge that was four months old, so she decided to put it in the compost. She tried to pour it out, but it was so thick, it didn't come out.*

- a. qəp̄id waxi Mabelesa **məlk**, kiʔst̄a weɫ loɫ̄co
 qəp̄-xʔid wax =i Mabel =s=a **məlk**
 spill-BEC try =3DIST Mabel =INST=DET **milk**
 kiʔs=t̄a weɫ loɫ̄-cu-a
 NEG=but ABIL obtain-inside-A
 'Mabel tried to pour **the milk** (INST), but it didn't come out.' (VF)
- b. qəp̄id waxi Mabel**ǰ**a **məlk**, kiʔst̄a weɫ loɫ̄co.
 qəp̄-xʔid wax =i Mabel =ǰ=a **məlk**
 spill-BEC try =3DIST Mabel =ACC=DET **milk**
 kiʔs=t̄a weɫ loɫ̄-cu-a
 NEG=but ABIL obtain-inside-A
 'Mabel tried to pour **the milk** (ACC), but it didn't come out.' (JF)

(227) Context: *I went out with a friend and bought a beautiful teapot. When I arrived home, I absentmindedly gave the teapot to my friend, so that they could bring it inside the house for me. They brought it inside and put it on the table, and came back outside to where I was. By that point, I'd already forgotten that I'd sent my friend inside with the teapot, so I asked my friend where the teapot was. My friend then said to me, 'Oh. I put it on the table.'*

- a. ʔəǰʔaʎudənsuǰda **digilaǰiǰ** laǰida həm̄xdəmiɫ
 ʔəǰ-ʔaʎ-xʔid =ən =s=uǰ=da **di-gila-_haǰi=ǰ**
 DO-on-BEC =1 =INST=3MED=OST **tea-make-container=VIS**
 la =ǰ=i=da həm̄xdəmiɫ
 PREP =ACC=3DIST=OST table
 'I put **the teapot** (INST) down on the table.' (JF)
- b. ʔəǰʔaʎudənǰuǰda **digilaǰiǰ** laǰida həm̄xdəmiɫ
 ʔəǰ-ʔaʎ-xʔid =ən =ǰ=uǰ=da **di-gila-_haǰi=ǰ**
 DO-on-BEC =1 =ACC=3MED=OST **tea-make-container=VIS**
 la =ǰ=i=da həm̄xdəmiɫ
 PREP =ACC=3DIST=OST table
 'I put **the teapot** (ACC) down on the table.' (VF)

The same pattern can be seen in environments where case alternation is licensed through event modification. Example (228) shows an instance of the Direct Manipulation Alternation (discussed in Section 5.2), and example (229) shows an instance of the Caused Motion Alternation (discussed in Section 5.3). In both (228) and (229), the speaker was asked to provide a translation for an event description which, in English, is telic. In both instances, the speaker's first volunteered form contained an instrumental object; accusative was subsequently found to be possible in these contexts as well.

(228) Context: A woman picked up a cup in her hand and smashed it down on her (clam) digging stick, causing the cup to break.

təpɪdɪdɪdɑ çədaqə {sa, ʃa} kʷəʔsta laʃis dzigayu
 təp-xʔid =i=da çədaq {=s=a, =ʃ=a}
 broken-BEC =3DIST=OST woman {=INST=DET, =ACC=DET}
 kʷəʔsta la =ʃ=is dzik-w.ayu
 cup PREP =ACC=3REFL.POSS dig-INST.PASS
 ‘The woman broke a cup {INST, ACC} on her digging stick.’ (VF, VF)

(229) KS: And how would we say, ‘Monica filled the balloon with water’...?

ləmũx qutamas {sida, ʃida} wəp laʃida puxwəns
 lə=ʔm =uʃ qut-a-mas {=s=i=da, =ʃ=i=da}
 AUX=VER =3MED full-A-CAUS {=INST=3DIST=OST, =ACC=3DIST=OST}
 wəp la =ʃ=i=da puxwəns
 water PREP =ACC=3DIST=OST balloon
 ‘Then she filled the balloons with water {INST, ACC}.’ (VF)
 Literally: ‘Then she caused-to-be-full with water into the balloon.’

The finding that either case may appear in both atelic and telic contexts, with alternating verbs, shows that case choice in alternating environments does not determine telic interpretation.

6.3.1.2 Inherently telic verbs

A second problem for (225) arises when we look at the realization of objects with transition verbs (Greene 2013); these are verbs which resemble what have been labeled as achievements in the literature. A list of transition verbs is given in (230). The defining property of these verbs is that they are inherently telic, meaning that in the absence of overt aspectual-marking, they entail event completion (Greene 2013: 39-41).

(230) Kʷakʷala Transitions (Greene 2013:97)

ço- ‘give’
 dulo- ‘win’
 bəw- ‘leave’
 ʃəs- ‘become lost’¹⁵
 gaʃ- ‘come’
 lagəʔa- ‘arrive’
 galabənd- ‘start’
 ǰʷat- ‘finish’
 qa- ‘find’

If object case were associated with (a)telicity in Kʷakʷala, we would expect all transitive transition verbs to be strict-accusative. However, this prediction is not borne out. From the

¹⁵ Greene (2013: p. 97) glosses this verb as ‘lose’. Since this verb is an unaccusative (and requires causative -mas to be made transitive), I’ve changed its translation here to ‘become lost’.

verbs in (230), only *dulo-* ‘win’ (231) and *q̇a-* ‘find’ (232) consistently take accusative objects.¹⁶ On the other hand, the verb *gaḥ-* consistently takes instrumental objects (233), *bəw-* ‘leave’ (234) takes an object which speakers judge to be strict-instrumental, and *ćo* ‘give’ (235) takes an alternating object.

(231) *dulowida gudanəḥa dzadzəlx^waṗ*
dulo =i=da gudan =ḥ=a dza~dzəlx^w-_ra-ṗ
 win =3DIST=DET horse =ACC=DET REDUP~run-try-RECIP
 ‘The horse won **the race** (ACC).’ (VF)

(232) *q̇ami Katiyəḥus daləci*
q̇a=ṗm =i Katie =ḥ=us dala-_hači
 find=VER =3DIST Katie =ACC=3REFL.POSS **money-container**
 ‘Katie did find **her wallet** (ACC).’ (VF)

(233) *hedi siḥəm gaḥsa nənq̇uma*
he=d =i siḥəm gaḥ =s=a
 be.3DIST=DET =3DIST snake come =INST=DET
n~naq-_huma
REDUP~drink-NMZ
 ‘It’s the snake who brought **the drinks** (INST).’ (Littell 2016, p. 548)

(234) a. *ləmūḥ Hannaḥ luwūḥ Katiyəḥ boḥcuḥ caḥisəḥ*
lə=ṗm =uḥ Hannah=ḥ λəw =uḥ Katie=ḥ
 AUX=VER =3MED Hannah=VIS CONJ =3MED Katie=VIS
bəw=λ =s=uḥ caḥis=ḥ
 leave=FUT =INST=3MED **Fort.Rupert=VIS**
 ‘Hannah and Katie are gonna leave **Fort Rupert** (INST).’ (VF)

b. # *bəwuḥis ḥəwanəm*
bəw =uḥ =ḥ=is ḥəwanəm
 leave =3MED =ACC=3REFL.POSS husband
Intended: ‘She left her husband (ACC).’ (JF)

Speaker: “*bəwuḥ ḥis...? ki.*” [‘No.’]

(235) *ćowuḥ Shelli {sis, ḥis} dzastu q̇wəmdzuṗu laḥuḥ Vicki*
ćo =uḥ Shelly {=s=is , =ḥ=is}
 give =3MED Shelly {=INST=3REFL.POSS , =ACC=3REFL.POSS}
dzastu q̇wəmdzuṗu la =ḥ=uḥ Vicki
blue.colour dress PREP =ACC=3MED Vicki
 ‘Shelly is giving/gave **her blue dress** {INST, ACC} to Vicky.’ (VF, JF)

¹⁶ I don’t have negative data proving that the relations in (231) and (232) are strict-accusative; however, in every positive example I have come across involving these verbs, the object is accusative. The same is true with respect to the verb *gaḥ-* ‘come’ in (233), though with this verb, the attested object case is instrumental.

Thus, being an inherently telic VP does not guarantee having an accusative object. The object case frames of transitions are determined by event structure, independently from telicity.

6.3.1.3 Non-culminating accomplishments

A third problem for (225) comes from data involving processes, a lexical aspect class defined in Greene (2013: p. 30-1, 35-9) which includes activity-like and accomplishment-like verbs. If accusative case were associated with telicity in K^wak^wala, we would expect the presence of an accusative object with accomplishment-like verbs to generate an entailment of telicity. However, as first reported in Greene (2013, 2014), K^wak^wala is a language with non-culminating accomplishments (NCA's),¹⁷ thereby resembling languages like Hindi (Singh 1998), Thai (Koenig & Muansuwan 2000), Malagasy (Travis 2000), Mandarin Chinese (Smith 1997[1991]), St'át'imcets and Skwxú7mesh (Bar-el, Davis & Matthewson 2005), and Karachay-Balkar (Tatevosov 2008). Examples of NCAs are provided in (236)-(237) below, with the verbs *hit-* 'fix' (236) and *q̣^wəmdzu^yugila* 'dress-make' (237). These examples each consist of two conjuncts: the first conjunct describes an event with an accomplishment-like verb containing an accusative object, and the second conjunct includes an explicit denial that the event description in the previous conjunct culminated. The fact that these event descriptions' culmination can be felicitously cancelled demonstrates that culmination is not entailed (note that this contrasts starkly with these sentences' English translations, where cancellation is *infelicitous*).

(236) hiʔidoʔda bəg^wanəma^xən ka kisməʔ g^waloʔda bəg^wanəm hiʔi^xən ka

hiʔ-xʔid	=o ^x =da	bəg ^w anəm	= ^x =ən	ka
fix-BEC	=3MED=OST	man	=ACC=1POSS	car
kiʔs=ʔm	=o ^x	g ^w aʔ	=o ^x =da	bəg ^w anəm
NEG=VER	=3MED	finish	=3MED=OST	man
	hiʔ-xʔid	= ^x =ən	ka	
	fix-BEC	=ACC=1POSS	car	

'The man fixed **my car** (ACC) but didn't finish.' (Greene 2013: p. 44)

Literally: 'The man fixed **my car** (ACC), but he didn't finish fixing **my car** (ACC).'

(237) sənbəndu^x Mabel^x q̣^wəmdzu^yugila^xa q̣^wəmdzu^yoʔ lənswuʔ, kista g^waʔamasə^x

sənbənd	=u ^x	Mabel= ^x	q̣ ^w əmdzu ^y u-gil	= ^x =a	q̣ ^w əmdzu ^y u=aʔ
throughout	=3MED	Mabel=VIS	dress-make	=ACC=DET	dress=INVIS
yesterday	NEG=BUT	finish-A-CAUS	=ACC		
lənswuʔ	kis=tə	g ^w aʔ-a-mas	= ^x		

Literally: 'All yesterday Mabel made **a dress** (ACC), but she didn't finish it (ACC).'

A particularly stark illustration of the non-culminating character of process roots is shown in example (238) with the verb *kilak-* 'beat up'. Example (238a) shows a typical use of this verb,

¹⁷ The existence of NCAs are a major part of what motivates Greene (2013) to propose a three-way aspectual classification of verbs in K^wak^wala into states, processes, and transitions (p. 39), in which activity-like and accomplishment-like verbs are members of the same process class. Greene's theory is introduced in more detail in Appendix E.

where it functions as a K^wak^wala translational equivalent for the English verb ‘kill’.¹⁸ Example (238b) shows, however, that the result state entailed by the English verb ‘kill’ — namely, death — is a cancellable inference with *kilak-*. A more accurate translation of this verb is ‘beat up’.

- (238) a. *kilaxʔidida bəgʷanəməx̣a sadiqʷa laχis ʔəỵəʔsu*
kilak-xʔid =i=da bəgʷanəm =x̣=a sadiqʷa
 beat.up-BEC =3DIST=OST man =ACC=DET **horsefly**
la =x̣=is ʔəỵəʔsu
 PREP =ACC=3REFL.POSS hand/arm
 ‘The man killed **the horsefly** (ACC) on his arm.’ (VF)
- b. *kilaxʔidida bəgʷanəməx̣ Scott. kiʔs̄ta ləʔli Scott.*
kilak-xʔid =i=da bəgʷanəm =x̣ Scott
 beat.up-BEC =3DIST=OST man =ACC **Scott**
kiʔs̄=ta ləʔl =i Scott
 NEG=but dead =3DIST Scott
 ‘The man beat up **Scott** (ACC), but Scott isn’t dead.’ (VF)

Greene (2013: p. 42) claims that while accomplishment-like predicates fail to entail telicity, they still do implicate it. In any case, the finding that telicity is not entailed in predicates headed by accomplishment-like process verbs with accusative objects is significant, because it demonstrates, once again, that object case realization is independent of telicity entailments.

In summary, I’ve provided three types of evidence against there being a connection between telicity entailments and object case realization in K^wak^wala. At this juncture, the reader may be interested in knowing more about what mechanisms K^wak^wala speakers do have at their disposal for communicating telicity. I provide a brief overview of some of these mechanisms in Appendix D, where I point out that K^wak^wala does not appear to grammaticalize telicity at all.

6.3.2 The independence of object case and nominal interpretation

We saw in Section 6.2 that in Finnish, nominals in object position which are interpreted as quantitatively indeterminate (indefinite plurals and mass terms) give rise to unbounded event descriptions.¹⁹ In K^wak^wala, on the other hand, I have not come across any obvious interactions between the realization of object case and any particular semantic properties of nominal objects. In (239) for instance, a nominal with indefinite plural reference (*=a ʔiʔayəndzis* ‘oranges’) is shown appearing in either instrumental or accusative case; and in (240), a nominal interpreted as a mass term (*=a čəncəsdzəm* ‘meat-fat’) is shown appearing in either instrumental or accusative case. The event description in (239) is in the past and telic, while the event description in (240) is in-progress and atelic. In neither of these instances did the language consultant obviously prefer one case to the other.

¹⁸ There is one other translational equivalent of ‘kill’ in K^wak^wala, namely *yaxʔidamas* ‘Literally: cause to make bad/spoiled’. However, due to the presence of causative *-mas*, the external argument of *yaxʔidamas* is semantically a Causer (Sardinha 2015a), while the external argument of *kilak-* is an Agent. Presumably because it entails agency, *kilak-* is therefore often the preferred way of translating English ‘kill’.

¹⁹ Except, that is, with inherently telic verbs.

(239) Context: *Ted's family had a potlatch. Ted went around and gave oranges to everyone in attendance.*

ləmi Ted çicola {sa, ǰa} ʔiʔayəndzis laǰa liləɫq^wəlaʔe?
 lə =ʔm =i çì~çò-la {=s=a , =ǰ=a}
 AUX =VER =3DIST REDUP~go-CONT {=INST=DET , =ACC=DET}
ʔi~ʔayəndzis la =ǰ=a li~ləɫq^wəlaʔe?
REDUP~orange PREP =ACC=DET REDUP~tribes
 ‘Ted gave out **oranges** {INST, ACC} to the people [*Literally*: tribes].’ (VF, JF)

(240) Context: [*The speaker and KS are discussing how, in general, to say that you're spreading butter or grease onto bread; there is no particular quantity of meat-fat being discussed in the context.*]²⁰

badaʔdzuduǰ Mabelǰ {sa, ǰa} çəncəsdzəm laǰ^wa k^wənik^w
 bada-dzu-xʔid =uǰ Mabel=ǰ {=s=a , =ǰ=a}
 butter-flat-BEC =3MED Mabel=VIS {=INST=DET , =ACC=DET}
çəncəsdzəm la =ǰ=^w=a k^wənik^w
meat.fat PREP =ACC=3MED=DET bread
 ‘Mabel’s buttering **meat-fat** {INST, ACC} on the bread.’ (JF, VF)

While I have not found any effects of nominal interpretation on the distribution of instrumental and accusative cases, in terms of where these cases are *possible*, more research is needed on the question of whether aspects of nominal interpretation influence case choice in contexts where either case is possible.

6.4 The mirrored nature of K^wak^wala and Finnish object case

Having looked at Finnish and K^wak^wala object case systems in isolation, we’re now in a position to compare these systems and explain their similarities and differences. In this section, I’ll first consider how the Finnish and K^wak^wala object case systems are semantically mirror images (6.4.1), and then I’ll discuss how this semantic mirroring can be accounted for syntactically (6.4.2).

6.4.1 Semantic mirroring

The impetus for describing the object case system of Finnish in this chapter is to shed light on how even though K^wak^wala’s object case system is unique, it is far from anomalous. Finnish provides a powerful illustration of this precisely because the K^wak^wala and Finnish object case systems are mirror images of each other: while in Finnish, an interpretable accusative associates with the *non-initiating* or *final* subevent, in K^wak^wala, an interpretable instrumental case

²⁰ Since the context here is not constrained, it’s impossible to tell whether the speaker who volunteered (240) had a particular quantity of *çəncəsdzəm* ‘meat-fat’ in mind. On the other hand, it is possible to tell, by looking at transcripts of the elicitation session, whether a particular quantity of *çəncəsdzəm* had been established as a discourse referent in the common ground. At this point in the elicitation session, there was no particular quantity of *çəncəsdzəm* established.

associates with the *initiating* or *initial* subevent. The sense in which these systems are mirrored is summarized in Figure 6.1.

	<u><i>Interpretable case</i></u>	<u><i>Uninterpretable case</i></u>
<i>Initial bound/subevent</i>	Instrumental (K ^{wak} wala)	Partitive (Finnish)
<i>Final bound/subevent</i>	Accusative (Finnish)	Accusative (K ^{wak} wala)

Figure 6.1: K^{wak}wala and Finnish as semantically mirror opposites

In Sections 6.2 and 6.3, I outlined some of the empirical consequences of the mirrored nature of these object case systems. We're now in a position to view these empirical consequences side-by-side and consider how they are explained by the pattern outlined in Figure 6.1. The empirical consequences I have in mind are listed in (241).

(241) Empirical consequences of the mirrored nature of K^{wak}wala and Finnish object case systems

- a. The presence of an accusative object entails telicity in Finnish, whereas in K^{wak}wala, an accusative object only implicates telicity (Greene 2013).
- b. The presence of a partitive object implicates atelicity in Finnish, whereas in K^{wak}wala, the presence of an instrumental object does not implicate atelicity.²¹
- c. In Finnish, a bare plural or mass noun object gives rise to an atelic interpretation, whereas in K^{wak}wala, nominal semantics has no apparent effect on which object case may be realized, or on telicity.
- d. In both Finnish and K^{wak}wala, case realization can be influenced via event modification. In Finnish, adding a bound to an event (e.g. via secondary resultative predication) can license an accusative object (e.g. Heinämäki 1994: p. 214-6). In K^{wak}wala, we saw in Chapter 5 that case alternation is licensed in contexts involving direct manipulation, caused motion, and semantic incorporation with *-(g)ila* 'make'. These patterns illustrate the more general fact that in both Finnish and K^{wak}wala, object case is constrained by verb meaning but determined ultimately by event structure.
- e. Both Finnish and K^{wak}wala have three broad classes of transitive verbs. Finnish has verbs which are strict-partitive, strict-accusative, and partitive-accusative alternating, while K^{wak}wala has verbs which are strict-instrumental, strict-accusative, and instrumental-accusative alternating.

The generalizations (241a)-(241c) can be explained by taking into account how semantic value is distributed differently within the Finnish and K^{wak}wala case systems. Finding (241a), that Finnish accusative entails telicity, is due to this being an interpretable case; the corresponding

²¹ On a related note, in Chapter 7, Section 7.3.1 I will present data suggesting that in alternating case environments, the choice of instrumental case nevertheless generates a relevance implicature targeting the *initiating* subevent.

finding, that K^{wak}wala accusative does not entail telicity, is due to this case being uninterpretable. Finding (241b), that Finnish partitive implicates atelicity, is due to this case being uninterpretable but paradigmatically opposed to an interpretable case that entails telicity; the corresponding finding, that K^{wak}wala instrumental does not implicate atelicity, is due to this case being interpretable in a way that is unconnected with the notion of telicity. Finding (241c), that bare plurals and mass noun objects generate atelic readings in Finnish but not K^{wak}wala, follows from the fact that it is only in Finnish that accusative is interpretable and associated with telicity. More specifically, the fact that accusative case imposes boundedness on whatever nominal referent it marks makes it incommensurable with inherently unbounded referents in Finnish. This is not the case in K^{wak}wala.

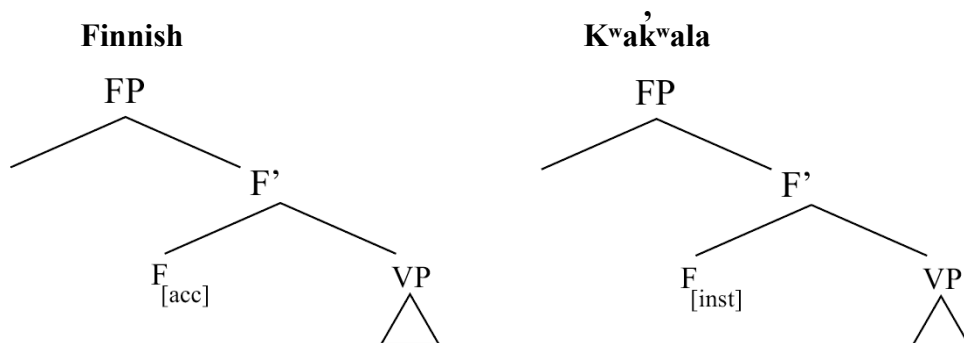
The generalizations listed in (241d)-(241e), on the other hand, can be explained by the fact that at an abstract level of description, Finnish and K^{wak}wala object case systems are structured very similarly. In particular, finding (241d) — that event structure modification can influence case realization — follows from the fact that in both languages, object case distinctions are grounded in event structure, not verb meaning. Finding (241e) — that both languages have three types of verbs — follows from the following set of facts: that generally, both object case systems are configured to have two cases; that every expressed object in both systems must bear one of the two available cases; and that both languages possess verbs which allow alternation due to their possessing entailments which are semantically consistent both with the semantic value added by the interpretable case, and with the absence of this semantic value.

I conclude that the major similarities and differences between object case in Finnish and K^{wak}wala can be explained on the basis of their being semantically mirrored in the sense indicated in Figure 6.1.

6.4.2 Syntactic mirroring

Given that Finnish and K^{wak}wala's object case systems are semantically mirrored, I propose that the syntax underlying the expression of interpretable case in both systems is essentially identical: all that differs is the semantic interpretation associated with the syntactic head that governs interpretable case assignment. In particular, I will argue that the syntactic analysis of Finnish object case developed in Kratzer (2004) can be carried over with minimal modifications to account for object case in K^{wak}wala. The analysis I will adopt is schematized in (242).

(242) Syntactic analysis of interpretable structural case realization in Finnish and K^{wak}wala



The basic idea behind Kratzer's analysis of Finnish is that there is a functional projection above VP but below the level where external arguments are introduced which serves as the locus of

both accusative case assignment and telic interpretation. Kratzer leaves this functional projection unnamed, so for convenience, I label it $F_{[acc]}$ here. I propose that Kwakwala possesses an analogous functional projection which serves as the locus of both instrumental case assignment and an interpretation of co-initiation. For convenience, I will label this head $F_{[inst]}$. I'll begin by describing Kratzer's (2004) analysis of Finnish, in which the syntactic and semantic properties of $F_{[acc]}$ derive patterns of object case realization in Finnish. Following this, I'll walk-through how the syntactic and semantic properties of $F_{[inst]}$ function similarly in Kwakwala and illustrate the analysis with a derivation.

First, let's consider how Kratzer's (2004) analysis captures the semantic value of accusative case in Finnish. The semantic value of $F_{[acc]}$ is provided in (243).

$$(243) \quad \llbracket F_{[acc]} \rrbracket \\ = \lambda R_{\langle e, \nu \rangle} \lambda x_e \lambda e_{\nu} . R(x)(e) \ \& \ \exists f [\text{measure}(f) \ \& \ \forall x' [x' \leq f(x) \rightarrow \exists e' [e' \leq e \ \& \ R(x')(e')]]]^{22}$$

(Kratzer 2004: p. 394)

Semantically, $F_{[acc]}$ relates an individual to an event via a measure function (the exact nature of which is determined pragmatically) which maps some aspect of the individual onto the event's temporal extent. In this way, the individual comes to define the event's culmination conditions (i.e. its final bound).

To satisfy the semantic type of $F_{[acc]}$, an internal argument of the verb must move from its base position in VP to the specifier position of $F_{[acc]}$, thereby leaving a trace. In order to ensure movement to the specifier of $F_{[acc]}$, Kratzer proposes that there is an EPP feature on $F_{[acc]}$; this ensures that movement of the nearest VP-internal argument is guaranteed whenever $F_{[acc]}$ is present in the structure. With inherently telic verbs, $F_{[acc]}$ is obligatory in the structure, and movement to the specifier of $F_{[acc]}$ is redundant. On Kratzer's (2004: p. 403) analysis, the obligatoriness of $F_{[acc]}$ with inherently telic verbs is enforced by adopting a principle Maximize Interpretability, which forces speakers to pick accusative case unless the interpretation that results clashes with what the speaker intends to say. All that remains to be said about accusative case, then, is that the specifier of $F_{[acc]}$ is a structural case position: any DP which ends up in this position will be expressed in accusative case. Kratzer (2004: p. 400) also considers the logical possibility of merging an argument directly into the specifier of $F_{[acc]}$, but chooses not to develop this alternative further.

This analysis accounts for the realization of accusative case in Finnish. To account for the realization of object partitive case, Kratzer takes the object partitive to be assigned by default to any DP object which remains in-situ inside to the VP. In those instances where partitive case is assigned, we can say that $F_{[acc]}$ is simply not present in the structure.²³ When $F_{[acc]}$ is not present in the structure, there is nothing to trigger movement, assign case, or assign the interpretation in (243), so the assignment of partitive case is carried out as a last resort.

²² I've substituted type ν for Kratzer's type s to make this denotation consistent with the conventions adopted here. Note that Kratzer refers to this head by the name of a semantic feature, [telic].

²³ Alternatively, we could say that in structures lacking $F_{[acc]}$ there is an uninterpretable variant of F in the structure which doesn't project a specifier. This type of architecture is advocated for in Legate (2003) and Wood (2012). Kratzer (2004) does not specify whether or not there is a head (which I have called) F in the structure when the accusative case is not assigned. Since the choice between having or not having F present in the structure in these instances doesn't have any empirical consequences, I leave this issue aside.

To account for object case realization in Kwakwala, all that is needed is to modify the syntactic and semantic properties of F to enable instrumental case to be associated with the semantic value of co-initiation. The denotation of $F_{[inst]}$ was provided in Chapter 4, Section 4.3, and is repeated in (155) below. The *Co-initiator* predicate in (155) is also provided in (156).

(155) $\llbracket F_{[inst]} \rrbracket = \lambda R_{\langle e,vt \rangle} . \lambda x_e . \lambda e_v . R(x)(e) = 1 \ \& \ x \text{ is } Co\text{-initiator of } e$

(156) $\lambda x_e . \lambda e_v . x \text{ is } Co\text{-initiator of } e$
 $= (x \text{ is a dependent cause of } e) \vee (x \text{ defines the initial bound of } e) \vee (x \text{ is in the possession of an } Initiator \text{ at the initial bound of } e)$

Semantically, $F_{[inst]}$ relates an individual to an event via a *Co-initiator* relation, which maps an individual onto the event so that it comes to define the event's *initiating* subevent (i.e. its *initial* bound).

In order to satisfy the semantic type of $F_{[inst]}$, an internal argument of the verb must undergo syntactic movement from its base position in VP to the specifier position of $F_{[inst]}$, thereby leaving a trace below $F_{[inst]}$. As on Kratzer's (2004) analysis, movement to the specifier of $F_{[inst]}$ is guaranteed by the presence of an EPP feature on $F_{[inst]}$; this ensures that movement of the nearest VP-internal argument occurs whenever $F_{[inst]}$ is present in the structure. Recall that for verbs with strict-instrumental relations, $F_{[inst]}$ is present in the structure obligatorily due to the presence of an $[inst]$ feature which forces these verbs to be realized as the complement of this head (as discussed in Section 4.4), and movement to the specifier of $F_{[inst]}$ is semantically redundant.²⁴ The specifier of $F_{[inst]}$ is a structural case position, so that any DP which moves there gets realized in instrumental case.

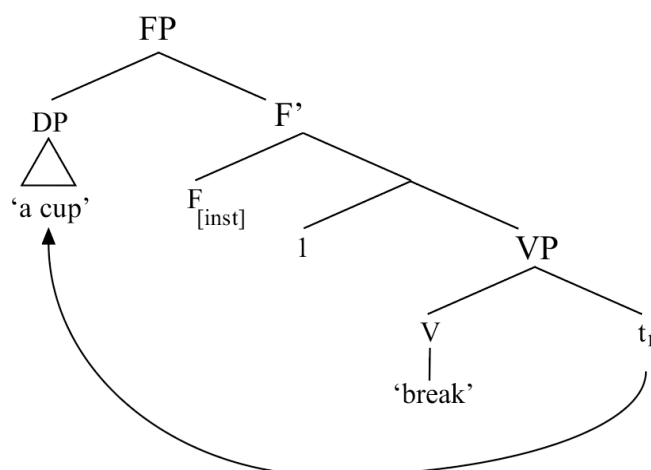
This analysis is illustrated below with respect to a fragment of the sentence in (244), which is taken from Chapter 5, Section 5.2.2. A tree of the relevant fragment is provided in (245), where English phrases have been substituted for Kwakwala ('a cup' for $=a \ k^w\acute{a}ʔsta$ and 'break' for $t\acute{a}p\acute{id}$). A bottom-up derivation is provided for the nodes above VP in (246)-(248) which makes use of the rules of semantic composition in Heim & Kratzer (1998). This analysis generates the correct truth conditions for the FP node in (245), which are indicated by the last line of (248).

(244) *Context: A woman picked up a cup in her hand and smashed it down on her (clam) digging stick, causing the cup to break.*

$t\acute{a}p\acute{id}ida$	$\acute{c}\acute{a}daq\acute{e}sa$	$k^w\acute{a}ʔsta$	$la\acute{x}is$	$dzigayu$	
$t\acute{a}p-x\acute{?}id$	$=i=da$	$\acute{c}\acute{a}daq$	$=s=a$	$k^w\acute{a}ʔsta$	
broken-BEC	=3DIST=OST	woman	=INST=DET	cup	
la	$=\acute{x}=is$	$dzik\text{-}_w\acute{a}yu$			
PREP	=ACC=3REFL.POSS	$dig\text{-INST.PASS}$			
‘The woman broke a cup (INST) on her digging stick.’ (VF)					

²⁴ In Section 4.4 I explained how adopting Maximize Interpretability generates the wrong empirical predictions for Kwakwala. This is one point on which my and Kratzer's (2004) analysis differ.

(245)



(246) $\llbracket 1 \text{ break } t_1 \rrbracket = \lambda y_e. \lambda e_v. e \text{ is a breaking of } y$ **Predicate Abstraction**

(247) $\llbracket F' \rrbracket = \llbracket F_{[inst]} \rrbracket (\llbracket 1 \text{ break } t_1 \rrbracket)$ **Function Application**
 $= [\lambda R_{\langle e, VP \rangle}. \lambda x_e. \lambda e_v. R(x)(e) = 1 \ \& \ x \text{ is Co-initiator of } e] (\lambda y_e. \lambda e_v. e \text{ is a breaking of } y)$ **by (155) and (246)**
 $= \lambda x_e. \lambda e_v. (\lambda y_e. \lambda e_v. e \text{ is a breaking of } y)(x)(e) = 1 \ \& \ x \text{ is Co-initiator of } e$ **β -reduction**
 $= \lambda x_e. \lambda e_v. e \text{ is a breaking of } x \ \& \ x \text{ is Co-initiator of } e$ **β -reduction x2**

(248) $\llbracket FP \rrbracket = \llbracket a \text{ cup} \rrbracket (\llbracket F' \rrbracket)$ **Function Application**
 $= [\lambda Q_{\langle e, VP \rangle}. \lambda e_v. \exists z [Q(z)(e) = 1 \ \& \ z \text{ is a cup}]] (\lambda x_e. \lambda e_v. e \text{ is a breaking of } x \ \& \ x \text{ is Co-initiator of } e)$ **by (247) and the semantics of 'a cup'**
 $= \lambda e_v. \exists z [(\lambda x_e. \lambda e_v. e \text{ is a breaking of } x \ \& \ x \text{ is Co-initiator of } e)(z)(e) = 1 \ \& \ z \text{ is a cup}]$ **β -reduction**
 $= \lambda e_v. \exists z [e \text{ is a breaking of } z \ \& \ z \text{ is Co-initiator of } e \ \& \ z \text{ is a cup}]$ **β -reduction**

It follows from this analysis that in every context where case alternation is possible, the presence of instrumental case on an object means that the object has moved to the specifier of $F_{[inst]}$ as in the example just illustrated.

An interesting type of speaker data which may provide direct evidence for the movement analysis is shown in (249)-(251) below, with verbs that take strict-accusative objects. Each of the volunteered 'a' sentences below contain accusative objects, while each of the corresponding 'b' sentences contain the same nominal argument, but in instrumental case. Each of the 'b' sentences was judged to be infelicitous, though in each case, the speaker was still able to provide a translation for the sentence. These translations are significant because the object in them is interpreted simultaneously as the *Co-initiator* of the event and as the direct internal argument of the verb — in other words, as if movement of the type illustrated in (245) has occurred. In (249), the hat is both what Katie held, and what she held *with*; in (250), the hat is both what Katie stowed, and what Katie stowed *with*; and in (251), the hat is both what Katie took out of the drawer and what she used in doing so.

- (249) a. **daɫuχ Katiyəχuχda λətəml**
 da-ala =uχ Katie =χ=uχ=da λətəml
 take.in.hand-STAT =3MED Katie =ACC=3MED=OST **hat**
 ‘Katie is holding **the hat** (ACC).’ (VF)
- b. # **daɫuχ Katiyəsuxda λətəml**
 da-ala =uχ Katie =s=uχ=da λətəml
 take.in.hand-STAT =3MED Katie =INST=3MED=OST **hat**
 Speaker: “Katie is holding the hat with the hat.”²⁵ (JF)
- (250) a. **ləmuχ gəʔχuχ Katiyəχ^wa λətəml**
 lə=ʔm =uχ gəʔχ =uχ Katie =χ=^w=a λətəml
 AUX=VER =3MED stow =3MED Katie =ACC=3MED=DET **hat**
 ‘Katie stowed **the hat** (ACC).’ (VF)
- b. # **ləmuχ gəʔχuχ Katiyesuχ λətəml**
 lə=ʔm =uχ gəʔχ =uχ Katie =s=uχ λətəml
 AUX=VER =3MED stow =3MED Katie =INST=3MED **hat**
 Speaker: “You’re using the hat to put the hat away.” (JF)
- (251) a. **ʔəχwəlçuduχ Katiyəχ^wa λətəmlix laχ^wa niχniχəχ**
 ʔəχ-wəl-çu-xʔid =uχ Katie =χ=^w=a
 DO-out.from-inside-BEC =3MED Katie =ACC=3MED=DET
 λətəml=χ la =χ=^w=a niχniχəχ=χ
 hat=VIS PREP =ACC=3MED=DET drawer=VIS
 ‘Katie took **the hat** (ACC) out of the drawer.’ (VF)
- b. # **ləmuχ Katiyəχ ʔəχwəlçudsuxda λətəmlix laχ^wa niχniχəχ**
 lə=ʔm =uχ Katie=χ ʔəχ-wəl-çu-xʔid =s=uχ=da
 AUX=VER =3MED Katie=VIS DO-out.from-inside-BEC =INST=3MED=OST
 λətəml=χ la =χ=^w=a niχniχəχ=χ
 hat=VIS PREP =ACC=3MED=DET drawer=VIS
 Speaker: “You’re using the hat to take the hat out of a drawer. When you say it that way.” (JF)

A possible explanation for these translations is that the speaker, on hearing each of the ‘b’ sentences above, registers the presence of instrumental case (on what she identifies to be a normally strict-accusative argument) as a signal that the object has moved to the specifier of $F_{[inst]}$. This results in coercion, such that the object gets interpreted simultaneously as the event’s *Co-initiator* and in its base position internal to the VP. Thus if we are willing to take these speaker translations at face value, these data provide evidence fairly direct evidence for the movement analysis illustrated in (245).

The movement analysis developed so far accounts for the realization of instrumental objects in environments where the Alternation Condition is met, and case alternation is possible. With strict-instrumental case relations, there is another logical possibility besides movement to

²⁵ A similar sentence lacking this special translation is shown in (184b).

the specifier of $F_{[inst]}$. Namely, strict-instrumental objects, such as semantic Instruments, could to be merged directly into the specifier of $F_{[inst]}$ instead of moving there from within the VP (in which case there would need to be a separate denotation for $F_{[inst]}$ to capture this possibility). If this were the case, then there would be two ways in the grammar for a nominal to end up in the specifier of $F_{[inst]}$: either by movement or by external merge. I will leave open the question of whether external merge into $F_{[inst]}$ is possible at this time, since I don't have at my disposal any empirical evidence with which to adjudicate the issue.

To account for the realization of accusative case on objects in Kwakwala, all that remains to be said is that accusative case is assigned by default to any DP object which remains in its base position internal to VP.²⁶ When $F_{[inst]}$ is absent in the structure, no movement is triggered, no instrumental case is assigned, and no interpretation of co-initiation arises. Assignment of accusative case is then carried out as a last resort.

The syntactic analysis of Kwakwala object case I've just sketched is nearly identical to the syntactic analysis Kratzer (2004) proposes for Finnish object case. The semantically mirrored nature of these two languages' case systems is taken to arise, then, from a difference in the interpretation associated with the case-assigning head located immediately above VP in both languages.

With a syntactic and semantic analysis of object case in Kwakwala and Finnish in place, a few words are in order concerning what kind of case is assigned by F in the structures above. Kiparsky (1998) aptly describes object case in Finnish as 'semantically-conditioned structural case' (p. 265).²⁷ If this is true of Finnish and the two systems have the same nature, then it should be true of Kwakwala as well. What is interesting about the Finnish accusative and the Kwakwala instrumental is that they straddle the line between being structural cases and inherent cases. On the one hand, they are clearly structural cases, given that they are assigned to the nominal which appears in a particular syntactic position. On the other hand, they resemble inherent cases, in the sense that they are associated with a specific semantic value which is more abstract than verb-specific thematic roles (i.e. lexical case; see Woolford 2006). If it is also true that in Kwakwala, nominals may either be merged in the specifier of $F_{[inst]}$ or moved there, then the sense in which instrumental case resembles an inherent case is even more stark. In any case, the hybrid nature of these cases is theoretically interesting, as Kiparsky (1998: p. 265-6) points out, because it invites us to consider 'semantically-conditioned structural cases' as a distinct variety of case.

6.5 Kwakwala in typological perspective

So far in this chapter, I've been comparing Kwakwala's object case system with the case system of only one other language, Finnish. The purpose of this has been to show that despite its uniqueness, Kwakwala's object case system is not unexpected: Kwakwala is just like other languages in manifesting a link between object-encoding and event structure. Finnish is the most obvious language to make this point with, since Finnish and Kwakwala are strikingly similar in the way they encode objects. In this section, I'll zoom out again, beyond these two languages, in order to show how Kwakwala fits into an even larger typological pattern.

²⁶ Accusative case is also assigned by default to the nominal within prepositional *la* phrases.

²⁷ Kiparsky actually adopts this terminology to describe Finnish partitive, which he argues is interpretable (and associated with an interpretation of unboundedness). Regardless, I think his terminology here is generally appropriate and can be applied equally well to an analysis where accusative is interpretable.

Ritter & Rosen (2000) propose an event-structural typology which provides a very useful framework for thinking further about Kwakwala's object case system in cross-linguistic perspective. This typology takes as its defining parameter the way that languages grammaticalize event structure. Languages divide into two types: Initiator or I-languages, which grammatically encode the initial bound of events; and Delimiting or D-languages, which grammatically encode the final bound of events. In order to define D-languages and I-languages, Ritter & Rosen develop a specific syntactic hypothesis about how this typological distinction is encoded in grammar, the details of which are not relevant here. I will focus here, rather, on the empirical predictions of this analysis to show how Kwakwala fits squarely within the I-language/D-language division these authors propose. However, I will also explain why Kwakwala is an I-language in a way which is not predicted by Ritter & Rosen's proposal, which will lead me to propose a specific extension to their theory.

The basic idea behind Ritter & Rosen's theory is that I-languages grammaticalize the *initial* bound of events in their functional structure, while D-language grammaticalize the *final* bound in theirs.²⁸ Given this difference, I-languages and D-languages tend to manifest different empirical characteristics. Since D-languages are oriented towards delimitation in their syntax, they tend to grammaticalize distinctions related to perfective aspect, definiteness, and boundedness, especially as these categories are realized on objects; and since I-languages are oriented towards initiation in their syntax, they tend to grammaticalize distinctions based on differences in person, agentivity, and animacy, especially as these categories are realized on subjects. The authors identify the list of properties in Table 6.1 as ones which tend to distinguish D-languages from I-languages.

D-languages	I-languages
<ul style="list-style-type: none"> • Accomplishments form a natural class with achievements • Sensitive to semantic and syntactic properties of the object including specificity or definiteness, case marking, person • Accusative Case may be restricted to delimited objects • Ergative splits on the basis of perfective aspect/past tense • Object agreement not specified for person features 	<ul style="list-style-type: none"> • Accomplishments form a natural class with activities • Sensitive to semantic and syntactic properties of the subject including agentivity, animacy • Make a grammatical distinction between topic and subject • Ergative splits on the basis of properties of the subject • Subject and object agreement specified for person features • Quirky Case subjects • Animacy hierarchies

Table 6.1: Properties of D-languages and I-languages (Ritter & Rosen 2000: p. 195)

According to the authors, some examples of D-languages include Finnish, English, Mandarin Chinese, and Haitian Creole. In English, for instance, delimiting particles and suffixes are able

²⁸ The wording in Ritter & Rosen (2000: p. 187) suggests that it might be possible for a language to be both an I-language and a D-language. If so, then the properties listed in Table 6.1 are properties of *canonical* D-languages and *canonical* I-languages.

to license delimited readings, while we've seen that in Finnish, event delimitation is marked by accusative case. Some examples of I-Languages include Icelandic, Irish, Japanese, Dyirbal, and Southern Tiwa. For instance, in Icelandic, Irish, and Japanese, only agents can be realized as *Initiators* and receive nominative case; all other subjects in these languages receive quirky or inherent case.

Given the classification of Finnish as a D-language, we might expect K^wak^wala to qualify as an I-language on the basis that its object case system is the semantic mirror-image of the one in Finnish. More specifically, since K^wak^wala's instrumental case is semantically tied to the *initial* bound of an event, K^wak^wala should thereby qualify as a language which grammaticalizes event initiation. However, on Ritter & Rosen's (2000) theory, event initiation is described in relation to event's *Initiator* only, so that as it stands, their theory only predicts I-languages which grammaticalize distinctions in *subjects*. The fact that K^wak^wala has grammaticalized event initiation as a relevant distinction for classifying *objects* therefore requires an extension to their theory, to allow for event initiation to be grammaticalized in terms of object distinctions. Once this extension is allowed, K^wak^wala's object case system can be seen to fit squarely into this wider typological pattern, namely as an I-language which grammaticalizes event *initiation* in its object case system.

It's worth pointing out that K^wak^wala also possesses several additional characteristics associated with I-languages. For instance, K^wak^wala resembles Irish and Japanese in disallowing Instruments as subjects. Whenever Instruments are put into subject position in K^wak^wala, they are consistently construed as volitional and agent-like (252)-(253) — hence, not as Instruments.

(252) *Context: Out-of-the-blue.*

təp̄idida λəʔbayuχa k^wəʔstabidu
 təp-xʔid =i=da λəʔp-,ayu =χ=a k^wəʔsta=bidu
 broken-BEC =3DIST=OST nail-INST.PASS =ACC=DET cup=DIM
Literally: 'The hammer broke the little cup (ACC).' (JF)

Speaker: [laughter] "The hammer broke the little cup."

KS: [...] "And do you think of a hammer that's just doing it by itself?"

Speaker: "Yeah — nobody's holding it. Ghost, maybe. lolinoχ^w ['ghost']."

(253) *Context: Out-of-the-blue.*

túsʔidida kawayuχa k^wənik^w
 tús-xʔid =i=da kaχ^w-,ayu =χ=a k^wənik^w
 cut-BEC =3DIST=OST carve-INST.PASS =ACC=DET bread
Literally: 'The knife cut the bread (ACC).' (JF)

Speaker: [laughter] "All by itself?! [laughter] The knife cut the bread... all by itself. Nobody's holding the knife. [...] lolinoχ^w ['ghost']."

The reason that Irish and Japanese disallow Instrument subjects, according to Ritter & Rosen, is that they are not canonical *Initiators*. Yet while these languages grammaticalize the notion of what counts as a canonical *Initiator* in terms of differences in subject marking, K^wak^wala

grammaticalizes this same notion in terms of differences in object marking, so that objects which participate in event initiation (*Co-initiators*) are distinguished from those which don't (*Non-initiators*). K^{wak}wala patterns just like these other I-languages in disallowing Instrument subjects, yet the underlying source of this pattern is different: namely, this restriction in K^{wak}wala results from how objects are grammaticalized, whereas in Irish and Japanese, it results from how subjects are. Thus while K^{wak}wala differs in the details, it clearly resembles these other languages at an abstract level of description.

K^{wak}wala also manifests grammatical restrictions based on person, which is another I-language property distinguished in Ritter & Rosen (2000). To begin with, there is no way to form passives with first person agents in K^{wak}wala (Rosenblum 2013: pg. 256-259). Next off, there are no pronominal suffixes for first person objects in K^{wak}wala; instead, speakers use periphrastic constructions (synchronically identical to PPs) which derive historically from predicates of motion (Mithun 2007, Sardinha 2011a). By my own observation, second person pronominal objects seem also to be becoming restricted in the language. That is to say that in modern K^{wak}wala, there appears to be significant inter-speaker variation in the realization of second person pronouns, with periphrastic forms being used instead of enclitic pronouns in many environments. In particular, I've found speakers to frequently use the form *loλ*, a form constructed out of prepositional *la* plus the second person pronominal enclitic *=uλ*, in environments where historically *=uλ* was possible. The existence of these properties is consistent with K^{wak}wala being an I-language, even independently of its object case system.

In summary, K^{wak}wala appears to provide new support for Ritter & Rosen's (2000) typological distinction between I-languages and D-languages. This is true both in terms of how it instantiates numerous I-language properties, and in how it fails to instantiate D-language properties (as seen, for instance, in the fact that telicity is independent of object marking, as discussed in Section 6.3). Since K^{wak}wala has grammaticalized event initiation in terms of object-encoding, Ritter & Rosen's (2000) typology must be expanded to include the possibility of event initiation being grammaticalized in terms of object distinctions.²⁹ Once this extension is made, we expect not only to see languages like K^{wak}wala, a dependent-marking language in which event initiation is realized in terms of object case, but also the head-marking equivalent: that is, we expect to find languages in which event initiation is marked via object agreement. At this time, I'm unaware of whether any such language exists, but now that we know what to look for, it's possible that one may turn up.³⁰

6.6 Conclusion

The purpose of this chapter has been to place K^{wak}wala's object case system in cross-linguistic perspective and see what doing so reveals about language more generally. To this end, I began the chapter by pointing out the sense in which K^{wak}wala's object case system is unique. In particular, K^{wak}wala is the first language reported as having a two-object case system in which an interpretable instrumental-like case is opposed to an uninterpretable accusative-like case. One

²⁹ This finding has ramifications for Ritter & Rosen's syntactic proposal, since for them, event initiation is grammaticalized at a position in the tree where external arguments are introduced, whereas event delimitation is grammaticalized lower, just above where internal arguments are projected. In K^{wak}wala, event initiation is grammaticalized low in the structure.

³⁰ A good place to start might be in languages with secundative alignment (Dryer 1986) — that is, languages where the Theme in ditransitives is grammatically distinguished from the Patient and Recipient, which pattern alike. K^{wak}wala is such a language (as pointed out in Rosenblum 2013: p. 233).

way in which K^wak^wala's object case system is interesting, then, is simply that it demonstrates a new way for an object case system to be.

Yet while the details of K^wak^wala's object case system are unique, at a higher level of abstraction, the system fit into existing cross-linguistic patterns. To make this point, I focused on showing how K^wak^wala's object case system is the mirror inverse of another, more familiar object case system in the literature: the object case system in Finnish. While K^wak^wala possesses an interpretable instrumental case tied to the *initial* bound of events and an uninterpretable accusative case, Finnish possesses an interpretable accusative case tied to the *final* bound of events, and an uninterpretable partitive case. Empirically, this differences between K^wak^wala and Finnish gives rise to a predictable association between object case and telicity in Finnish which is entirely absent in K^wak^wala. Otherwise, Finnish and K^wak^wala's case systems are strikingly similar in their configuration, in the sense that both systems possess an interpretable object case which associates an internal argument with some part of an event — that is, either its *initial* or *final* part. This similarity is apparent from the fact that Kratzer's (2004) syntactic analysis of the Finnish case system can be extended to account for K^wak^wala's with only minimal modifications needed. In this way, the uniqueness of K^wak^wala's object case system turns out, on closer analysis, to be quite superficial.

Zooming out once more to see K^wak^wala in even wider cross-linguistic perspective, I argued that Ritter & Rosen's (2000) event-structural typology provides a useful framework for conceptualizing K^wak^wala's relationship to other languages. In Ritter & Rosen's typology, languages can be distinguished on the basis of whether they grammaticalize the *initial* bound of events (I-languages) or the *final* bound of events (D-languages). I argued that K^wak^wala grammaticalizes event initiation in its object case system, thereby qualifying it as an I-language. By validating Ritter & Rosen's (2000) typology, the K^wak^wala data can also be seen to support the authors' core idea regarding what may be universal in Language: namely, the idea that all languages grammaticalize at least one part of event structure, though individual languages can vary in terms of whether they grammaticalize the *initial* part or the *final* part.

A fascinating implication of the findings in this chapter concerns the nature of aspectual categories in K^wak^wala. In Finnish, object case distinctions are standardly assumed to reflect distinctions in viewpoint aspect (Travis 2010: p. 133). The fact that K^wak^wala's object case system semantically mirrors the one in Finnish, then, compels us to consider that object case distinctions in K^wak^wala may also reflect distinctions in viewpoint aspect. If so, then viewpoint aspectual categories in K^wak^wala may be of a somewhat different sort than we're used to seeing, given that there is no canonical perfective marker in the grammar of this language (Greene 2013: pg. 88-9). The connection between object case and aspect is therefore an important topic for future work on K^wak^wala, but one which is one step beyond the scope of the project here. I return to briefly discuss this topic in Chapter 7, Section 7.3.1.

In conclusion, when K^wak^wala's object case system is viewed in cross-linguistic perspective, we find that it is unique in detail, but unsurprising in its general form. On the one hand, the K^wak^wala pattern expands our ideas about what a possible language looks like; on the other hand, it fits squarely into already-existing patterns.

7

Conclusion

This chapter is organized into three sections:

- Section 7.1 provides a chapter-by-chapter summary of the analysis of Kwakwala object case developed in Chapters 3-6 of this dissertation.
- Section 7.2 discusses a remaining question which the analysis developed in Chapters 3-6 does not answer: namely, the question of what determines case choice in alternating environments.
- Section 7.3 presents preliminary evidence for two pragmatic strategies which speakers use to make case choices in alternating environments.

7.1 Summary

This project began with the observation of three types of relations in Kwakwala between particular verbs, particular internal arguments, and particular object cases. These included strict-instrumental (=s) relations, strict-accusative (=x̃) relations, and alternating instrumental-accusative {=s, =x̃} relations. The puzzle these relations present us with is how to predict and explain, for any given internal argument, why that argument is expressible as an instrumental, accusative, or potentially alternating object. In this dissertation I proposed a semantic solution to this puzzle, which is called the Initiating Subevent Theory of object case.

In Chapter 3, I presented three empirical arguments for object case distribution in Kwakwala having a basis in semantics. First, I showed that verbs with strict-instrumental relations, verbs with strict-accusative relations, and verbs with alternating relations fall into semantically coherent verb classes. Next, I showed that with certain verbs, there is a correlation between the semantic perspective that is encoded by the verb and the object case, or cases, available for the verb's internal argument. Finally, I showed that object case constrains the semantic interpretation of monotransitive and ditransitive predicates involving weak verbs. These three arguments each suggest that the distribution of object case can be explained in semantic terms.

In Chapter 4, I outlined the Initiating Subevent Theory of object case. The first central claim of this analysis is that object case distinctions in this language are grounded in subevental structure. Instrumental case canonically marks participants in *initiating* subevents, which are referred to as *Co-initiators*, while accusative case canonically marks participants in *non-initiating* subevents, which are referred to as *Non-initiators*. Concomitantly, arguments which participate in both the *initiating* and *non-initiating* subevent of an event may be expressed in either case. In order to predict which object case(s) an internal argument will occur in, I proposed a set of semantic criteria for identifying *Co-initiators* and *Non-initiators*. I then motivated the second central claim of the analysis, which is that instrumental case is interpretable. This finding was noted to align with an early intuition expressed in Boas (1911: p. 544) that instrumental case is meaningful. Accusative case, on the other hand, was argued to be an uninterpretable default case. I then showed why having a meaningless accusative case in the

grammar results in the need to enforce strict-instrumental case relations by syntactic stipulation. Finally, I discussed how the Initiating Subevent Theory accounts for the K^{wak}wala findings presented in Chapter 3.

In Chapter 5, I presented three new kinds of empirical evidence in support of the claim that K^{wak}wala object case is determined by event structure, each of which focused on how modifying event descriptions leads to changes to object case realization. First, I showed that case alternation is licensed in whenever an argument is both directly manipulation by an *Initiator* and undergoes change (the Direct Manipulation Alternation); second, I showed that it is possible to license an alternating internal argument by modifying an event description with a Path-denoting PP (the Caused Motion Alternation); and finally, I showed that case alternation can be licensed through semantic incorporation with the affixal verb *-(g)ila* ‘make’.

In Chapter 6, I zoomed out in order to consider K^{wak}wala’s object case system in cross-linguistic perspective. I showed that K^{wak}wala fits into an existing cross-linguistic tendency for languages to associate the way objects are encoded with the part-structure of events. To illustrate this point, I compared K^{wak}wala’s object case system to the object case system in Finnish as analyzed in Leino (1982), Heinämäki (1984, 1994), Vainikka (1989), and Kratzer (2004). While K^{wak}wala grammaticalizes an interpretable object case associated with the *initial* bound of events, Finnish grammaticalizes an interpretable object case associated with the *final* bound of events. I argued that this difference explains why these two languages differ in how they express telicity. The similarities between these two languages then led me to propose a compositional analysis of instrumental case realization in K^{wak}wala which is modelled directly off of Kratzer’s (2004) analysis of accusative case in Finnish. Finally, I discussed how K^{wak}wala fits into Ritter & Rosen’s event-structural typology of I(nitiator)-Languages and D(elimiting)-Languages.

7.2 A remaining question

One of the contributions of this dissertation is the development of a semantic generalization for predicting the grammatical distribution of instrumental and accusative objects. Namely, if an internal argument is a *Co-initiator* only, it will be mapped as an instrumental object; if it is a *Non-initiator* only, it will be mapped as an accusative object; and if it is both a *Co-initiator* and a *Non-initiator* simultaneously, it will be mapped as either an instrumental or accusative object.

Crucially, what the analysis developed in Chapter 3-6 of this dissertation does *not* account for is how case choices are made in contexts where instrumental and accusative are both semantically licensed. In previous chapters, I have mentioned that K^{wak}wala speakers often report sentence pairs with alternating objects as having the same or very similar meaning, and have difficulty trying to describe how they differ. Some examples of speakers’ reactions to sentence pairs with alternating objects were provided in Chapter 4, Section 4.2.4; two additional examples are provided in (254)-(255) to highlight how pervasive this pattern of speaker response is.

(254) **Speaker:** “*hañak^{wili} Mabel ʔəxʔalilaxa kəkadək^wsiladzu?* [(a)]”

KS: “[...] I’m gonna change it a little bit, and you can tell me if it’s...”

Speaker: “*wiga* [‘Go ahead.’]”

KS: “*hañak^{wili} Mabel ʔəxʔalilaxa kəkadək^wsiladzu?* [(b)]”

Speaker: “Mhm. It’s, it’s just as legal as the first one.”

KS: “Kay. And do you notice any difference?”

Speaker: “It doesn’t change what you’re saying.”
KS: “Yeah. Does it change the way you’re looking at it?”
Speaker: “Mhm, no.”
KS: “No.”
Speaker: “It’s just the sound, that’s all you’ve changed.”

- a. haṅak^{wili} Mabel ʔəḥʔaliṭa^{ḥa} **kakadək^wsiladzu?**
 haṅak^{wil} =i Mabel ʔəḥ-ʔaliṭ-a =**ḥ=a**
 quickly , =3DIST Mabel DO-on.floor.in.house-A =ACC=DET
ka~kat-_wk^w-ksi-la-dzu
REDUP~write-PART-occupy-CONT-flat
 ‘Mabel quickly put **the book** (ACC) down.’ (VF)
- b. haṅak^{wili} Mabel ʔəḥʔaliṭasa **kakadək^wsiladzu?**
 haṅak^{wil} =i Mabel ʔəḥ-ʔaliṭ-a =**s=a**
 quickly , =3DIST Mabel DO-on.floor.in.house-A =INST=DET
ka~kat-_wk^w-ksi-la-dzu
REDUP~write-PART-occupy-CONT-flat
 ‘Mabel quickly put **the book** (INST) down.’ (JF)

(255) [*The speaker and KS are talking about throwing out food.*]

KS: “And is there any difference... in meaning between *ḥəḥʔidagaʔsuḥda* [(a)] and *ḥəḥʔidagaʔsḥuḥda* [(b)]...?”
Speaker: “Uh, no. You’re just referring to the food.”
KS: “Mhm [‘Yes’].”
Speaker: “Whether it’s *sḥuḥ* or *suḥ*.”
KS: “Mhm? [‘Yes?’] Okay.”
Speaker: “It’s actually almost the same.”
KS: “Yeah.”
Speaker: “Yeah.”
KS: “Okay.”
Speaker: “Mhm [‘Yes’].”
KS: “ALMOST the same? Do you sense any...”
Speaker: “Al[most], al[most], yeah. I don’t know the differentiation.”
KS: “Yeah. Mokay.”
Speaker: “I would just know it the second I spoke it.”

- a. ḥəḥʔidagaʔ**suḥda**
 ḥəq-xʔid-a-ga =s =**s=uḥ=da**
 discard-BEC-A-IMP =2 =INST=3MED=OST
 ‘Throw **that [food]** (INST) out.’ (VF)

- b. čəǰʔidagaʔsǰuǰda
 čəq-xʔid-a-ga =s =ǰ=uǰ=da
 discard-BEC-A-IMP =2 =ACC=3MED=OST
 ‘Throw **that** [food] (ACC) out.’ (VF)

A semantic theory on its own cannot explain what determines case choice in alternating contexts. This is because in the vast majority of contexts where case alternation is possible, the semantic contribution of instrumental case is redundant and therefore has no truth-conditional impact on the sentence. Exceptions to this generalization include weak predicates (e.g. with dummy ʔəǰ- ‘do’) and instances in which case alternation is licensed in contexts where an argument being directly manipulated by the *Initiator* (The Direct Manipulation Alternation) for the reason that in both of these situations, instrumental case adds entailments above and beyond those already supplied by the verb and modifying constituents (e.g. path-denoting PPs). In other alternating environments, however, the semantic value of instrumental case is redundant and the truth conditions of the sentence will be the same regardless of which case is chosen. This means that case *choice* in alternating contexts must be determined by factors other than the literal content of what is said.

The remainder of this chapter is devoted to presenting preliminary evidence for the existence of two pragmatic strategies which speakers appear to use in making case choices in alternating contexts. The patterns I discuss below are subtle, violable, and ultimately in need of more empirical support than I can offer here. They nevertheless constitute a promising topic for future research on this language.

7.3 Future directions: Case choice and pragmatics

To understand the pragmatic factors which appear to underlie case choice in alternating contexts in K^{wak}wala, it will be helpful to say a little about the communicative function of object case-marking in general. Næss (2007: p. 53) identifies two common theoretical approaches to understanding the function of case-marking, which he refers to as the *indexing approach* and the *discriminatory approach*.¹ On an indexing approach, the function of object case-marking is to index thematic information on internal arguments as a means of semantically categorizing them (e.g. Wierzbicka 1981). The theory of case marking developed in previous chapters is broadly in line with the indexing approach, given that =s indexes *Co-initiators*. On a discriminatory approach, on the other hand, the function of case marking is to distinguish arguments from one another (e.g. Comrie 1975, Bossong 1991, Aissen 2003). While Næss (ibid.) is primarily concerned with how case functions to distinguish subjects and objects in transitive clauses, I take the discriminatory approach to be equally relevant to the question of how internal arguments are distinguished from each other.

In the next two subsections, I discuss preliminary evidence for two pragmatic strategies which speakers use to make case choices in alternating environments. The first strategy, which I refer to as ‘subevent highlighting’, relates to the indexing function of object case-marking. This is a strategy whereby the possibility of case choice in alternating contexts is exploited to generate

¹ I should note that Næss’s (2007: p. 161) point in the chapter I’m referencing is that some case markers don’t fit well into either analysis, but serve rather to indicate the fact that arguments are maximally semantically distinct (for instance, when a clause contains *both* a controlling Agent and an affected Patient). For my purpose here however, this third approach is not relevant.

relevance implicatures — implicatures, that is, about which part of an event the speaker considers more relevant to the discourse. I will suggest here that case choice, in these instances, functions to communicate a type of aspectual information (Section 7.3.1). The second strategy relates to the discriminating function of object case-marking; here, I will present data suggesting that the need to disambiguate semantic arguments from each other serves to pragmatically constrain case choice in alternating environments (Section 7.3.2).

7.3.1 Subevent highlighting

A pragmatic factor which appears to play a role in determining Kwakwala speakers' case choice in alternating environments is *relevance*. In contexts where an event's initiation phase is more relevant to what is being discussed, speakers tend to volunteer instrumental (=s) case, while in contexts where an event's result is more relevant to what is being discussed, speakers tend to volunteer accusative (=x̣) case. I will refer to this empirical pattern in what follows as **subevent highlighting**.²

Subevent highlighting is exemplified in (256) with the verb *hənɣλənd-* 'put hollow container upright on fire', where a speaker is prompted to describe actions being role-played in her kitchen. First, the speaker is asked to describe an ongoing event in which KS is in the process of putting a pot of soup on the stove. In this situation, the speaker volunteers a sentence with an instrumental object (256a). Subsequently, the speaker is asked to describe a culminated event, in which KS has already put the pot of soup on the stove. In this situation, the speaker volunteers two sentences — one which is stative (256b), and one with an accusative object (256c), which the speaker translates using the English perfective.

(256) [Context: KS is holding an actual pot and acting out a scenario in the speaker's kitchen. When [(a)] is volunteered, KS is in the middle of slowly placing the pot onto the stove.]

KS: "If you saw me, doing it?"

Speaker: "Mhm ['Yes']."

KS: "How would you ask — how would you, um, say, 'Katie's putting the pot on the stove' ...?"

- a. ləmũx̣ Katiyəx̣ hənɣλəndsə sup lax̣wə ləḡwilaçix̣
 lə=ʔm =uḡ Katie=x̣ hən-x̣λ-x̣ʔid
 AUX=VER =3MED Katie=VIS hollow.container.upright-on.fire-BEC
 =s=a sup la =x̣=w=a ləḡwilaçix̣
 =INST=DET soup PREP =ACC=3MED=DET stove=VIS
 'Katie's putting the (pot of) soup (INST) on the stove.' (VF)

² The structure and organization of my field corpus, at this time, unfortunately does not allow me to tell how prevalent this pattern is amongst the data I've collected. What led me to investigate subevent highlighting in the first place was the relatively recent realization that I had acquired the pattern unconsciously, to some degree, as an L2 learner of Kwakwala. It began in the first few years I worked on Kwakwala, when I observed that the passive marker *-ayu* was used far less frequently than *-suʔ*, and I was curious about whether *-ayu* had lost productivity in the language. I learned at some point that speakers would produce more *-ayu* forms if they were asked to translate sentences in imperfective contexts. I did not recognize the wider significance of this pattern, however, until the summer of 2016. Though subevent highlighting may be subtle, the fact that I formed a generalization about it as an L2 learner is not insignificant. If an L2 learner could form a generalization like, couldn't an L1 learner?

KS: “[...] And now let’s say I walk away. [*KS has put the pot on the stove and is actually walking away.*] How would you say, ‘The soup is on the stove’...?”

- b. ləm^ux̣ hən^xλəndu^{x̣}da supⁱx̣ la^{x̣}^wa ləğ^wilaci
 lə=ʔm =u^{x̣} hən-xλ-xʔid =u^{x̣}=da
 AUX=VER =3MED hollow.container.upright-on.fire-BEC =3MED=OST
 sup=^{x̣} la =^{x̣}=^w=a ləğ^wilaci
 soup=VIS PREP =ACC=3MED=DET stove=VIS
 ‘The (pot of) soup is sitting on the stove.’ (VF)
- c. ləm^ux̣ hən^xλəndu^{x̣} Katiyə^{x̣}^wa supⁱx̣ la^{x̣}^wa ləğ^wilaci^{x̣}
 lə=ʔm =u^{x̣} hən-xλ-xʔid =u^{x̣}
 AUX=VER =3MED hollow.container.upright-on.fire-BEC =3MED
 Katie =^{x̣}=^w=a sup=^{x̣} la =^{x̣}=^w=a
 Katie =ACC=3MED=DET soup=VIS PREP =ACC=3MED=DET
 ləğ^wilaci=^{x̣}
 stove=VIS
Speaker: “Katie has put the (pot of) **soup** (ACC) on the stove.” (VF)

The verb *hən^xλənd-* in these sentences is used in a caused motion frame; this means that its Theme, the (pot of) soup, is semantically capable of being expressed in either case, and that case choice in this context is semantically insignificant. Nevertheless, we see that there is an alignment between which subevent is more relevant in each context, and which case the speaker volunteers. Namely, in (256a), the speaker is asked to describe the *initiating* subevent of a ‘putting’ event, and chooses the case associated with *initiating* subevents, namely instrumental, to do so; in (256c), on the other hand, the speaker is asked to describe the result of a ‘putting’ event, and chooses the case associated with *non-initiating* subevents, namely accusative, to do so.

One plausible explanation for this pattern is that case choice in alternating context provides information about which subevent is more relevant to the discourse. To see how this might work, consider first the context in (256a), where the speaker uses an instrumental object to describe an in-progress event. The listener knows, on account of knowing the language, that both object cases are semantically possible in this context, and that the speaker would thereby be required to make a case choice. Upon hearing (256a) the listener also knows that the speaker chose instrumental case. The listener then reasons as follows: the speaker must have chosen instrumental case because the meaning associated with instrumental case is relevant to the discourse; hence, the speaker intended to highlight the event’s *initiating* subevent as relevant. Note that similar reasoning applies, but in reverse, with respect to (256c), where the speaker uses an accusative object to describe a culminated event. Again, the listener knows that either case is semantically possible, that a case choice is required, and that the speaker therefore chose accusative in this context. Here, the listener reasons that the speaker must have chosen accusative case for a reason, namely, to avoid highlighting the *initiating* phase of the event. From this, the listener reasons that the speaker chose accusative case in order to highlight the *non-initiating* phase of the event as more relevant in the discourse.

It is important to keep in mind that speakers’ judgments confirm, time and time again, that sentences with instrumental objects (like (256a)) can describe culminated events, and sentences

with accusative objects (like (256b)) can describe in-progress events. Nevertheless, there is a distinct tendency for speakers' volunteered sentences to follow the opposite pattern — that is, the one exemplified in (256). On the analysis I've just sketched, this is because case choice in alternating contexts is capable of generating relevance implicatures which target aspects of subevental structure. Since the question of what is relevant at any given moment is subtle and often negotiable, this analysis potentially explains why case choices are themselves variable and negotiable, and why speakers find it so hard to describe the difference in meaning between sentences like (256a) and (256c).

If this analysis is on the right track, then we expect case choice in contexts like (256) to have a noticeable effect on shaping the structure of discourse and directing a listener's attention. The use of instrumental case invites the listener to take a point-of-view on the event from within its *initiating* subevent, while the use of accusative case invites the listener to take a point-of-view on the event that is outside of its *initiating* subevent. It would seem, then, the information communicated by case choice in these contexts helps determine the point-of-view events are seen from, which implies that the information communicated via case choice is essentially aspectual in nature (Smith 1997[1991]). In this way, case choice in alternating contexts appears to function as one of the mechanisms Kwakwala speakers have at their disposal for communicating viewpoint aspectual information. This finding invites further research on how the category of viewpoint aspect is realized in this language.

7.3.2 Discriminating arguments

Another pragmatic factor which appears to play a role in determining case choice is the pressure to be maximally clear about which internal semantic argument of a verb is being realized in a given utterance. I will explore two examples in this section where speakers appear to exploit case choice in order to disambiguate internal semantic arguments; both examples will involve instances where an expressed internal argument is potentially confusable with an unexpressed internal argument.

The first example involves the verb *nəp-* 'throw', which I assume has three core arguments: an Agent, a Theme, and a Goal. The case frame for this verb's internal arguments is given in (257).

(257)	<u>Case frame of <i>nəp-</i> 'throw'</u>
	Theme: {INST, ACC}
	Goal: ACC

Though *nəp-* 'throw' is semantically ditransitive, it can be realized syntactically as monotransitive, either with an expressed Theme and no Goal, as in (258), or with an expressed Goal and no Theme, as in (259).

(258) nəp- ‘throw’ with an expressed Theme, no expressed Goal

nəp̄idida bəgʷanəme {sa, ʃa} siwayu
 nəp-xʔid =i=da bəgʷanəm {=s=a, =ʃ=a}
 throw-BEC =3DIST=OST man {=INST=DET, =ACC=DET}
siʃʷ-ayū
paddle-INST.PASS
 ‘The man threw **a paddle** {INST, ACC} (at someone).’

Speaker: “Means the same [with =sa or =ʃa].” (VF, JF)

(259) nəp- ‘throw’ with an expressed Goal, no Theme

nəp̄idənʃa bəgʷanəm
 nəp-xʔid =ən =ʃ=a bəgʷanəm
 throw-BEC =1 =ACC=DET man
 ‘I threw (something) **at the man** (ACC).’ (VF)
 (Can also mean: # ‘I threw the man (at something).’)

In sentences with *nəp-* and only an accusative-marked object, the object could in theory denote either a Theme or a Goal. For this reason, sentences like (259) are ambiguous. It just so happens that in (259), real-world knowledge excludes one possible reading (cf. ‘I threw the man.’, where the man is the Theme), so this ambiguity isn’t really an issue. However, in situations where an internal argument could in theory be interpreted as either a Theme or a Goal, ambiguity of this sort could potentially lead to difficulties in recovering a speaker’s intended meaning.

Now, consider the data in (260). The speaker here was asked whether the sentence in (260a) could be used to mean that a hat was intentionally thrown (i.e. where the hat is a Theme). The speaker responded to this sentence by commenting that it could mean something different than what is intended, namely that the hat was thrown at (i.e. where the hat is a Goal). She then volunteered (260b), with an instrumental Theme, as a better way of achieving the target meaning.

(260) a. ??hinumamūʃ Eddiyəʃ nəpiʃis ʃətəm̄l
 hinuma=ʔm =uʃ Eddie=ʃ nəp-xʔid =ʃ=is
 on.purpose=VER =3MED Eddie=VIS throw-BEC =ACC=3REFL.POSS
ʃətəm̄l
hat

Intended: ‘Eddie threw **his hat** (ACC) on purpose.’ (JF)

Speaker: “I think when you, when you use that — word, he threw something AT his hat.”

- b. hinumamux Eddiyax napisis lataml
 hinuma=?m =ux Eddie=x nap-x?id =s=is lataml
 on.purpose=VER =3MED Eddie=VIS throw-BEC =INST=3REFL.POSS hat
 ‘Eddie threw his hat (INST) on purpose.’ (VF)

We know, on the basis of speaker judgments like (258), that the Theme of *nap-* can be realized as an accusative object. What the speaker’s response in (260a) seems to suggest is that in a sparse context, where there are no obvious cues (or clear biases based on real-world knowledge) for deciding whether an expressed argument is a Theme or a Goal, accusative case is best avoided if the argument is a Theme, since choosing accusative would introduce ambiguity regarding the argument’s thematic role. Case choice, in other words, presents an opportunity which can be exploited to reduce ambiguity. The conditions under which this disambiguation occurs are schematized in (261).

- (261) Disambiguation Strategy (*nap-* ‘throw’)
 Theme: =s/=x (= expressed)
 Goal: =x (= null)
 Optimal case choice for Theme: =s

On the other hand, when the sentence or context *does* include disambiguating information, the Theme can more naturally appear in either case. This is shown by the data in (262), which was elicited with the same speaker a few minutes after eliciting (262); here, the Goal of *nap-* is expressed within an overt prepositional phrase, which thereby functions to disambiguate this verb’s internal arguments. Here, the speaker again volunteers instrumental on the Theme (262a), but then subsequently judges accusative on the Theme to be acceptable as well (cf. (262b)).

- (262) a. hinumamux Eddiyax napisis lataml laxa guk^w
 hinuma=?m =ux Eddie=x nap-x?id =s=is
 on.purpose=VER =3MED Eddie=VIS throw-BEC =INST=3REFL.POSS
 lataml la =x=a guk^w
 hat PREP =ACC=DET house
 ‘Eddie threw his hat (INST) at a house on purpose.’ (VF)
- b. hinumamux Eddiyax napixis lataml laxa guk^w
 hinuma=?m =ux Eddie=x nap-x?id =x=is
 on.purpose=VER =3MED Eddie=VIS throw-BEC =ACC=3REFL.POSS
 lataml la =x=a guk^w
 hat PREP =ACC=DET house
 ‘Eddie threw his hat (ACC) at a house on purpose.’ (JF)

Speaker: “*napixis lataml*. Uh, I guess you could. *napixis lataml... laxa guk^w*. *napisis lataml laxa guk^w*. [(b)] I... don’t think anybody’s gonna argue about it, but anyway. Uh, *hinumamux Eddie napixis lataml laxa guk^w*. Yeah, you could — you could use it that way.”³

³ The speaker’s hesitancy here may stem from her surprise at the fact that only moments ago, when we were discussing (S), she had rejected accusative case on this argument.

In summary, the data in (260) show that case choice can be exploited to disambiguate potentially confusable arguments. The data in (262) show, however, that when sources of information other than case-marking are available for disambiguating arguments, case choice is no longer constrained.

Another place where the discriminating function of object-case marking becomes apparent is in contexts where we expect a semantic Patient to be able to undergo case alternation because it is directly manipulated by an *Initiator* — that is, in contexts which license the Direct Manipulation Alternation discussed in Chapter 5, Section 5.2. What I’ve observed in the course of my research is that instrumental case is realized less often in these contexts than one might expect on the basis of semantic factors alone. On closer observation, I’ve found one crucial factor in constraining the Direct Manipulation Alternation to be whether or not the verb involved describes an event which potentially involves an Instrument other than a body part — for instance, a tool. To illustrate why this might be the case, we’ll need to compare data involving verbs that both do, and do not, lexically entail an Instrument that is external to the *Initiator*.

With verbs that name events which do not lexically entail the involvement of an external Instrument, such as *kuḥ^w*- ‘fold’ (263), the Direct Manipulation Alternation occurs quite naturally. Verbs of this sort name events that entail direct manipulation — that is, manipulation using a part of the *Initiator*’s body *without the mediation of an external Instrument*. While it is technically possible to mention the body part that is used in the event, it is pragmatically odd to do so (264).

(263) *kuḥ^wən* {*sada*, *ḥada*} *maṃa*
kuḥ^w =ən {=*s=a=da*, =*ḥ=a=da*} *maṃa*
 fold =1 {=INST=DET=OST, =ACC=DET=OST} **blanket**
 ‘I’m folding **blankets** {INST, ACC}.’ (JF, VF)

(264) ?? *kuḥ^{wuḥ}* *Shelliḥ^{wa}* *maṃasis* *ḥəyəs*
kuḥ^w =uḥ *Shelly* =*ḥ=w=a* *maṃa*
 fold =3MED *Shelly* =ACC=3MED=DET *blanket*
 =*s=is* *ḥəyəs*
 =MEANS=3REFL.POSS **hand/arm**
Literally: ‘Shelly’s folding blankets **with her hands** (INST).’ (JF)

Speaker: “Mm. *heḥəm*. [‘That’s it.’] [*laughs*] Very [*laughs*] self-explanatory!”

The oddness in (264) arises because the *Initiator*’s hands are implicit arguments in these events, in the sense that they are entailed but unrealized arguments (Williams 2015: p. 94-116), so naming them in most contexts is redundant.

Another set of verbs which readily occur in the Direct Manipulation Alternation are verbs derived from underlying states, such as *təpíd* ‘break’ (from *təp-* ‘be broken’) and *yaḥḥíd* ‘melt’ (from *yaḥ-* ‘be melted’). Crucially, since these are stative roots, I assume they do not possess specific lexical entailments about external Instruments, even though the semantics of unaccusative and transitive verbs derived from them may be commensurate with Instruments. They are similar to verbs like *kuḥ^w*- ‘fold’, then, in that while they may become Instrument-mediated events compositionally, they are not Instrument-mediated events at the level of lexical entailments.

The significant finding for us here is that with verbs naming events which do entail *Initiator*-external Instruments, speakers tend to avoid realizing instrumental case on the Patient, even when semantically, we'd expect instrumental case to be possible. Take, for instance, the verb stem *q^wəcəm-* 'peel round object', which describes an event involving an Agent, a Patient, and an (often unrealized) Instrument. In a context where the Patient is being directly manipulated — for instance, where an Agent is holding an orange and peeling it with her hands — we predict, on the basis of similar examples discussed in Section 5.2, that the Patient should be able to appear in either case (265).

(265) Predicted case frame of *q^wəcəm-* 'peel round object' (in a context involving direct manipulation)

Patient: {INST, ACC}
Instrument: INST

However, this is not what we find. In an out-of-the-blue context, the speaker below volunteered accusative case on the Patient with this verb (266a), but rejected instrumental case (266b). The comments underneath (266b) indicate that the speaker's reason for rejecting instrumental case is because it brought to mind not the Patient, but a *distinct* semantic argument of the verb — in particular, the unrealized Instrument. Examples (266c)-(266d) show cases where this Instrument is realized: in a Means adjunct in (266c), and as an instrumental object in (266d).

(266) [*Context: Out-of-the-blue.*]

a. *q^wəcəmdaluḥ Abbiyəḥ^wa ʔayəndzisiḥ*
q^wəs-(ǧ)əm-xʔid-a-la =uḥ Abby =ḥ^w=a
 peel-face-BEC-A-CONT =3MED Abby =ACC=3MED=DET
ʔayəndzis=ḥ
orange=VIS
 'Abby's peeling **an orange** (ACC).' (VF)

b. # *q^wəcəmdaluḥ Abbisuḥ ʔayəndzisiḥ*
q^wəs-(ǧ)əm-xʔid-a-la =uḥ Abby =suḥ
 peel-face-BEC-A-CONT =3MED Abby =INST=3MED
ʔayəndzis=ḥ
orange=VIS

Speaker: "Um, if you were describing what she's USING to — but then you'd just use your hands to peel. If you were describing her using something to peel, then you could use *sux*." (JF)

c. *q^wəcəmdaluḥ Abbyḥ^wa ʔayəndzisiḥsa həməyu*
q^wəs-(ǧ)əm-xʔid-la =uḥ Abby =ḥ^w=a
 peel-face-BEC-CONT =3MED Abby =ACC=3MED=DET
ʔayəndzis=ḥ =s=a həm-_vayu
orange=VIS =MEANS=DET eat-INST.PASS
 'Abby's peeling **an orange** (ACC) with a fork.' (JF)

- d. q^wəcəmdaluḥ Abbyḥsa həḿayu laḥ^wa ʔayəndzisiḥ
 q^wəs-(ḡ)əḿ-xʔid-la =uḥ Abby=ḥ =s=a
 peel-face-BEC-CONT =3MED Abby=VIS =INST=DET
 həḿ-^wayu la =ḥ=^wa ʔayəndzis=ḥ
 eat-INST.PASS PREP =ACC=3MED=DET orange=VIS
 ‘Abby’s peeling an orange **with a fork** (INST).’ (VF)

A plausible explanation for why (266b) is rejected is that whenever the verb *q^wəcəḿ-* is used, the fact that this verb entails an Instrument makes instrumental case a poor choice for encoding the Patient. This is because using instrumental case to encode the Patient generates an ambiguity between this argument and the often-implicit Instrument of this verb. Speakers are therefore better off choosing to encode the Patient with accusative case, even though instrumental would be semantically possible, to avoid potential ambiguity. The speaker’s decision-making strategy in cases like (266b) is schematized in (267).

- (267) Disambiguation Strategy (*q^wəcəḿ-* ‘peel round object’) in a direct manipulation context
 Patient: =s/=ḥ (= expressed)
 Instrument: =s (= null)
 Optimal case choice for Patient: =ḥ

Once again, we see that in a context where both cases are semantically licensed, the potential for one object case to appear is constrained, pragmatically, by the fact that realizing this case would generate ambiguity relative to a null argument. In this way, the constellation of arguments associated with a particular verb functions to constrain the realization of object case in environments where case alternation is semantically licensed.

It is not clear, in the context of my research, how often speakers’ case choices are motivated by the pressure to disambiguate arguments in the ways explored in this section. Regardless, these data suggest that speakers can and do at least occasionally exploit the opportunity case choice presents in order to prevent ambiguity, and thereby improve the discriminability of semantic arguments.

In conclusion, the data presented in Sections 7.3.1 and 7.3.2 suggest that in environments where object case choice is semantically *insignificant*, it is nevertheless pragmatically significant.

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Glossary

The following terms are defined and developed in the dissertation text, where they are indicated in **bold** the first time they are used. Square brackets '[...]' indicate the section(s) in which each term is defined and elaborated.

alternating instrumental-accusative {=s, =x̃} relation

[Section 1.1, Section 3.2.3, Section 4.2.4]

A descriptive label for a relation that holds between a particular verb and a particular internal argument, such that the argument can appear in either instrumental (=s) or accusative (=x̃) case in every context of the verb's use.

Alternation Condition

[Section 4.2.4]

A semantic condition describing when it's possible for an internal argument to undergo instrumental-accusative {=s, =x̃} case alternation. The condition is phrased as follows: "An argument which satisfies the conditions for being both a *Co-initiator* and a *Non-initiator* may appear in either instrumental (=s) or accusative (=x̃) case."

canonical object position

[Section 1.2]

The position in clausal syntax where instrumental (=s) objects and accusative (=x̃) objects are realized. Canonical object position is located immediately to the right of the subject except when the subject precedes the main verb, in which case it is located immediately to the right of the verb.

Caused Motion Alternation

[Section 5.3]

A phenomenon whereby instrumental-accusative {=s, =x̃} case alternation is licensed on internal arguments which undergo caused motion in a direction. The Caused Motion Alternation can be licensed either through verbal entailments or through modification of an event description with a Path-denoting prepositional phrase. An analogous construction exists in English and is referred to as the caused motion construction (Goldberg 1995, Levin & Rappaport-Hovav 1995).

Co-initiator

[Section 1.4, Section 4.2.2, Section 4.2.3]

An event role that includes participants in the *initiating* part of an event which are not themselves *Initiators*. *Co-initiators* satisfy one or more of the following semantic conditions: they serve as the means by which an *Initiator* instigates an event (*dependent cause*); their existence or presence delimits the initial bound of the event (*initial bound*); or they are possessed by the *Initiator* at the initial bound of the event in a way that is relevant to event structure (*possession (initial bound)*). Arguments falling into this category are realized as instrumental (=s) objects in active clauses, and as subjects in clauses formed with the instrumental voice suffix *-ayu*.

Direct Manipulation Alternation

[Section 5.2]

A phenomenon whereby instrumental-accusative $\{=s, =\check{x}\}$ case alternation is licensed on internal arguments which in the course of an event are both directly manipulated by an *Initiator* and undergo some change. The Direct Manipulation Alternation can be licensed either by verbal entailments or by context.

***initiating* subevent**

[Section 1.4, Section 4.2.1]

The initial part or phase of an event. Intuitively, the *initiating* subevent is the part of an event related to causal instigation and to the initial temporal phase or bound of an event. *Initiating* subevents are also referred to as an *initial* subevents in the literature on event structure.

Initiating Subevent Theory

[Section 1.4, Chapter 4 (throughout)]

A theory about the semantic factors which underly the grammatical distribution of object case in Kwakwala, which has two central claims. The first claim is that object case is tied to subevental structure, with instrumental case realized on participants of *initiating* subevents (*Co-initiators*), and accusative case realized on participants of *non-initiating* subevents (*Non-initiators*). The second claim is that instrumental case is interpretable (i.e. is associated with a semantic value), while accusative case is an uninterpretable default (i.e. is not associated with a semantic value).

Initiator

[Section 4.2.1]

An event role which includes arguments capable of independent causal instigation, such as agents, experiencers, and natural forces. In active clauses, *Initiators* are always expressed as the subject.

interpretable case

[Section 1.4, Section 4.3, Chapter 6 (throughout)]

A case which is associated with a semantic value. In this dissertation I claim that instrumental case in Kwakwala is an interpretable case.

Location

[Section 4.2.1]

An event role that includes spatial locations, as well as metaphorical extensions of this category. Arguments falling into this semantic category appear in active clauses as the object of prepositional *la* phrases and as the subject in clauses formed with the locative voice suffix *-ʔas*.

***non-initiating* subevent**

[Section 1.4, Section 4.2.1]

The final part or phase of an event. Intuitively, a *non-initiating* subevent is the part of an event involving causal effects or results, and is related temporally to the final bound or

phase of the event. *Non-initiating* subevents are also referred to as *final* subevents in the literature on event structure. The term ‘non-initiating’ is adopted here instead of ‘final’ to emphasize the finding that the object case associated with these subevents (namely, accusative) is uninterpretable in K^{wakwala}, in comparison with the object case associated with the *initiating* subevent which is interpretable (namely, instrumental).

Non-initiator

[Section 1.4, Section 4.2.2, Section 4.2.3]

An event role that includes participants in the *non-initiating* part of an event. *Non-initiators* satisfy one or more of the following semantic conditions: they undergo some causally-induced change (*change*); their existence or presence delimits the final bound of the event (*final bound*); or they come into an *Initiator*’s possession by the final bound of the event (*possession (final bound)*). Arguments falling into this semantic category are realized as accusative (=x̃) objects in active transitive clauses, and as subjects in clauses formed with the accusative voice suffix *-səw̃*. The label ‘*Non-initiator*’ is innovated here, though the event role itself is quite similar to categories that have been previously proposed in the linguistics literature (e.g. Dowty’s 1991 Proto-Patient role).

perspectively-opposed verb pairs

[Section 3.3 (3.3.1, 3.3.3), Section 4.2.5]

A pair of verbs in which each verb encodes a different view on a single, overarching situation. For example, the verb pair *laḥ-* ‘sell’ versus *kəlx^w-* ‘buy’ is a perspectively-opposed verb pair. In K^{wakwala}, verb pairs of this sort pattern asymmetrically with respect to object case. Compare with *reverse-action verb pairs*.

reverse-action verb pairs

[Section 3.3, (3.3.2, 3.3.3), Section 4.2.5]

A pair of verbs which describe two temporally-separate segments of a reversible action. For example, the verb pair *gic̣u-* ‘put inside’ and *ʔəḥwəḷcu-* ‘take out from inside’ is a reverse-action verb pair. In K^{wakwala}, verb pairs of this sort pattern asymmetrically with respect to object case. Compare with *perspectively-opposed verb pairs*.

subevent highlighting

[Section 7.3.1]

A phenomenon whereby case choice in alternating contexts serves to highlight either the *initiating* subevent or the *non-initiating* subevent as more relevant to the discourse. Specifically, choosing instrumental case highlights the *initiating* subevent, while choosing accusative case highlights the *non-initiating* subevent.

strict-accusative (=x̃) relation

[Section 1.1, Section 3.2.1, Section 4.2.4]

A descriptive label for a relation between a particular verb and a particular internal argument, such that the argument can only appear in accusative (=x̃) case.

strict-instrumental (=s) relation

[Section 1.1, Section 3.2.2, Section 4.2.4, Section 4.4]

A descriptive label for a relation between a particular verb and a particular internal argument, such that the argument can only appear in instrumental (=s) case.

uninterpretable case

[Section 1.4, Section 4.3, Chapter 6 (throughout)]

A case which is not associated with a semantic value. In this dissertation I claim that accusative case in Kwakwala is an uninterpretable case.

Appendix A:

A plain language overview of The Semantics of Kwak'wala Object Case

The point of this essay is to provide an overview of the main findings of the dissertation in plain language, including basic properties of the object case system in Kwak'wala and what this system reveals about language in general. While the rest of the dissertation is written in technical language and assumes background in linguistics, this essay is written for a wider audience, including but not limited to Kwak'wakəwak'w community members and language learners. Readers should not expect this essay to be an *easy* read, since there are bound to be many new ideas in it which require effort to work through. Nevertheless, I hope that everyone will be able to learn something new from it.

The Kwak'wala examples presented below consist of five lines of text which are arranged in layers, like in (i).

- (i)
- a. Kwak'wala sentence in U'mista orthography
 - b. Kwak'wala sentence in NAPA (UVic variety) orthography
 - c. Kwak'wala sentence broken down into roots, suffixes, and clitics
 - d. Morpheme-by-morpheme gloss of roots, suffixes, and clitics
 - e. English translation

As indicated in (i), Kwak'wala examples are presented in two orthographies: U'mista and NAPA (UVic variety). A guide to orthographic conventions is provided in Appendix B, and a key to the abbreviations that are used to gloss examples can be found in the pages preceding Chapter 1.

Appendix A is divided into the following four sections:

- Section A.1, entitled “Kwak'wala's two object cases”, begins with an introduction to what “objects” and “object cases” are, and then goes over some basic concepts the reader will need to know to understand how object case works. It then walks through a set of instructions for determining when to use each of Kwak'wala's object case markers in a sentence.
- Section A.2, entitled “Choosing between object cases”, discusses strategies for deciding which case to use in contexts where either case is possible.

- Section A.3, entitled “Variation between speakers”, discusses the issue of whether there are differences between Kwakwala speakers in how object case works.
- Finally, Section A.4, entitled “What Kwakwala’s object case system tells us about language in general”, talks about how Kwakwala’s object case system compares and contrasts with object-marking systems in other languages, and what this means for our collective understanding of how languages around the world are structured.

A.1 Kwakwala’s two object cases

In Kwakwala, **objects** occur in two positions in the sentence. They can either appear after the subject, as they do in (1), or after the verb, as they do in (2). Sometimes objects are also followed by other types of sentence constituents such as prepositional phrases, as in (3).¹ In (1)-(3), the object is indicated in **bold**.

(1) *Objects can follow the subject:*

- a. bawux Mabelaxsa gukwdzi
 bəwux Mabeləxsa gukwdzi
 bew =uǰ Mabel=x =s=a gukwdzi
 leave =3MED Mabel=VIS =INST=DET **bighouse**
 ‘Mabel is leaving/left **the Bighouse** (INST).’
- b. tʰusux Mabelaxwa kwənikw
 tʰusux Mabeləxwa kwənikw
 tʰus =uǰ Mabel =x=w=a kwənikw
 cut =3MED Mabel =ACC=3MED=DET **bread**
 ‘Mabel is cutting/cut **bread** (ACC).’

(2) *Objects can directly follow the verb:*

- a. laʼmisaŋ kaʼalasa loʼlinoǰ
 ləʼmisaŋ kəʼalasa loʼlinoǰ
 ləʼʔm=is =ən kəʼl-la =s=a loʼlinoǰ
 AUX=VER=and =1 afraid-CONT =INST=DET **ghost**
 ‘I’m afraid of **ghosts** (INST).’

- b. la'mi Mabel dukwala¹ **iki**
 ləmi Mabel duq^wəla¹ **ʔiki**
 lə=ʔm =i Mabel duq^w-la =**ǰ=a** **ʔiki**
 AUX=VER =3DIST Mabel see-CONT =ACC=DET sky
 'Mabel is looking/looked at **the sky** (ACC).'

(3) *Objects can be followed by a prepositional phrase:*

- a. kitlansa **walas kidlam** ke'ida məlik
 kiλənsa **walas kiλəm** qeʔida məlik
 kiλ =ən =s=**a** **walas kiλəm** qe =i=da məlik
 fish.with.net =1 =INST=DET **big net** PREP =3DIST=OST sockeye
 'I'm fishing/fished **with a big net** (INST) for sockeye.'
- b. galul'idida tsakwanaxa **dala** laxa kəlwilas
 gəlul'ʔidida cəq^wana¹ **dala** laxa kəlwilas
 gəlul-xʔid =i=da cəq^wana =**ǰ=a** **dala**
 steal-BEC =3DIST=OST bird =ACC=DET **money**
 la =**ǰ=a** kəlwilas
 PREP =ACC=DET store
 'The bird is stealing/stole **money** (ACC) from the store.'

Objects in Kwakwala are introduced by one of two markers, either =s or =ǰ. Some objects can only be introduced by =s, as in the 'a' examples in (1)-(3), and some can only be introduced by =ǰ, as in the 'b' examples in (1)-(3). Otherwise, the same object can be introduced by either =s or =ǰ with no obvious difference in meaning, as in the examples in (4).

- (4) a. napidida bagwanam {**sa, xa**} siwayu
 nəpidida bəg^wanəm {**sa, ǰa**} siwayu
 nəp-xʔid =i=da bəg^wanəm {=s=**a** , =**ǰ=a**}
 throw-BEC =3DIST=OST man {=INST=DET, =ACC=DET}
si^xw-_wayu
paddle-INST.PASS
 'The man is throwing/threw **a paddle** {INST, ACC}.'

Speaker's comment: "It's the same [with either =s or =ǰ]."

¹ In Kwakwala, sentences without tense markers can have either a past tense or a present tense interpretation. This is why more than one possible English translation is provided for many of the examples below.

- b. tɫumux Shelliḡ baba'la {**sux**, **xux**} **Hopix**
 λumuḡ Shelliḡ babəla {**suḡ**, **ḡuḡ**} **Hopiḡ**
 λum =uḡ Shelly=ḡ babəla {=**s=uḡ**, =**ḡ=uḡ**}
 really =3MED Shelly=VIS jealous {=**INST=3MED**, =**ACC=3MED**}
Hope=ḡ
Hope=VIS
 'Shelly is really jealous of **Hope** {INST, ACC}.'
- c. gi'standux Mabela {**sa**, **xa**} **dəmxəsɣəm** laxa 'wap
 gi?stənduḡ Mabela {**sa**, **ḡa**} **dəmxəsɣəm** laxa wəp
 gi-ʔst-xʔid =uḡ Mabel {=**s=a**, =**ḡ=a**}
 LOC-water-BEC =3MED Mabel {=**INST=DET**, =**ACC=DET**}
dəmxəsɣəm la =ḡ=a wəp
jar PREP =ACC=DET water
 'Mabel is putting/put **the jars** {INST, ACC} into the water.'

The markers =s and =ḡ are markers of **object case**. For our purposes, we can think of case as something that indicates a noun's role in a sentence. The form =s is called **instrumental case**, and the form =ḡ and is called **accusative case**. When an object is introduced with =s, we say that it is 'in' instrumental case, or is 'marked' instrumental. When an object is introduced with =ḡ, we say that it is 'in' accusative case, or is 'marked' accusative. When either =s or =ḡ can appear in a sentence marking the same object, as in (4), we call this **case alternation**. I'll use curly brackets '{=s, =ḡ}' to indicate places where case alternation is possible.

Something to know about object case markers in Kwakwala is that they are **clitics**. Clitics are unstressed words which lean on other words.² More specifically, object case markers are **enclitics**, which means that they are pronounced as part of the previous word.³ An example of an enclitic from English is =ll in *I'll*, which is a contraction of the two words 'I will'. Object case markers are often followed by other enclitics, such as =ən, =uḡ, =i, =a, etc. These enclitics give information about whether the object is first person, second person, or third person, whether the object is possessed, and the object's location relative to the speaker.

Something to be aware of is that the forms =s and =ḡ have other functions in the language besides marking case on objects. For instance, an enclitic =s marks some third person possessors, as in (5), while an enclitic =ḡ marks some time adverbials, as in (6).

² Clitics are indicated by an equals sign ('='), while suffixes are indicated by a dash ('-').

³ Clitics which are pronounced as part of the following word are called **proclitics**.

(5) =s introduces a third person possessor:

hə'ɫalux bagwəns əbəmpe'sux Mabelx
 həɫaluχ bagʷəns ʔəbəmpeʔsux Mabelχ
 həɫal =uχ bagʷəns ʔəbəmpe=eʔ =s=uχ Mabel=χ
 hesitant =3MED visit mother=INVIS =3POSS=3MED Mabel=VIS
 'Mabel's mother is hesitant to visit.'

(6) =χ introduces a temporal adverbial phrase:

pəlχəlatlux xa lənstle'
 pəlχəlaχux χa lənsleʔ
 pəlχ-la=λ =uχ =χ=a lənsleʔ
 fog-CONT=FUT =3MED =ACC=DET tomorrow
 'It's going to be foggy tomorrow.'

In this essay, I'll only be concerned with the =s that marks instrumental objects and the =χ that marks accusative objects — that is, with the use of these forms as **object case markers**. Two criteria are useful for identifying =s and =χ in their object case marking function. First, the object case forms =s and =χ consistently show up in the sentence positions that were shown in (1)-(4), while the =s and =χ in (5)-(6) can appear in a wider range of positions in the sentence. Second, objects can be identified by the fact that they are always associated with the verb in a sentence. In other words, objects only appear in sentences where the verb selects an object. This is different from the nominals introduced by =s and =χ in (5)-(6) because =s marked possessors and =χ marked temporal phrases are not dependent on which verb is present.

Now that we've discussed what objects and case are, we're ready to consider the central question of this essay, which is the following:

Central Question:

If we want to construct a Kwakwala sentence that contains an object, how do we know whether to express it in instrumental (=s) case, in accusative (=χ) case, or in either case?

It turns out that the answer to this question depends on what *meaning* you're trying to convey. Object case in Kwakwala is determined by **semantics**, which means that which object case that appears in a sentence — instrumental (=s) or accusative (=χ) — has an effect on a sentence's meaning. We will see below that it is possible to state instructions for deciding which case to use when constructing a Kwakwala sentence with an object. This means that we don't have to memorize when to use one case or the other, but can follow instructions to create new sentences.

The meaning that is conveyed through object case marking is quite abstract. To understand what meaning is conveyed by object case, we'll need to learn a few semantic concepts first. Three concepts in particular will be crucial for understanding object case: the notion of an *event*, the notion of an *event role*, and the notion of a *subevent*.

First, what do we mean by 'event'? In daily life, we tend to think about events as periods of time set aside for people to gather for some particular purpose. A birthday party is an event, as are potlatches, dances, meetings, and funerals. An event of this sort is something we might write down on a calendar, invite people to, and plan for. Events of this sort also tend to be special in comparison with the other things we do in our day-to-day life.

In linguistics however, the word 'event' has a more abstract meaning than this: it basically stands for any *particular occurrence*. While going to a birthday party still counts as an 'event' in this sense, so do the following occurrences: my walking to my friend's house for the birthday party — my ringing the doorbell — my waiting for an answer at the door — my hearing footsteps inside the house — my friend's answering the door — etc. An **event**, in the way linguists use this term, is any coherent chunk of experience that can be thought of as a particular occurrence. Consider, for instance, a news article that describes a sequence of events leading up to a forest fire: someone lights a campfire in the woods (a lighting-a-campfire-in-the-woods event); that person leaves the fire unattended (a leaving-the-fire-unattended event); the wind blows sparks from the fire into the woods (a wind-blowing-sparks-into-the-wood event); and some nearby trees catch on fire (a trees-catching-on-fire event). The use of the term 'event' here to refer to particular occurrences in the world is what linguists mean when they talk about events.

Something to keep in mind about events is that they can either take up time (that is, have duration) or be instantaneous. For example, an event in which *I listen to the radio* can last for minutes or hours, whereas an event in which *I turn off the radio* usually only lasts an instant. Though they differ in terms of duration, both listening to a radio and turning off a radio are types of events.

Something else to know about events is that they have *participants*. To get a feel for what an event participant is, consider the examples in (7)-(12) below, each of which describes a sewing event.

- (7) $\dot{k}\grave{a}ni$ Mabel
 $\dot{q}\grave{a}ni$ Mabel
 $\dot{q}\grave{a}n =i$ Mabel
 $sew =3DIST$ Mabel
 'Mabel is sewing/sewed.'

- (8) $\dot{k}\dot{a}ni$ Mabel $la\dot{x}a$ $xwak'wana$
 $\dot{q}\dot{a}ni$ Mabel $la\dot{x}a$ $xwak'wana$
 $\dot{q}\dot{a}n$ =i Mabel la = \dot{x} =a $xwak'wana$
 sew =3DIST Mabel PREP =ACC=DET canoe
 'Mabel is sewing/sewed in a canoe.'
- (9) $\dot{k}\dot{a}ni$ Mabel $\dot{k}a$ Monica
 $\dot{q}\dot{a}ni$ Mabel qa Monica
 $\dot{q}\dot{a}n$ =i Mabel qa Monica
 sew =3DIST Mabel PREP Monica
 'Mabel is sewing/sewed because of Monica.' OR
 'Mabel is sewing/sewed for Monica.'
- (10) $\dot{k}\dot{a}ni$ Mabelesa $walas$ $\dot{k}\dot{a}nayu$
 $\dot{q}\dot{a}ni$ Mabelesa $walas$ $\dot{q}\dot{a}nayu$
 $\dot{q}\dot{a}n$ =i Mabel =s=a $walas$ $\dot{q}\dot{a}nayu$
 sew =3DIST Mabel =INST=DET big sewing.needle
 'Mabel is sewing/sewed with a big sewing needle.'
- (11) $\dot{k}\dot{a}ni$ Mabele $\dot{x}a$ $\dot{l}\dot{a}n\dot{x}stu$ $\dot{k}\dot{w}\dot{a}mdzu'y\dot{u}$
 $\dot{q}\dot{a}ni$ Mabele $\dot{x}a$ $\dot{l}\dot{a}n\dot{x}stu$ $\dot{q}\dot{w}\dot{a}mdzu'y\dot{u}$
 $\dot{q}\dot{a}n$ =i Mabel = \dot{x} =a $\dot{l}\dot{a}n\dot{x}stu$ $\dot{q}\dot{w}\dot{a}mdzu'y\dot{u}$
 sew =3DIST Mabel =ACC=DET green.colour dress
 'Mabel is sewing/sewed a green dress.'
- (12) $\dot{k}\dot{a}ni$ Mabele $\dot{x}a$ $\dot{l}\dot{a}n\dot{x}stu$ $\dot{k}\dot{w}\dot{a}mdzu'y\dot{u}$ $\dot{k}a$ Monica $la\dot{x}a$ $xwak'wana$
 $\dot{q}\dot{a}ni$ Mabele $\dot{x}a$ $\dot{l}\dot{a}n\dot{x}stu$ $\dot{q}\dot{w}\dot{a}mdzu'y\dot{u}$ qa Monica $la\dot{x}a$ $xwak'wana$
 $\dot{q}\dot{a}n$ =i Mabel = \dot{x} =a $\dot{l}\dot{a}n\dot{x}stu$ $\dot{q}\dot{w}\dot{a}mdzu'y\dot{u}$
 sew =3DIST Mabel =ACC=DET green.colour dress
 qa Monica la = \dot{x} =a $xwak'wana$
 PREP Monica PREP =ACC=DET canoe
 'Mabel is sewing/sewed a green dress for Monica in a canoe.'

Mabel is an event participant in all of the events above, since she's the one doing the sewing. In (7) she's the sole event participant, while in (8) there are two event participants: Mabel, and a canoe. Notice that the fact that a canoe counts as an event participant means that something doesn't have to be alive to 'participate' in an event. In (9), there are again two participants, Mabel and Monica. In (10), Mabel and a big needle are participants. In (11), Mabel and a green

dress (that she's either sewing or has already sewn) are participants. Example (12) then has four participants: Mabel, a green dress, Monica, and a canoe.

An **event participant**, then, is any entity that plays a role in an event.⁴ The type of role that an event participant plays is called an **event role**. In (13), the five event roles represented in (7)-(12) are given names.

(13) Event roles represented in (7)-(12):⁵

Mabel	=	<i>Initiator</i>
canoe	=	<i>Location</i>
Monica	=	<i>Reason</i>
big needle	=	<i>Co-initiator</i>
green dress	=	<i>Non-initiator</i>

An **Initiator** is anything that initiates, or causes, an event to come about. In (7)-(12) Mabel is the one doing the sewing, so she is the *Initiator* of each sewing event. In Kwakwala, *Initiators* appear in subject position.⁶ A **Location** is the place where an event occurs. In (8), a canoe is the place where Mabel sews, so it is the *Location* of the event. In Kwakwala, *Locations* are introduced by the preposition *la* immediately followed by =*x̣*, or by one of the forms *gaḵən* 'me', *gaḵənʔs* 'us (including you)' or *gaḵənuʔx̣* 'us (and not you)'. A **Reason** is anything that serves either as the reason for something happening or the reason why something happens. In (9), Monica is the motivation for Mabel's sewing, and this makes her a *Reason*. In Kwakwala, *Reasons* are introduced by the preposition *qa*. I will have more to say about what it means to be a *Co-initiator* and a *Non-initiator* below, since these event roles are associated with object case. To understand these event roles however, we'll first need to learn one more semantic concept: the concept of a *subevent*.

In addition to having *participants*, events have *parts* which are called **subevents**. We can think of events as each consisting of up to two subevents. Intuitively, we can grasp the idea of a subevent by thinking in terms of two oppositions. The first opposition has to do with time, and is the opposition between the *beginning* of an event versus the *end* of an event. The second opposition has to do with causation, and is the opposition between the *cause* of an event and the *result* of an event. Intuitively, the *beginning* of an event and the *cause* of an event are related and form a single category, which I'll refer to as an **initiating subevent**. Likewise, the *end* of an

⁴ Note that an 'event participant' can involve more than one individual. For instance, in the sentence 'Mabel sewed three green dresses', 'three green dresses' is a single event participant, though one which consists of three individuals.

⁵ Event roles are capitalized and italicized throughout the dissertation, including this Appendix.

⁶ Note, though, that not all subjects are *Initiators*. For instance, in the sentence *təp̄idux̄da kwəʔsta* 'The cup broke', the cup is a subject of the sentence, but it is not an *Initiator*.

event and the *result* or *effect* of an event are related and form a single category, which I'll refer to as a ***non-initiating subevent***. These oppositions are summarized in (14).⁷

- | | |
|--|---|
| (14) a. <u>initiating subevents</u> | b. <u>non-initiating subevents</u> |
| i. Beginning | i. End |
| ii. Cause | ii. Result / Effect |

With the notion of a subevent in mind, we can define four basic kinds of events. Doing so will give us practice in identifying the **event structure** of particular events, which is a skill that will be useful when we talk about object case below.

First, there are events that consist of two subevents. These events have both an *initiating* subevent and a *non-initiating* subevent. The event described in (15), for instance, is one in which the wind (*yola*) is the *Initiator* of a sinking event, and a canoe's sinking is the result. In the event described in (16), Eddie is the *Initiator* of an event of fixing a car, which thereby gets fixed. In the event described in (17), Norman is the *Initiator* of a running event which ends once Norman gets to the store. In all three cases, the event has both a clear *initiating* phase and a clear *non-initiating* phase.

- (15) wəns'idi yolaxa xwakwəna
 wənsʔidi yolaxa xʷakʷəna
 wəns-xʔid =i yu-la =x̣=a xʷakʷəna
 sunken-BEC =3DIST wind-CONT =ACC=DET canoe
 'The wind is sinking/sunk the canoe (ACC).'

- (16) hiʔ'idi Eddixa kəlkəlsiʔsəla
 hiʔʔidi Eddixa kəlkəlsiʔsəla
 hiʔ-xʔid =i Eddie =x̣=a kəlkəlsiʔsəla
 fix-BEC =3DIST Eddie =ACC=DET car
 'Eddie is fixing/fixed the car (ACC).'

- (17) dzəlxwəli Norman laxa kəlwilas
 dzəlxʷəli Norman laxa kəlwilas
 dzəlxʷ-la =i Norman la =x̣=a kəlwilas
 run-CONT =3DIST Norman PREP =ACC=DET store
 'Norman is running/ran to the store.'

Events consisting of two subevents of this sort are called **accomplishments**.

⁷ Since the concept of a subevent will be crucial below, it might be worth taking a moment to stop and think about these two categories until they begin to feel intuitive.

Secondly, there are events which have a beginning or cause, but no specified end or result. These events consist of an *initiating* subevent only. In (18) for instance, Mabel is the *Initiator* of a singing event in which no end or result is specified. Likewise in (19), Norman is the *Initiator* of a running event in which the endpoint is again unspecified (compare this with (17) above). Note that even though it's reasonable to assume that these events will eventually come to an end in the real world, there is nothing in the way that the events are described in these sentences which tells us what that end would look like, or what it's results would be. For this reason, we say that these events lack a *non-initiating* subevent.

(18) d̩aŋxali Mabel
 d̩əŋxali Mabel
 d̩əŋx-la =i Mabel
 sing-CONT =3DIST Mabel
 'Mabel is singing/sang.'

(19) dzəlxwali Norman
 dzəlxwali Norman
 dzəlxw-la =i Norman
 run-CONT =3DIST Norman
 'Norman is running/ran.'

Events of this sort are referred to as **activities**. Accomplishments and activities which have duration are also sometimes together referred to as **processes**.

Thirdly, there are events which consist of a transition of some kind. In (20) for instance, there is a transition between Monica not having a wallet, to her having found a wallet. Likewise in (21), there's a moment where Simon transitions from not being at school, to being at school. Events of this sort consist of two subevents: the part of the event prior to the transition is the *initiating* subevent, while the part of the event following the transition is the *non-initiating* subevent.⁸

(20) k̩a'i Monicaxa da'latsi
 qaʔi Monicaxa dalaci
 qa =i Monica =x=a dalaci
 find =3DIST Monica =ACC=DET wallet
 'Monica found a wallet (ACC).'

⁸ Linguists have differing opinions on whether events of this sort consist of both an *initiating* and *non-initiating* subevent, or only a *non-initiating* subevent. This is partly due to the fact that with events of this type, little or nothing is entailed (that is, specified in the meaning of the verb) about the *initiating* subevent that precedes the transition.

- (21) laga'i Simon laxa kakuṭṭa'atsi
 lagaʔi Simon laxa qaquḷaʔaci
 lagaʔ =i Simon la =x=a qaquḷaʔaci
 arrive =3DIST Simon PREP =ACC=DET school
 'Simon arrived at school.'

Events of this sort are referred to as **achievements** or **transitions**. One characteristic of events of this type is that they tend to occur instantaneously.

Finally, some events don't seem to have any parts at all. These events don't describe the way things begin, end, are caused, or affected — they describe the way things *are*. In (22) for instance, Betty is said to be a certain way, literally to 'have heart/mind', which in Kwakwala is a way of saying that someone has wisdom or wholeness. In (23), Bill is described as being a teacher.

- (22) nogadi Betti
 noḡadi Betti
 noq-wad =i Betty
 heart.mind-have =3DIST Betty
 'Betty is wise.'

- (23) kakuṭṭamasi Bill
 qaquḷamasi Bill
 qaquḷamas =i Bill
 teacher =3DIST Bill
 'Bill is a teacher.'

Events of this sort are referred to as **states**.⁹

In summary, events can be described as having between zero and two subevents. Learning to identify which subevents an event consists of — that is, its **subevental structure** — is what will allow us to predict which case to use in constructing Kwakwala sentences with objects. We're now ready to see how this works.

The principles for determining which object case to use in a Kwakwala sentence can be explained in terms of subevental structure. The basic idea is that event participants (other than *Initiators*) that are associated with an *initiating* subevent are expressed as instrumental (=s) objects, while event participants that are associated with a *non-initiating* subevent are expressed

⁹ Some linguists don't consider states to be 'events'; they reserve this term for describing occurrences that are dynamic, which states obviously aren't. A useful cover term for both dynamic and stative occurrences which linguists do agree on is the term 'eventuality'. I'm won't be concerned here with whether we consider states to be 'events' or not, but it is an issue to be aware of.

as accusative (=ǎ) objects. In terms of event roles, instrumental (=s) objects have the event role *Co-initiator*, while accusative (=ǎ) objects have the event role *Non-initiator*. This basic set of ideas is summarized in (24).

(24) **The basic idea:**

- a. Instrumental (=s) objects are associated with the *initiating* subevent (*Co-initiators*)
- b. Accusative (=ǎ) objects are associated with the *non-initiating* subevent (*Non-initiators*)

Correspondences between subevental structure, event roles, and object cases are summarized in (25).

<p>(25) a. <u>initiating subevent</u></p> <ul style="list-style-type: none"> i. Beginning ii. Cause iii. Possessed <p style="text-align: center;"> </p> <p style="text-align: center;"><i>Co-initiators</i> =s objects</p>	<p>b. <u>non-initiating subevent</u></p> <ul style="list-style-type: none"> i. End ii. Result / Effect / Target iii. Obtained¹⁰ <p style="text-align: center;"> </p> <p style="text-align: center;"><i>Non-initiators</i> =ǎ objects</p>
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In order to figure out which object case an event participant should be in, we need to decide which of the two categories in (25) it falls into. There are a few useful questions we can use to do this, which are listed in (26)-(28).

(26) **Question 1:**

Is the event participant associated with the beginning of the event, or the end of the event?

Answer 1:

- a. If the event participant is associated with the beginning of the event, it is a *Co-initiator*: use instrumental (=s).
- b. If the event participant is associated with the end of the event, it is a *Non-initiator*: use accusative (=ǎ).

(27) **Question 2:**

Is the event participant associated with the cause of the event, or the result or effect of the event?

¹⁰ The opposition ‘Possessed’ versus ‘Obtained’ added here will be discussed shortly.

Answer 2:

- a. If the event participant is associated with the cause of the event, it is a *Co-initiator*: use instrumental (=s).
- b. If the event participant is associated with the result or effect of the event, it is a *Non-initiator*: use accusative (=x̃).

We'll also come across examples later on where we'll see that the notions of possession and obtaining are also relevant, as expressed by a third question.

(28) **Question 3:**

Is the event participant possessed by the *Initiator* at the beginning of the event, or obtained by the *Initiator* by the end of the event?

Answer 3:

- a. If the event participant is possessed by the *Initiator* at the beginning of the event, it is a *Co-initiator*: use instrumental (=s).
- b. If the event participant is obtained by the *Initiator* by the end of the event, it is a *Non-initiator*: use accusative (=x̃).

The notion of possession intended in Question 3 is a more general type of possession than general ownership. Something that's possessed by the *Initiator* could be owned only temporarily, or could even be something that's just 'with' the *Initiator* in some relevant sense, like something the *Initiator* is holding or wearing. This abstract notion of possession should become clearer once we look at a few examples.

First off, we can look at how event participants associated with the beginning of an event (other than the *Initiator*, that is) are *Co-initiators* and are marked instrumental (=s). Consider, for instance, the event described in (29). The *Initiator* is at the Bighouse at the beginning of the event, but is no longer at the Bighouse once she's left it. Similarly in (30), the *Initiator* has cancer at the beginning of the event, but doesn't once she's healed from it. The property of being with the *Initiator* at the beginning of the event makes both the Bighouse in (29) and cancer in (30) *Co-initiators*. This is why they are expressed with instrumental (=s) case. In English, event participants of this sort are sometimes introduced with the preposition 'from'.

(29) bawux Mabelaxsa gukwdzi

bəwux̃ Mabeləx̃sa guk^wdzi

bew =u^{x̃} Mabel=^{x̃} =s=a guk^wdzi

leave =3MED Mabel=VIS =INST=DET bighouse

'Mabel left the Bighouse (INST).'

- (30) i'kilakwux Monicasa *cancer*
 ?i?kilak^wuǰ Monicasa *cancer*
 ?i?kil-ak^w =uǰ Monica =s=a **cancer**
 heal/bless-PART =3MED Monica =INST=DET **cancer**
 'Monica has been healed from **cancer** (INST).'

In contrast, event participants that are associated with the end of an event are *Non-initiators* and are marked accusative (=ǰ). In (31), for instance, the dress comes into existence in the course of the sewing event. Likewise in (32), the image of a sun comes into existence as the painting event proceeds. These event participants don't even exist at the beginning of an event — they only exist by the time the event ends. This property of coming into existence makes them associated with the end of events, and this makes them *Non-initiators*.

- (31) kǎnx'idǎnxwa kǔxwtso'yix
 qǎnx?idǎnx^wa qǔx^wcoyǰ
 qǎn-x?id =ǎn =ǰ=^w=a **qǔx^wcoyǰ=ǰ**
 sew-bec =1 =ACC=3MED=DET **attire=VIS**
 'I'm sewing/sewed **a dress** (ACC).'

- (32) gǎlsida tsadaqexa tǎisala laxa gukw
 gǎlsida cǎdaqexa tǎisala laxa gukw^w
 gǎls =i=da cǎdaq =ǰ=a tǎisala la =ǰ=a
 paint =3DIST=OST woman =ACC=DET **sun** PREP =ACC=DET
 gukw^w
 house
 'The woman is painting/painted [an image of] **a sun** (ACC) onto a house.'

Now, let's consider how event participants that are associated with an event's cause (other than the *Initiator*) are *Co-initiators* and are marked instrumental (=s). Tools and instruments are clear examples of event participants of this kind. In (33) for instance, Toby is using his hands as a tool for eating. Likewise in (34), the woman is using salmonberries to pay with. Both Toby's hands in (33) and the woman's salmonberries in (34) are used by the *Initiator* to cause something to come about.

- (33) hǎ'mapox Tobi axǎlasis i'a'yasux
 hǎ'mapox Tobi ?ǎxǎlasis ?i?ǎyǎsuǰ
 hǎ'map =oǰ Toby ?ǎx-la =s=is **?i~?ǎyǎsu=ǰ**
 eat =3MED Toby DO-CONT =INST=3REFL.POSS **RED~hand/arm=VIS**
 'Toby's eating using **his hands** (INST).'

- (34) hələqida tsadaqesa kəmdzukw
 hələqida cədaqesa qəmdzukw
 hələq =i=da cədaq =s=a qəmdzukw
 pay =3DIST=OST woman =INST=DET **salmonberry**
 ‘The woman’s paying with **salmonberries** (INST).’

In contrast, event participants that are associated with the result or effects of an event are *Non-initiators* and are marked accusative (=x̄). Typically, these are event participants which undergo some change in the course of the event. In (35) for instance, the plate changes when it’s broken by Monica. Likewise in (36), the house changes in appearance as it’s painted.¹¹

- (35) təp̄idi Monicaxa p̄iləga
 təp̄idi Monicaxa p̄iləga
 təp-x̄?id =i Monica =x̄=a p̄iləga
 broken-bec =3DIST Monica =ACC=DET **plate**
 ‘Monica broke **a plate** (ACC).’

- (36) gəls’idida bəgwanəməxa gukw
 gəls?idida bəgwanəməxa gukw
 gəls-x̄?id =i=da bəgwanəmə =x̄=a gukw
 paint-BEC =3DIST=OST man =ACC=DET **house**
 ‘The man painted (on) **a house** (ACC).’

Next, event participants that are possessed by the *Initiator* at the start of the event are *Co-initiators* and are marked instrumental (=s). For instance, the object of the verb *ɔəxənugwad-* ‘own’ is marked this way (37).

- (37) axənugwadida gənanəmesa kətsənak
 ɔəxənugwadida gənanəmesa kətsənaq
 ɔəx-nukw-,ad =i=da gənanəmə =s=a kətsənaq
 do-have-have =3DIST=OST child =INST=DET **spoon**
 ‘The child has **a spoon** (INST).’¹²

¹¹ It’s worth taking a moment to think about how the way the *gukw* ‘house’ is interpreted here differs from how the *ʔisəla* ‘sun’ is interpreted in (32). Both are *Non-initiators*, but are *Non-initiators* of slightly different types: while the *gukw* in (36) exists prior to the event and is affected by it, the *ʔisəla* in (32) actually comes into existence in the course of the event. The *ʔisəla* ‘sun’ has a role which is referred to in the linguistics literature as a ‘Representation Source’, while the *gukw* ‘house’ in (36) might be referred to as a ‘Patient’ or ‘Undergoer’. Both, however, could also be referred to by the single label ‘Incremental Theme’, because of the fact that they both serve to measure out the event in some way (as discussed in Tenny 1994).

¹² The meaning of *ɔəxənugwad-* can also be compared to the English phrase ‘be endowed with’. Some modern Kwakwaka speakers allow case alternation {=s, =x̄} with *ɔəxənugwad* ‘own’, while some only accept =s.

In contrast, event participants that are obtained by the *Initiator* by the end of the event are *Non-initiators* and are marked accusative (=ǰ). For instance, event participants that are obtained (38) or bought (39) are expressed as accusative objects.

- (38) lotloᵰ Katiyaᵰa ḳasane'
 loᵰoᵰ Katiyeᵰa q̣əsəne?
 lə-uᵰ =uᵰ Katie =ǰ=a q̣əsəne?
 AUX-obtain =3MED Katie =ACC=DET shirt
 'Katie got **the shirt** (ACC).'

- (39) kəlɰwoᵰda babagwəmeᵰa tlatəml
 kəlɰwoᵰda babagwəmeᵰa λətəml
 kəlɰw =oᵰ=da babagwəm =ǰ=a λətəml
 buy =3MED=OST little.boy =ACC=DET hat
 'The little boy bought **a hat** (ACC).'

In summary, we've just seen that it's possible to define a set of **semantic criteria** to figure out which event role a given event participant has, and to use these semantic criteria to determine which case to use when building sentences.

There are, however, many situations where an event participant meets the criteria for being *both* a *Co-initiator* and a *Non-initiator* simultaneously. We might guess, then, that these event participants should be able to appear in either instrumental case or accusative case — and in fact, this is what happens. This generalization is called the **Alternation Condition**, and it is stated in (40).

(40) **Alternation Condition:**

An event participant which satisfies the conditions for being both a *Co-initiator* and a *Non-initiator* may appear in either instrumental (=s) or accusative (=ǰ) case.

The Alternation Condition can be met in a number of different ways. For instance, the Alternation Condition can be met because an event participant helps cause an event and is also affected by the same event in some way. Or the Alternation Condition can be met because an event participant is possessed by the *Initiator* at the beginning of an event and is given away by the end of the event (and so undergoes a change in possession). To get a feel for some of the different ways that the Alternation Condition can be met, let's look at a few examples.

First, consider the event described in (41) with the verb *ᵰəᵰcud-* 'to put something inside something'. The event participant that is 'put inside' the fridge — here, *mətik* 'sockeye' — starts out in with the *Initiator* at the start of the event, making it a *Co-initiator*, and then undergoes a change of location, making it a *Non-initiator*. Hope is both doing something 'with' the sockeye,

and doing something ‘to’ the sockeye. In fact, all verbs with a meaning similar to ‘put’ allow their object to be in either case. Another example like this is *q̣ux̣ẉc̣ud-* ‘to put clothes on, dress’, shown in (42). The event participant that is put on — here, *ʔik ǵẉilǵẉela* ‘nice clothes’ — starts out with the *Initiator* at the start of the event, making it a *Co-initiator*, and then undergoes a change of location when it’s put on, making it a *Non-initiator*. The verb *giʔst̄and* ‘to put into water, submerge’ from example (4c) above is another example of this sort.

- (41) *ax̣tsudux̣* Hope {**sida**, **x̣ida**} **malik** laxa ʔẉadaʔatsi
 ʔax̣c̣udux̣ Hope {**sida**, **x̣ida**} **m̄alik** laxa w̄adəʔaci
 ʔax̣-c̣u-x̣ʔid =uǰ Hope {=s=i=**da** , =ǰ=i=**da**}
 DO-inside-BEC =3MED Hope {=INST=3DIST=OST , =ACC=3DIST=OST}
 la =ǰ=a w̄adəʔaci
 PREP =ACC=DET fridge
 ‘Hope put **the sockeye** {INST, ACC} into the fridge.’

- (42) *laʔmux̣* Simon *ḳux̣ẉtsud* {**sis**, **x̣is**} **ik ǵẉilǵẉela**
 l̄m̄ux̣ Simon *q̣ux̣ẉc̣ud* {**sis**, **x̣is**} **ʔik ǵẉilǵẉela**
 laʔm =uǰ Simon *q̣ux̣ẉ-c̣u-x̣ʔid* {=s=**is**,
 AUX=VER =3MED Simon dress-inside-BEC {=INST=3REFL.POSS,
 =ǰ=**is**} **ʔik ǵẉilǵẉela**
 =ACC=3REFL.POSS} **good clothes**
 ‘Simon put on **his nice clothes** {INST, ACC}.’

In fact, any event participant which starts out with the *Initiator* and undergoes a change of location can appear in either object case. The object of *ḳwis-* ‘spit’ (43) is an example of this sort, as is the object of *n̄ap-* ‘throw’ in (4a) above. Even though these *Kwakwala* verbs aren’t translated using the English verb ‘put’, their meaning is quite similar. When you *ḳwis-* ‘spit’ something out, your spit starts off with you, making it a *Co-initiator*, and then gets spat somewhere else, making it a *Non-initiator*. Similarly, when you *n̄ap-* ‘throw’ something, what you throw starts off with you, making it a *Co-initiator*, and then gets thrown to some other location, making it a *Non-initiator*.

- (43) *ḳwisʔidida* bagwaname {**sis**, **x̣is**} **g̣w̄alik** laxa b̄as
 ḳwisʔidida b̄əgwanəme {**sis**, **x̣is**} **g̣w̄alik** laxa b̄as
 ḳwis-x̣ʔid =i=da b̄əgwanəm {=s=**is** , =ǰ=**is**}
 spit-BEC =3DIST=OST man {=INST=3REFL.POSS , =ACC=3REFL.POSS}
g̣w̄alik la =ǰ=a b̄as
gum PREP =ACC=DET bus
 ‘The man spit out **his gum** {INST, ACC} on the bus.’

Next, consider a verb like *muk^w*- ‘tie’ in (44). The event participant that is ‘tied’ — here, *dənəm* ‘rope’ — is held and directly manipulated by the *Initiator* throughout the event — in other words, it is something that the *Initiator* ties ‘with’ — which makes it a *Co-initiator*. The *dənəm* ‘rope’ also undergoes a change in the course of the event, becoming tied, which makes it a *Non-initiator*. Because it meets the semantic criteria for being both a *Co-initiator* and a *Non-initiator*, it is able to undergo case alternation.

- (44) *mukwux* Simon {**sa**, **x̣a**} **dənəm**
muk^wux̣ Simon {**sa**, **x̣a**} **dənəm**
muk^w =*u*x̣ Simon {=**s**=**a** , =**x̣**=**a**} **dənəm**
 tie =_{3MED} Simon {=**INST**=**DET** , =**ACC**=**DET**} **rope**
 ‘Simon tied (with) **the rope** {**INST**, **ACC**}.’

With verbs naming events having to do with emotions or mental processes, it can be a little harder to predict which object case(s) should be possible. Let’s consider (4-b), with *babəl’* ‘jealous’. In this example, the person that the *Initiator* (Shelly) is jealous of can appear in either instrumental or accusative case. Conceivably, this is because what an *Initiator* is jealous of is simultaneously a cause of their jealousy, making it a *Co-initiator*, and the target of their jealousy, making it a *Non-initiator*. This would explain why this event participant is able to undergo case alternation.

Whenever the Alternation Condition is met, then, case alternation is possible. This also means that if the Alternation Condition is *not* met, case alternation should *not* be possible. In example (10), for instance, the big sewing needle that Mabel is sewing with is associated with the beginning and cause of the event, but not with its end or result; therefore, this event participant is only a *Co-initiator*, and can only be marked instrumental (=s). Similarly in (11), the green dress that Mabel is sewing is a result of the event, and not part of its cause; therefore, this event participant is only a *Non-initiator*, and can only be marked accusative (=x̣). Before moving on, you might find it useful to go back and study the examples we have already seen, to consider why each example has an accusative (=x̣) object, an instrumental (=s) object, or an alternating {=s, =x̣} object.

Sometimes the Alternation Condition is met even though we might not expect it to be based on the meaning of the verb alone. For instance, the verb *təp̄id-* ‘break’ typically takes an accusative (=x̣) object, the event participant that changes, or gets ‘broken’. However, in a context where the *Initiator* picks up a cup and smashes it on something in order to break it, the event participant that is ‘broken’ — namely, the cup — is both a *Co-initiator* and a *Non-initiator*. It is a *Co-initiator* because it is directly manipulated by the *Initiator* (like the rope in (44)), and it’s a *Non-initiator* because it undergoes change. This makes case alternation possible, as shown in (45).

- (45) *Context: A woman picked up a cup in her hand and smashed the cup down on her (clam) digging stick, causing the cup to break.*

təp̩idida tsadaqe {sa, xa} kʷa'sta laxis dzigayu
 təp̩idida cədaqe {sa, xa} kʷəʔsta laxis dzigayu
 təp-xʔid =i=da cədaq {=s=a, =x̄=a}
 broken-BEC =3DIST=OST woman {=INST=DET, =ACC=DET}
 kʷəʔsta la =x̄=is dzik-,ayu
 cup PREP =ACC=3REFL.POSS dig-INST.PASS
 'The woman broke a cup {INST, ACC} on her digging stick.'

More generally, whenever an *Initiator* both (a) directly manipulates an event participant and (b) brings about some change in the same event participant, the event participant in question can appear in either instrumental (=s) or accusative (=x̄) case.¹³

Another place where the Alternation Condition is met even though we wouldn't expect it to be based on the meaning of the verb alone is illustrated in (46) with the verb *qəyak-* 'kick'. This verb usually takes a *Non-initiator* object that is marked accusative (=x̄) — the event participant that is 'kicked'. When an event is described involving something that is kicked *in a specified direction*, the event participant that is kicked can suddenly appear in either case. This is because in a context where this event participant is kicked in a specific direction, it meets the Alternation Condition: it qualifies as a *Co-initiator* because it starts out with the *Initiator*, and it qualifies as a *Non-initiator* because it undergoes a change, namely a change in location.¹⁴

(46) k̩a'yaksudi Simon {sa, xa} luxwsam k̩a'yakasu' laxa hanxso'las
 qəyaksudi Simona {sa, xa} lux̄səm qəyakasu? laxa hənxsolas
 qəyak-(x)so-xʔid =i Simon {=s=a, =x̄=a} lux̄səm
 kick-through-BEC =3DIST Simon {=INST=DET, =ACC=DET} spherical
 qəyak-a-səw̩ la =x̄=a hən̄-(x)so-la-ʔas
 kick-A-ACC.PASS PREP =ACC=DET look-through-CONT-LOC.PASS
 'Simon kicked the ball {INST, ACC} through a window.'

Notice how in this context, the verb *qəyak-* takes on a meaning that's similar to the meaning of a verb like *nəp-* 'throw': both verbs are used to describe events where something is projected away from the *Initiator* to some other location. This abstract meaning goes hand-in-hand with object case alternation: whenever an event participant undergoes caused motion in a direction, it can appear in either object case.

¹³ Elsewhere in the dissertation, this phenomenon is referred to as the **Direct Manipulation Alternation**.

¹⁴ Elsewhere in the dissertation, this phenomenon is referred to as the **Caused Motion Alternation**.

What examples like (45) and (46) show us is that it's not enough to just memorize which verbs co-occur with which object case(s). Instead, we always have to take into account what type of event is being described. Then, event participants which meet the criteria for being *Co-initiators* are marked instrumental (=s), while event participants that meet the criteria for being *Non-initiators* are marked accusative (=ǎ). Event participants that meet the criteria for both event roles simultaneously can be marked by either case.

Another way of thinking about the distinction between =s objects and =ǎ objects is in terms of the following English-based heuristic: =s objects are things you do something 'with', while =ǎ objects are things you do something 'to'. Alternating objects, then, are things you simultaneously do something 'with' and 'to'. This heuristic is not perfect: for instance, the phrase 'do with' doesn't really explain the use of instrumental case in examples (1a)/(29), (2a), (4b), (30), and (37), and the phrase 'do to' doesn't really explain the use of accusative case in examples (2b), (4b), (32), and (38). But this heuristic does work fairly often, so it's a good thing to keep in mind.

It's now time to take stock of what we've seen, and consider how to go about answering the central question stated above. When Kwák'wala speakers produce sentences, we can think of them as following **rules** of a special sort — rules which they are wholly unconscious of. In order to construct a Kwák'wala sentence as a non-native speaker, the closest we can do is approximate the rules that native speakers use, by consciously following **instructions** that mimic native speakers' rules. In (47), I've summarized the set of instructions introduced in this essay which, as far as I can tell, approximate the unconscious rules native speakers use to create sentences with objects in Kwák'wala.

(47) **Instructions for determining object case possibilities in Kwák'wala**

- I. If an event participant is not itself an *Initiator* and is associated with the beginning of the event, with the cause of the event, and/or is possessed by the *Initiator* at the beginning of the event, it is a *Co-initiator*: **use instrumental (=s)**.
1. If an event participant is associated with the end of the event, with the result or effect of the event, or is obtained by the *Initiator* by the end of the event, it is a *Non-initiator*: **use accusative (=ǎ)**.
- I. If an event participant is both a *Co-initiator* and a *Non-initiator*, **use either instrumental (=s) or accusative (=ǎ)**.

These instructions are intended to enable anyone to build Kwák'wala sentences with instrumental (=s) and accusative (=ǎ) objects and communicate like a native speaker.

A.2 Choosing between object cases

Turning now to situations where both instrumental (=s) and accusative (=ǰ) case are possible, we're faced with another question: when the Alternation Condition in (40) is met, how do we choose between =s and =ǰ for expressing an object?

In one sense, when the Alternation Condition is met, whether instrumental (=s) or accusative (=ǰ) case is chosen really is optional. In fact, K^wak^wala speakers generally don't find either case to be wrong in these situations, and report that the sentence means pretty much the same thing no matter which case is used (for instance, note what the speaker says about example (4a)). Nevertheless, K^wak^wala speakers still do sometimes *prefer* one case to the other. In other words, case choice is not just random. In this section, I'll describe two different strategies which seem to approximate the unconscious strategies speakers follow when they have to decide which object case to use. The two strategies are called *disambiguation* and *subevent highlighting*. While the existence of these strategies is somewhat tentative at this point, I've included them here because case choice is an important issue that anyone who wants to learn K^wak^wala will have to face.¹⁵

Sometimes sentences are **ambiguous**, which means that the sentence has more than one possible meaning. For instance, the sentence in (48) is ambiguous because the object, which here is marked accusative (=ǰ), can be interpreted in two different ways: either as an event participant that's thrown (48i), or as an event participant which is thrown *at* (and possibly hit) (48ii).

(48) nǎp̄idi Eddiǰa tǎtǎml

nǎp̄idi Eddiǰa ǰǎtǎml

nǎp-xʔid =i Eddie =ǰ=a ǰǎtǎml

throw-BEC =3DIST Eddie =ACC=DET hat

i. 'Eddie is throwing/threw **a hat (ACC)** (at someone/something).¹⁶ (ǰǎtǎml = *Co-initiator* & *Non-initiator*)

ii. 'Eddie is throwing/threw (something) **at a hat (ACC)**.' (ǰǎtǎml = *Non-initiator*)

If a K^wak^wala speaker wants to communicate the meaning in (48-i), they can use either instrumental or accusative case, since the event participant that's thrown meets the Alternation Condition. On the other hand, if the speaker wants to communicate the meaning in (48-ii), they

¹⁵ In the dissertation, the findings of this section are presented very briefly at the end of Chapter 7, in a section devoted to topics for further research. I have elevated the importance of this topic here, however, because it is a crucial one for K^wak^wala learners.

¹⁶ The verb *nǎp-* 'throw' describes events that involve three event participants: a thrower, something that's thrown, and something that is thrown at. When a K^wak^wala speaker hears a sentence like (48) in which one of these three event participants is missing, he or she will still assume that the missing third event participant exists. The missing third event participant is indicated in parentheses in these translations.

can only use accusative case because the event participant which is thrown *at* only qualifies as a *Non-initiator*. When a sentence is potentially ambiguous, as (48) is, speakers tend to choose the object case which eliminates ambiguity, whenever possible. This means that if a Kwakwala speaker wants to communicate the meaning in (48-i), ‘Eddie is throwing/threw a hat’, he or she will tend to say (49) instead of (48), where instrumental case has been chosen instead of accusative case. The sentence in (49) has only one interpretation — that the hat is what is/was thrown. By choosing =s instead of =x̃ to communicate this meaning, the speaker has avoided the potential ambiguity in (48).

- (49) nəp̃idi Eddisa t̃l̃at̃am̃l
 nəp̃idi Eddisa λ̃ət̃əm̃l
 nəp-x̃?id =i Eddie =s=a λ̃ət̃əm̃l
 throw-BEC =3DIST Eddie =INST=DET hat
 ‘Eddie is throwing/threw a hat (INST).’ (λ̃ət̃əm̃l = *Co-initiator*)

When speakers choose an object case in order to avoid ambiguity, we can say that they are using a **disambiguation strategy**.

The second strategy speakers seem to use in choosing between object cases I call **subevent highlighting**. The basic idea is that speakers can choose object case in a way that ‘highlights’ one subevent as being more relevant to what’s being talked about. In particular, speakers choose =s to draw attention to the starting phase or cause of an event (its *initiating* subevent), while speakers choose =x̃ to draw attention to the completion or result of an event (it’s *non-initiating* subevent).

Subevent highlighting is illustrated in (50) and (51). In these examples, the speaker was asked to describe events while she watched them happen. Both events involved Katie putting a pot of soup onto the stove, but differed in terms of which *part* of the event the speaker was asked to describe. Since what is put on the stove (here, *sup* ‘soup’) meets the Alternation Condition, the speaker had to make a choice between instrumental case and accusative case in order to say each sentence. In (50), the speaker describes an event in which Katie is in the process of putting a pot of soup onto the stove — that is, where the event had started, but hadn’t yet been completed. To describe this event, the speaker chooses instrumental (=s) case, thereby ‘highlighting’ the initial part of the event. In (51) on the other hand, the speaker describes an event in which Katie had just put the pot of soup onto the stove, and the event had been completed. In this context, the speaker chose accusative (=x̃), thereby ‘highlighting’ the fact that the event had been completed.

(50) Context: The speaker is watching Katie putting a pot onto the stove.

- a. $l\grave{a}'mu\grave{x}$ $Katiya\grave{x}$ $h\grave{a}nxt\grave{a}ndsa$ **sup** $la\grave{x}wa$ $l\grave{a}g\grave{w}ilatsi\grave{x}$
 $l\grave{a}m\grave{u}\grave{x}$ $Katiy\grave{a}\grave{x}$ $h\grave{a}nx\grave{\lambda}\grave{a}nds\grave{a}$ **sup** $la\grave{x}^wa$ $l\grave{a}g^w\grave{i}laci\grave{x}$
 $l\grave{a}=?m$ $=u\grave{x}$ $Katie=?\check{x}$ $h\grave{a}n-x\grave{\lambda}-x\grave{?}id$
AUX=VER =3MED Katie=VIS hollow.container.upright-on.fire-BEC
=s=a **sup** la $=\check{x}=^w=a$ $l\grave{a}g^w\grave{i}laci=?\check{x}$
=INST=DET **soup** PREP =ACC=3MED=DET stove=VIS
‘Katie is putting **the soup** (INST) on the stove.’

(51) Context: Katie has just put a pot onto the stove, and the speaker has seen her do it.

- b. $l\grave{a}'mu\grave{x}$ $h\grave{a}nxt\grave{a}ndux$ $Katiya\grave{x}wa$ **supi\grave{x}** $la\grave{x}wa$ $l\grave{a}g\grave{w}ilatsi\grave{x}$
 $l\grave{a}m\grave{u}\grave{x}$ $h\grave{a}nx\grave{\lambda}\grave{a}ndux$ $Katiy\grave{a}\check{x}^wa$ **supi\check{x}** $la\grave{x}^wa$ $l\grave{a}g^w\grave{i}laci\grave{x}$
 $l\grave{a}=?m$ $=u\grave{x}$ $h\grave{a}n-x\grave{\lambda}-x\grave{?}id$ $=u\check{x}$ $Katie$
AUX=VER =3MED hollow.container.upright-on.fire-BEC =3MED $Katie$
 $=\check{x}=^w=a$ **sup=?\check{x}** la $=\check{x}=^w=a$ $l\grave{a}g^w\grave{i}laci=?\check{x}$
=ACC=3MED=DET **soup=VIS** PREP =ACC=3MED=DET stove=VIS
Speaker: ‘Katie has put the pot of **soup** (ACC) on the stove.’

More generally, speakers will tend to choose instrumental case (=s) when describing events that are in-progress, since these are events which have started but have not yet reached their *non-initiating* phase. Similarly, speakers will tend to choose accusative case (=x̄) when describing events that are completed and therefore have reached their *non-initiating* phase. However, it’s important to remember that regardless of which case is chosen, either case is still *possible* as long as the Alternation Condition is met. For instance, it is not wrong to use =x̄ in (50) or =s in (51).

In summary, we’ve seen that when the Alternation Condition is met and a case choice must be made, K^{wak}wala speakers don’t just randomly choose one object case or the other. Instead, speakers seem to make use of (at least) two strategies for choosing between instrumental (=s) and accusative (=x̄) case: disambiguation and subevent highlighting. The disambiguation strategy involves choosing an object case in a way which avoids potential ambiguity. Subevent highlighting involves choosing an object case in a way which highlights one part of the event as more relevant — either its beginning or cause (using =s) or its completion or result (using =x̄).

A.3 Variation between speakers

An important question that remains at this point is whether *all* K^{wak}wala speakers speak the way I’ve described. The short answer to this question is that I don’t know. Though I’ve closely

studied the speech of six K^wak^wala speakers, it's important to acknowledge that all of them speak either the central K^wak^wala dialect (Kingcome Inlet, Fort Rupert, Hopetown, and Alert Bay) or the northern 'Nak^wala dialect (C'əlǵ^wadi). It could be that other K^wak^wala speakers from other areas have different rules for object case than what I've described above.

Several of the K^wak^wala speakers I have worked with have told me that there does seem to be variation within the K^wak^wala-speaking community in how =s and =ǵ are used to mark objects. One particular way that K^wak^wala speakers probably differ from each other is in how they make case choices (as described in Section A.2). Consider that there are many situations where either object case is possible (that is, when the Alternation Condition is met) and where in order to say a sentence, a speaker has to choose between =s and =ǵ. Now imagine that you are a K^wak^wala speaker, and you hear another K^wak^wala speaker making a *different* case choice from the one you yourself would make. You would probably think this speaker was following different rules than you. Really, however, this speaker could be using the same set of rules as you (the ones in (47)), but just *making case choices* differently. For instance, he or she could be using the disambiguation strategy, while you would have preferred to use subevent highlighting (or some other strategy) at that same moment. The fact that speakers often have to choose between =s and =ǵ, combined with the fact that there are multiple possible strategies for making this choice, may explain why the use of =s and =ǵ appears to vary amongst K^wak^wala speakers.

On the other hand, there might also be actual grammatical variation within the community — that is, actual differences in what the underlying rules for object case are for different speakers. As we learn more about K^wak^wala, it will be important to pay attention to differences between speakers, to see whether the instructions I've stated in (47) need to be added to or changed. It's worth noting, though, that even if some speakers do have different rules for object case than the ones I've described, these differences are probably not very large. This is because if the rules were *too* different, speakers would have a hard time communicating with each other. The fact that speakers don't have a hard time communicating with each other suggests that any differences which do exist between speakers are relatively small.

Thus, it's important to acknowledge that the instructions I've presented in this essay may be incomplete. By continuing to elicit the knowledge of K^wak^wala-speaking elders, and keeping an open mind to the new things they tell us, we can continue to discover and improve our understanding of the unconscious rules that structure the K^wak^wala language.

A.4 What K^wak^wala's object case system tells us about language in general

With a basic story of how object case works in K^wak^wala in place, we are in a good position to reflect on what this case system tells us about language in general.

What makes K^wak^wala's object case system particularly interesting from a cross-linguistic perspective is that out of K^wak^wala's two object cases, only instrumental (=s) case has a **positive semantic value**, meaning that only instrumental case actually *adds* meaning onto sentences.

Another way of saying this is that instrumental case is **semantically interpretable**. Accusative (=x̃) case, on the other hand, doesn't actually *add* meaning to the sentence. Accusative case is, in other words, **semantically uninterpretable**.¹⁷

What's interesting about K^wak^wala as compared with other languages has to do specifically with the fact that K^wak^wala possesses a semantically interpretable object case tied to the *initial* subevent of an event, namely instrumental (=s), while the object case tied to the *non-initiating* or *final* subevent of an event, namely accusative (=x̃), is uninterpretable. This makes K^wak^wala's object case system interesting for two reasons. First, K^wak^wala's system is interesting because it is the first two-object case system of its kind (as far as I know) to be reported in the scientific literature on the world's languages. Second, K^wak^wala's system is interesting because having an interpretable object case tied to the *initial* subevent of an event is the mirror-opposite of a pattern which we do see in many of the world's languages. Finnish, for instance, is similar to K^wak^wala in possessing two object cases: partitive and accusative. In Finnish however, the case associated with the *non-initiating* subevent is interpretable — namely accusative — while the partitive case is uninterpretable (as discussed in Leino 1982, Heinämäki 1984, 1994, Vainikka 1989, and Kratzer 2004). More specifically, the presence of accusative case on an object in Finnish gives rise to the meaning that an event being described has a natural endpoint, or in other words is completed, bounded, or telic. In (52a) for instance, the presence of a partitive object implies that the event has not been completed (here, the book has not been fully read). In (52b), however, the presence of an accusative object gives rise to the interpretation that the event has been completed successfully (here, the book has been fully read).

- (52) a. Terttu luki **kirjaa**
 Terttu read **book.PART**
 'Terttu was reading **a book (PART)**.'
- b. Terttu luki **kirjan**
 Terttu read **book.ACC**
 'Terttu read **(all) the book (ACC)**.' (Heinämäki 1994: p. 213)

In K^wak^wala, in contrast, sentences with accusative (=x̃) objects do not necessarily describe bounded or completed events. The first translation of the sentence in (53a), for instance, suggests that a completed event is being described. However, the fact that it's possible to continue this sentence as in (53b) shows that the event described in (53a) is not necessarily a completed event, and that the first translation in (53a) is only one possible interpretation of this

¹⁷ Another way of stating this contrast is to say that instrumental case is the **marked** category, while accusative case is the **unmarked** category. I've used the terms **semantically interpretable** versus **semantically uninterpretable** here instead, however, in order to be consistent with the terminology I use in the dissertation. The evidence for this

sentence. In fact, (53a) can also be translated as ‘The man is fixing my car’, where the event is ongoing.¹⁸

- (53) a. *hił'idoχda bagwanamaxan ka*
hił'idoχda bəg^wanəmaχən ka
hił-xʔid =oχ=da bəg^wanəm =χ=ən ka
fix-BEC =3MED=OST man =ACC=1POSS car
 i. ‘The man fixed **my car** (ACC).’
 ii. ‘The man is fixing **my car** (ACC).’
- b. *kì's'moχ gwałoχda bagwanəm hił'ixan ka*
kiʔsmoχ ġ^wałoχda bəg^wanəm hił'ixən ka
kiʔs=ʔm =oχ ġ^wał =oχ=da bəg^wanəm hił-xʔid =χ=ən ka
NEG=VER =3MED finish =3MED=OST man fix-BEC =ACC=1POSS car
 ‘But the man didn’t finish fixing **my car** (ACC).’ (Greene 2013:44)

In short, the presence of an accusative object in Finnish signals that the event being described is bounded or completed, while the presence of accusative case in K^wak^wala can does not guarantee this meaning. This difference arises specifically because accusative case is interpretable in Finnish, but uninterpretable in K^wak^wala.

A fascinating consequence of the way that K^wak^wala’s case system is structured, then, is that it turns out to be the mirror image of the object case system in Finnish. In K^wak^wala, an interpretable object case is associated with the *initiating* subevent (namely, instrumental), while in Finnish, an interpretable object case is associated with the *non-initiating* subevent (namely, accusative). Yet even beyond this comparison with Finnish, this finding is interesting because it demonstrates — apparently for the first time — the possibility of having an object case system which is oriented towards the *initiating* subevent of an event. This finding supports a recent proposal in the field of language typology, which is that the grammar of some languages is more oriented towards the end of events (which are therefore called Delimiting or D-languages), while the grammar of other languages is more oriented towards the initiation of events (which are therefore called Initiator or I-languages) (Ritter & Rosen 2000). K^wak^wala fits into this typology because its object case system is oriented towards the *initiating* subevent, making it an I-language. K^wak^wala turns out to be the first reported language which can be classified as an I-language on the basis of its object case system.

More generally, the finding that object-marking is associated with event structure in K^wak^wala provides insight into the conceptual distinctions speakers make use of, unconsciously,

finding is pretty complicated, so I’ve avoided discussing it here. Readers who want to know more should consult Chapter 4, Section 4.3.

¹⁸ This means that sentences like (53a) are ambiguous in K^wak^wala in a way that they are not in English.

to talk about events in the world. Kwakwala's case system is interesting for the study of language both because it is unique, and because it fits into a larger pattern, like a puzzle piece we didn't know was missing. In this way, Kwakwala's object case system expands our knowledge of what a possible language looks like.

Appendix B: Orthographic Conventions

Throughout the dissertation, Kwakwaka examples are provided in the NAPA (University of Victoria) orthography, with the exception that in place of the symbol ‘dz’, I’ve used the digraph ‘dz’. Kwakwaka examples in Appendix A are provided in both U’mista and NAPA (UVic) orthographies to make them more immediately accessible to those Kwakwakwakw community members who do not have experience with the NAPA (UVic) orthography. The use of these two orthographies side-by-side may also facilitate learning the correspondences between the U’mista and NAPA (UVic) orthographies, for those who are interested in doing so.

The following tables outline six existing systems of orthographic correspondences for written Kwakwaka, including:

- International Phonetic Alphabet (IPA)
- North American Phonetic Alphabet (University of Victoria variety)
- North American Phonetic Alphabet (University of British Columbia variety)
- U’mista (U’mista Cultural Center, Alert Bay)
- Grubb (Grubb 1977)
- Boas (1947)

The Tables below are derived from ones presented in Littell (2016: p. 33-4).

Table B.1: Orthographic correspondences: oral stops and affricates

IPA	NAPA (UVic)	NAPA (UBC)	U'mista	Grubb	Boas 1947
p	p	p	p	p	p
p'	p̣	p̣	p̣	p'	p!
b	b	b	b	b	b
t	t	t	t	t	t
t'	ṭ	ṭ	ṭ	t'	t!
d	d	d	d	d	d
ts	c	c	ts	ts	ts
t's	c̣	c̣	ṭs	ts'	ts!
dz	dʒ	dʒ	dz	dz	dz
tʃ	ʃ	ʃ	tʃ	tl	L
t'ʃ	ʃ̣	ʃ̣	t'ʃ	tl'	L!
dʃ	ʃ	ʃ	dʃ	dl	ɫ
kʲ	k	k	k	k	k·
k'ʲ	ḳ	ḳ	ḳ	k'	k·!
gʲ	g	g	g	g	g
kʷ	kʷ	kʷ	kw	kw	k ^u , kw
k'ʷ	ḳʷ	ḳʷ	k'w	kw'	k! ^u , k!w
gʷ	gʷ	gʷ	gw	gw	g ^u , gw
q	q	q	<u>q</u>	<u>q</u>	q
q'	q̣	q̣	<u>q̣</u>	<u>q'</u>	q!
ɢ	ǧ	ɢ	g	g	g
qʷ	qʷ	qʷ	<u>kw</u>	<u>kw</u>	q ^u , qw
q'ʷ	q̣ʷ	q̣ʷ	<u>k'w</u>	<u>kw'</u>	q! ^u , q!w
ɢʷ	ǧʷ	ɢʷ	<u>gw</u>	<u>gw</u>	g ^u , gw
ʔ	ʔ	ʔ	ʔ	ʔ	ε

Table B.2: Orthographic correspondences: fricatives

IPA	NAPA (UVic)	NAPA (UBC)	U'mista	Grubb	Boas 1947
s	s	s	s	s	s
ʈ	ʈ	ʈ	ʈ	lh	ʈ
x ^j	x	x	x	x	x·
x ^w	x ^w	x ^w	xw	xw	x ^u , xw
χ	χ̣	χ	x	x	x
χ ^w	χ̣ ^w	χ ^w	xw	xw	x ^u , xw
h	h	h	h	h	h, ʱ

Table B.3: Orthographic correspondences: resonants

IPA	NAPA (UVic)	NAPA (UBC)	U'mista	Grubb	Boas 1947
m	m	m	m	m	m
n	n	n	n	n	n
l	l	l	l	l	l
y	y	y	y	y	y
w	w	w	w	w	w
ʔm	ṃ	ṃ	ʔm	ṃ	εm
ʔn	ṇ	ṇ	ʔn	ṇ	εn
ʔl	ḷ	ḷ	ʔl	ḷ	εl
ʔy	ỵ	ỵ	ʔy	ỵ	εy
ʔw	ẉ	ẉ	ʔw	ẉ	εw
a	a	a	a	a	a, ā
ε, e	e	e	e	eh	ā, ē, e
i	i	i	i	i	i, ī, î, e, ē
o	o	o	o	o	â, ô
u	u	u	u	u	u, ū, o, ō
ə, ɪ, ʊ	ə	ə	ə	e	E, ä, a

Appendix C: The Means-PP Analysis

C.1 Introduction

In Section 1.2, I introduced the notion of *canonical object position* — a position in clausal syntax where either an instrumental (=s) or accusative (=x̄) object may appear (1).

- (1) Canonical object position
- | | | | | | |
|------|-----|---|---|----------|-----|
| i. | | V | S | O | PP* |
| ii. | Aux | V | S | O | PP* |
| iii. | Aux | S | V | O | PP* |

I also claimed there (by assumption) that =s initial noun phrases which occur to the right of canonical object position are actually covert prepositional phrases denoting Means. This analysis is restated in (2).

- (2) **Means-PP Analysis** ($\emptyset_P=s$)
=s marked phrases which appear to the right of canonical object position are Means-PPs headed by a covert preposition which assigns inherent means case.¹

The purpose of this Appendix is to provide some preliminary empirical support for the Means-PP Analysis. I'll begin by discussing the significance of the fact that some =s initial phrases can be ordered after adjunct PPs (Section C.2). Following this, I'll discuss the significance of data involving preposition insertion which suggest that Kwakwala can only realize one direct object per clause (Section C.3).

The empirical arguments in C.2 and C.3 are specifically geared towards establishing the claim that =s phrases outside of canonical object position are covert PPs. A related claim — the claim that (at least some) =s initial phrases appearing in canonical object position are direct objects (in accordance with the syntactic analysis presented in Chapter 6, Section 6.4.2) is difficult to prove, one of the reasons being that passive constructions in Kwakwala are related to object case realization but do not clearly differentiate arguments from adjuncts (see for instance Sherer 2014: p. 20-1, 80, 100). I have left the task of establishing this latter claim to future research, and focus on presenting evidence for the former one.

C.2 Ordering relative to adjunct PPs

A first type of evidence supporting the Means-PP Analysis comes from the observation that some =s initial phrases can be reordered relative to adjunct PPs on the right periphery of the clause. This finding provides partial support the analysis in (2) insofar as it suggests that those =s initial phrases which are reorderable relative to adjunct PPs are in fact (covert) PPs themselves.

Take for instance the verb *ǵəls-* 'paint', which has only one obligatory argument, an Agent (3a). When this verb takes an =s initial phrase denoting the Medium of painting, this argument

¹ The phrase 'means case' is adopted here to avoid any potential confusion which could result from referring to this as inherent instrumental case, though this is an equally appropriate label.

can appear in three positions in the clause: in canonical object position (3b), to the immediate right of an accusative object (3c), or ordered after a prepositional *la* adjunct (3d).

- (3) a. *laλən ǧəlsɔiλ*
la=λ =ən ǧəls-xɔid=λ
 go=FUT =1 paint-BEC=FUT
 ‘I’m gonna go paint.’ (VF)
- b. *ǧəlsida cədaqesa λiɲa laχis ǧuǧəme?*
ǧəls =i=da cədaq =s=a λiɲa
 paint =3DIST=OST woman =INST=DET **eulachon.grease**
la =χ=is ǧuǧəme?
 PREP =ACC=3REFL.POSS face
 ‘The lady is painting **eulachon grease** (INST) on her face.’ (VF)
- c. *ǧəlsida cədaqəχis ǧuǧəmeyesa λiɲa*
ǧəls =i=da cədaq la =χ=is
 paint =3DIST=OST woman PREP =ACC=3REFL.POSS
ǧuǧəme? =s=a λiɲa
 face =MEANS=DET **eulachon.grease**
 ‘The lady is painting her face (ACC) **with eulachon grease**.’ (VF)
- d. *ǧəlsida cədaq laχis ǧuǧəmeyesa λiɲa*
ǧəls =i=da cədaq la =χ=is
 paint =3DIST=OST woman PREP =ACC=3REFL.POSS
ǧuǧəme? =s=a λiɲa
 face =MEANS=DET **eulachon.grease**
 ‘The lady is painting on her face **with eulachon grease** (INST).’ (JF)

The fact that the =s initial phrase in (3d) can to be ordered after a PP adjunct suggests that this phrase is a PP, hence analyzable as in (2). If we accept this conclusion, then this means that at least some =s initial phrases are in fact covert PPs.

Note that this data does not, however, help us decide whether the =s initial phrases in (3b) and (3c) are direct arguments or covert PPs.²

C.3 Preposition insertion

Another type of evidence which would be consistent with the Means-PP analysis in (2) is evidence suggesting that *K^wak^wala* allows at most one direct object per clause, realized in

² One of the reasons I’m unable to say more in this section is that much of the field data I collected on this topic (reordering =s initial phrases) was subsequently found to contain confounds, due to the fact that =s initial phrases are also used to introduce third person possessors. This topic requires further research.

canonical object position.³ On this analysis, =s initial phrases to the right of canonical object position are covert PPs, despite looking morphologically just like case-marked objects.

One kind of evidence for this type of analysis comes from observing *preposition insertion* — a phenomenon whereby in sentences with two expressed internal arguments, a preposition must be inserted to carry the argument which is expressed outside of canonical object position. This pattern is shown in (4) with the verb *kuḥ^wsʔənd* ‘split in half’, which takes a Patient argument in accusative case (4a). When both an Instrument and a Patient are expressed with this verb and the Instrument realized in canonical object position, the preposition *la* must be inserted to carry the Patient argument (4b)-(4c). Another similar example is shown in (5), with the verb *kəlx^w* ‘buy’, which takes an argument denoting Obtained Goods in accusative case (5a). When an Instrument is realized in canonical object position, the preposition *la* must get inserted to carry the Obtained Goods argument (5b)-(5c). Crucially, in neither (4) nor (5) does preposition insertion change the truth-conditional meaning of the sentence in any discernible way.⁴

(4) *Context: Talking about a karate teacher.*

- a. *kuḥ^wsʔəndida ɔ́aɔ́uɔ́lamasḥa ləq^wa*
kuḥ^w-(x)sʔ-xʔid =i=da ɔ́aɔ́uɔ́lamas =ḥ=a ləq^wa
 split-across-BEC =3DIST=OST teacher =ACC=DET firewood
 ‘The teacher split a piece of firewood (ACC).’ (JF)
- b. *kuḥ^wsʔəndida ɔ́aɔ́uɔ́lamasasis ʔəyʔsu laḥa ləq^wa*
kuḥ^w-(x)sʔ-xʔid =i=da ɔ́aɔ́uɔ́lamas =s=is
 split-across-BEC =3DIST=OST teacher =INST=3REFL.POSS
ʔəyʔsu la =ḥ=a ləq^wa
 hand/arm PREP =ACC=DET firewood
 ‘The teacher split a piece of firewood with his hand (INST).’ (JF)
- c. * *kuḥ^wsʔəndida ɔ́aɔ́uɔ́lamasasis ʔəyʔsuḥa ləq^wa*
kuḥ^w-(x)sʔ-xʔid =i=da ɔ́aɔ́uɔ́lamas =s=is
 split-across-BEC =3DIST=OST teacher =INST=3REFL.POSS
ʔəyʔsu =ḥ=a ləq^wa
 hand/arm =ACC=DET firewood
 ‘The teacher split a piece of firewood with his hand (INST).’ (JF)

(5) *Context: Shelly bought a car, and she paid for it in food rather than money.*

- a. *kəlx^woḥ Shelliḥa kəlkəlsəla*
kəlx^w =oḥ Shelly =ḥ=a kəlkəlsəla
 buy =3MED Shelly =ACC=DET car
 ‘Shelly bought a car (ACC).’ (VF)

³ Finnish is another language with a one-object constraint, which is referred to as Siro’s Law (see for instance Kiparsky 2001: p. 323). If a one-object constraint does hold in K^wak^wala, then this is yet another similarity between these two languages (see Chapter 6, Sections 6.2, 6.4 for discussion of other similarities).

⁴ This finding is contrary to the following claim in Boas (1911: p. 544): “On the whole, objective is used only when the action directly affects the object; while in other cases, where a direction toward an object is expressed, periphrastic forms are used.” This may reflect an historical change in the language.

- b. kəlx^woǰ Shellisa hishəmeʔ **la**ǰa kəlkəlsəla
 kəlx^w=oǰ Shelly =s=a hishəmeʔ **la** =ǰ=a kəlkəlsəla
 buy =3MED Shelly =INST=DET foodstuffs **PREP** =ACC=DET car
 ‘Shelly bought a car with foodstuffs (INST).’ (JF)
- c. * kəlx^woǰ Shellisa hishəmeʔǰa kəlkəlsəla
 kəlx^w=oǰ Shelly =s=a hishəmeʔ =ǰ=a kəlkəlsəla
 buy =3MED Shelly =INST=DET foodstuff =ACC=DET car
 ‘Shelly bought a car with food-stuffs (INST).’ (JF)

Data like (4)-(5) suggest the existence of a clausal constraint on object expression in K^wak^wala, with preposition insertion serving as a repair mechanism to enable the expression of additional strict-accusative arguments.

If there is a one-object constraint in K^wak^wala, then an analogous process of preposition insertion would also be expected to occur whenever the strict-accusative argument in (4)-(5) is expressed in canonical object position, as in (6)-(7). By analogy with (4b) and (5b) above, the =s initial phrases at the right-periphery in (6) with *kuǰ^wsʔənd* ‘snap in half’ and (7) with *kəlx^w* ‘buy’ would be Means-PPs, headed by a covert preposition inserted to carry the additional argument in these clauses.

(6) [*Same context as (4)*]

kuǰ^wsʔəndida ǰaǰuǰamasaxa ləq^wasis **ʔəyǰəʔsu**
 kuǰ^w-(x)sʔ-xʔid =i=da ǰaǰuǰamas =ǰ=a ləq^wa
 split-across-BEC =3DIST=OST teacher =ACC=DET firewood
 =s=is **ʔəyǰəʔsu**
 =MEANS=3REFL.POSS **hand/arm**
 ‘The teacher split a piece of firewood (ACC) **with his hand.**’ (VF)

(7) [*Same context as (5)*]

kəlx^woǰ Shelliǰa kəlkəlsəlasa **hishəmeʔ**
 kəlx^w=oǰ Shelly =ǰ=a kəlkəlsəla
 buy =3MED Shelly =ACC=DET car
 =s=a **hishəmeʔ**
 =MEANS=DET **foodstuffs**
 ‘Shelly bought a car (ACC) **with food-stuffs.**’ (JF)

The argument goes as follows: the fact that preposition insertion is obligatory in (4b) and (5b) suggests that there can be only one direct object in the clause, and that preposition insertion is occurring in these instances to carry whatever argument is ‘extra’ in the clause. If we are willing to accept that preposition insertion is occurring in (6) and (7) as well, then we arrive at the Means-PP analysis in (2). On this view, the =s initial phrases in (6) and (7) would be covert PPs as claimed in (2), despite the fact that they are morphologically identical to =s objects.

Note that while the analysis I’ve just stated is *consistent* with the data, there is (at least) one other alternative analysis consistent with the data. Namely, the =s initial phrases in (4b) and (5b)

could themselves be covert PPs, in which case preposition insertion in these examples could be triggered just because these accusative-marked constituents are in the domain of PPs, and therefore must be expressed as PPs themselves. This alternative analysis would run counter to my syntactic analysis of instrumental case in Section 6.4.2. Further research is ultimately needed to decide definitively between these two analyses.

Regardless of which analysis is correct, the data in (4)-(5) demonstrate flexibility in Kwakwala in terms of the way internal arguments are syntactically encoded. In particular, examples (4) and (5) demonstrate that core arguments (denoting Patients and Obtained Goods, respectively) can be realized either as =*x̣* objects or as the objects of the preposition *la* without any obvious change in a sentence's meaning. A further assumption that I have made in this dissertation is that Instruments may be realized either as =*s* objects, in which case they are direct arguments (see Chapter 6, Section 6.4.2) or as the objects of a covert preposition. While this analysis is consistent with the data, more research is needed on the syntax of these constructions to be certain of it.

Appendix D: Sources of telicity in K^wak^wala

In Chapter 6, Section 6.3.1, I provided evidence showing that object case realization and telicity are determined independently in K^wak^wala. The purpose of this section is to describe five sources of telic interpretation in K^wak^wala. They include context (D.1), endpoint modifiers (D.2), lexical aspect (D.3), derivation of unaccusatives with *-xʔid* ‘momentaneous, inchoative aspect’ (D.4), and implicature (D.5).

In (D.6), I briefly discuss implications of the fact that there is no compelling evidence for telicity being grammaticalized in K^wak^wala.

D.1 Context

An important source of telic interpretation in K^wak^wala is context. The context in example (1), for instance, is one in which the speaker (who is speaking on behalf of a character, Eddie) is reporting on a past event. The sentence in (1) is interpreted as telic, then, because the context in which it is uttered constrains its interpretation so that it *must* be interpreted as telic. Note that in this particular example, a telic interpretation arises in this context regardless of which object case is expressed.

- (1) *Context: Shelly did a huge load of laundry, but she didn't have time to finish hanging it to dry. So she asked her husband Eddie to do it. He started hanging up the laundry, but he got a phone call partway through, stopped, and never finished. Shelly calls him later, and finds out he didn't finish. She's upset because somethings needed to get dry. So she asks him what got hung up, and what didn't. Eddie responds...*

ǰiǰ^waλəɫən λa {sa, ǰa} ǰəsəneʔ. kiʔsən ǰiǰ^waλəla {sa, ǰa} qəǰsis
 ǰiǰ^w-aλ-la =ən λa {=s=a , =ǰ=a} ǰəsəneʔ
 hang-on-CONT =1 CONN {=INST=DET , =ACC=DET} shirt
 kiʔs =ən ǰiǰ^waλ-la {=s=a , =ǰ=a} qəǰ-(x)sis
 neg =1 hang-on.surface-CONT {=INST=DET , =ACC=DET} ring-foot/leg
 ‘I hung up **the shirts** {INST, ACC}. I didn't hang up **the pants** {INST, ACC}.’ (JF, VF)

This example illustrates the fact that telic interpretations of events are not necessarily determined solely by linguistic sources of information; they are also determined by properties of the world in which sentences are uttered.

D.2 Endpoint modifiers

Another source of telic interpretation in K^wak^wala comes from the use of modifiers that are used to assert that an event has culminated. K^wak^wala lacks an unambiguous ‘in an hour’ type phrase for achieving this purpose (Greene 2013: p.49-53). Two examples of modifiers which do generate telic interpretations are *ǰ^wal-* ‘finish, stop, quit’ (2) and *labənd* ‘go to the end’ (3).

- (2) ləmũx Scottiŋ laŋudŋa kəlkałsəla leŋəŋ ǵ^wal hiŋiɖəŋ^w
 lə=ŋm =uŋ Scott=ŋ laŋ-u-x?id =ŋ=a kəlkałsəla
 AUX=VER =3MED Scott=VIS sell-off/out-BEC =ACC=DET car
 l=a=ŋ ǵ^wal hiŋ-x?id =ŋ=w
 AUX=EMBED=VIS **finish** fix-BEC =ACC=3MED
 ‘Then Scott sold the car (ACC), when he had **finished** fixing it (ACC).’ (VF)

- (3) məŋi-pəni Abbi **labənd** dənŋəlaŋa *Amazing Grace*
 məŋi-pən =i Abby **la-ba-x?id** dənŋ-la
 two-time =3DIST Abby **go-end-BEC** sing-CONT
 =ŋ=a Amazing Grace
 =ACC=DET Amazing Grace
 ‘Abby sang Amazing Grace (ACC) **all the way through** two times.’ (VF)

Speaker: “*labənd* means sang ‘all the way’.”

Note that the fact that these modifiers are not redundant in these examples suggests that telicity is not entailed by the literal content of these utterances.

D.3 Lexical aspect

Another source of telicity in K^wak^wala is lexical aspect. Greene (2013) proposes three lexical aspect classes in K^wak^wala: states, processes, and transitions. Of these classes, Greene finds only transitions to be inherently telic. Their inherent telicity gives rise to three empirical patterns: in their bare forms, transitions only receive past-tense translations (4); transitions cannot be modified with *galabənd* ‘start to’ (5); and transitions are infelicitous with the ‘momentaneous’/‘inchoative’ aspect marker, *-x?id* (6) (Greene 2013: p. 39-41, 96-101).

- (4) Bare transitions have a past interpretation

q̣ida gudanŋa ŋətəm
 q̣(a) =i=da gudan =ŋ=a ŋətəm
 find =3DIST=OST horse =ACC=DET carrot
Can mean: ‘The horse found the carrot (ACC).’
Can’t mean: ‘The horse is finding the carrot (ACC).’ (Greene 2013, p. 40)

- (5) Transitions cannot be modified with *galabənd* ‘start to’

ləmoŋ galabəndoŋ Catherine q̣aŋis wayas
 lə-ŋm =oŋ galabənd =oŋ Catherine
 AUX-VER =3MED start =3MED Catherine
 q̣(a) =ŋ=is wayas
 find =ACC=3REFL.POSS honey
Intended: ‘Catherine has started to find her honey (ACC).’ (Greene 2013, p. 41)

Speaker: “You either have or you haven’t found your *wayas*.”

(6) Transitions cannot co-occur with -xʔid

- a. * gaḥʔidida dagʷadaḥʷa ṅala
gaḥ-xʔid =i=da dagʷada =ḥ=w=a ṅala
come-BEC =3DIST=OST doctor =ACC=3MED=DET day
Intended: 'A doctor came today.' (Greene 2013, p. 97)
- b. gaḥida dagʷadaḥʷa ṅala
gaḥ =i=da dagʷada =ḥ=w=a ṅala
come =3DIST=OST doctor =ACC=3MED=DET day
'A doctor came today.' (Greene 2013, p. 97)

On Greene's analysis, the impossibility of realizing -xʔid with transitions arises due to the fact that transitions already lexically encode a BECOME subevent, making -xʔid redundant (see D.4 for discussion of -xʔid).

Wherever bare transition predicates are used, a telic interpretation results.

D.4 Unaccusatives derived from states

Another source of telic interpretation in Kwakwala is the derivation of telic unaccusative predicates from stative roots with the 'momentaneous, inchoative' suffix -xʔid. The denotation of -xʔid is shown in (7).

- (7) Denotation of -xʔid
 $[[xʔid]] = \lambda P_{\langle v, \langle s, p \rangle \rangle} \lambda t_i \lambda w_s. \exists e. (\text{BECOME}(P))(e)(w) \ \& \ \text{time}(e) \subseteq t$ (Greene 2013:88)¹

An important thing to note about Greene's denotation of -xʔid is that it does not entail telicity. This property of -xʔid is apparent from the fact that when -xʔid is suffixed to process roots,² the resulting predicate only entails that a transition into an event has occurred in reference time, not that an entire event has occurred within reference time (Greene 2013: 88-89). In this way, -xʔid is not a canonical perfective marker, and therefore cannot be considered to grammaticalize telicity.

When -xʔid is suffixed to states, however, the resulting predicate is an inchoative state and thereby telic. An example of how this works is illustrated with the root təp- 'be broken' in (8)-(10). In its bare form, this root is stative (8); when suffixed with -xʔid, an unaccusative predicate is formed (9); and when an external argument is added to this unaccusative predicate, a causative predicate is formed (10).

- (8) naqoḥ Katie laḥa təpa kʷəʔsta
naq =oḥ Katie la =ḥ=a təp-a kʷəʔsta
drink =3MED Katie PREP =ACC=DET broken-A kʷəʔsta
'Katie's drinking out of a broken cup.' (VF)

¹ I have substituted *v* for Greene's *l* to represent the type of events to maintain consistency with the convention adopted in this dissertation.

² On Greene's (2013) analysis, process roots include Vendler's (1957) activities and accomplishments. Greene's (2013) analysis of lexical aspect in Kwakwala is discussed more in Appendix E.

(9) təp̄idida k̄wəʔsta
 təp-xʔid =i=da k̄wəʔsta
 broken-BEC =3DIST=OST cup
 ‘The cup broke.’ (VF)

(10) təp̄idi Pateḅa k̄wəʔsta
 təp-xʔid =i Pat =ḅ=a k̄wəʔsta
 broken-BEC =3DIST Pat =ACC=DET cup
 ‘Pat broke the cup (ACC).’ (VF)

The fact that examples (9) and (10) are telic is shown by the data in (11)-(12). In (11), which corresponds with (9), we see that culmination of the inchoative *təp̄id* ‘get broken’ event cannot be felicitously cancelled. In (12), which corresponds with (10), we see that culmination of the causative *təp̄id* ‘break’ event also cannot be felicitously cancelled.

(11) #təp̄idida k̄wəʔsta, kiʔstoḅ təp̄ida
 təp-xʔid =i=da k̄wəʔsta kiʔs=t̄a =oḅ təp-xʔid-a
 broken-BEC =3MED=OST cup NEG=but =3MED broken-BEC-A
Literally: ‘The cup broke, but it didn’t break.’ (JF)

(12) #təp̄idi Patəḅa k̄wəʔsta. kiʔstoḅ k̄wəʔsta təp̄ida
 təp-xʔid =i Pat =ḅ=a k̄wəʔsta kiʔs=t̄a =oḅ
 broken-BEC =3DIST Pat =ACC=DET cup NEG=BUT =3MED
 k̄wəʔsta təp-xʔid-a
 cup broken-BEC-A
Literally: ‘Pat broke the cup (ACC), but the cup didn’t break.’ (JF)

KS: “Is that a contradiction?”

Speaker: “Yeah, ‘he broke the cup, but it didn’t break’ [*laughter*].”

Only those verbs which fall into Greene’s transition class are inherently telic, and the number of those verbs is relatively small. The majority of telic predicates in the language are not lexically telic but are derived, rather, through suffixation of *-xʔid* to an underlyingly stative root.³

D.5 Implicature

Greene (2013: p. 39) reports that accomplishment-like predicates are interpreted as telic by default due to implicature. This means that out-of-the-blue, a sentence like (13) with the verb *q̄əȳak-* ‘kick’ will tend to be interpreted as describing a culminated event in the past tense. The fact that culmination is only an implicature however, and is not entailed, is shown by data like in (14). In (14a), which the speaker volunteered, we see that the same accomplishment-like VP (as seen in (13)) can be used to describe a kicking-a-ball event which did not culminate. In (14b),

³ The data in this section show crucially that not all accomplishment-like predicates in K^{wak}wala are non-culminating (cf. (C) with the examples of non-culminating accomplishments in Section 6.3.1.3). In forthcoming work, I make use of this finding to argue that atelicity in K^{wak}wala NCAs is basic rather than derived as it is, for instance, in Salish (Bar-el et al. 2005).

which was also judged felicitous by the same speaker in the same context, we see that an event formed using the same accomplishment-like VP (as seen in (13)) can have its culmination overtly cancelled in a subsequent clause.

- (13) $\dot{q}\acute{o}yax\dot{?}idi$ **Simonaxa** **lu \check{x} 'səm** **$\dot{q}\acute{o}y\acute{a}kasu?$**
 $\dot{q}\acute{o}y\acute{a}k-x\dot{?}id =i$ Simon = $\check{x}=a$ **lu \check{x} 'səm** **$\dot{q}\acute{o}y\acute{a}k-a-səw'$**
kick-BEC =3DIST Simon =ACC=DET **spherical** **kick-A-ACC.PASS**
‘Simon kicked **the ball** (ACC).’ (VF)

- (14) **KS:** “And then, let’s say you’re watching him and he — you know, he kicks AT the ball, but he misses it.”

- a. $\lambda i q^w i$ Simon $la\dot{?}i$ $\dot{q}\acute{o}yax\dot{?}id\check{x}a$ **lu \check{x} 'səm** **$\dot{q}\acute{o}y\acute{a}kasu?$**
 $\lambda i q^w =i$ Simon $l=a=i$ $\dot{q}\acute{o}y\acute{a}k-x\dot{?}id$
mess.up =3DIST Simon AUX=EMBED=3DIST kick-BEC
= $\check{x}=a$ **lu \check{x} 'səm** **$\dot{q}\acute{o}y\acute{a}k-a-səw'$**
=ACC=DET **spherical** **kick-A-ACC.PASS**
‘Simon messed up when he kicked at **the ball** (ACC).’ (VF)
- b. $\dot{q}\acute{o}yax\dot{?}idi$ **Simonaxa** **lu \check{x} 'səm** **$\dot{q}\acute{o}y\acute{a}kasu?$** $ki\dot{?}stu\check{x}$ $\dot{?}oləkala$ $\dot{q}\acute{o}yax\dot{?}idi$ **Simonaxa**
lu \check{x} 'səm **$\dot{q}\acute{o}y\acute{a}kasu?$**

$\dot{q}\acute{o}y\acute{a}k-x\dot{?}id =i$ Simon = $\check{x}=a$ **lu \check{x} 'səm** **$\dot{q}\acute{o}y\acute{a}k-a-səw'$**
kick-BEC =3DIST Simon =ACC=DET **spherical** **kick-A-ACC.PASS**
 $ki\dot{?}s=t\acute{a} =u\check{x}$ $\dot{?}wa-la-k\acute{a}l-a$ $\dot{q}\acute{o}y\acute{a}k-x\dot{?}id =i$
NEG=but =3MED SO-CONT-very-A kick-BEC =3DIST
Simon = $\check{x}=a$ **lu \check{x} 'səm** **$\dot{q}\acute{o}y\acute{a}k-a-səw'$**
Simon =ACC=DET **spherical** **kick-A-ACC.PASS**
Literally: ‘Simon kicked **the ball** (ACC). But he didn’t really kick **the ball** (ACC).’
(JF)

Speaker: “Mhm. You could say it that way. But you’ve become very technical.”

In my experience, telic implicatures in Kwakwala seem somewhat weak to speakers. Thus while I’ve found it to be generally true that speakers will tend to translate sentences like (13) in the past tense, I think it’s possible that this bias is driven by the fact that in English, accomplishments are more likely to be in the past tense than in the progressive. More research is needed on implicatures of telicity and their interaction with context.

D.6 Implications

Telicity is sometimes assumed to be a category that is grammaticalized in every language. It’s hard to know exactly how prevalent this assumption is, but we can see it manifested within several recent theories in the generative literature, such as Borer (2005), Ramchand (2008), and Travis (2010).

In K^wak^wala, however, there is no compelling evidence for telicity being grammaticalized in the functional structure of the clause. I therefore concur with Greene (2013: p. 39) that process roots (which include both activity-like and accomplishment-like verbs) in K^wak^wala are lexically atelic.

The idea that accomplishments are lexically atelic is developed in Kratzer (2004). In that same work, however, evidence is also presented for telicity being introduced in the verbal spine in a projection above the VP associated with accusative case assignment (see Chapter 6, Section 6.4.2 for discussion). In K^wak^wala, we've seen that accusative case is assigned independently of telicity (Section 6.3.1). This suggests that in K^wak^wala, process roots are born atelic and then simply remain atelic on account of there being no telicity-introducing head grammaticalized in the functional structure of this language. A consequence of this analysis, if it is the right one, is that telicity is *not* universally grammaticalized in the functional structure of all languages. I leave it to future work to test these claims in more depth.

Appendix E: Object case and lexical aspect

E.1 Introduction

The purpose of this section is to show that the semantic analysis of object case marking developed in this dissertation can be integrated with Greene's (2013) analysis of lexical aspect classes in Kwakwala.

Greene analyzes bare verbal predicates in Kwakwala as belonging to three classes: states, processes, and transitions. These aspectual classes are associated with the templates in (1), which are inspired by the theory of lexical aspect in Rothstein (2004).

(1) Kwakwala aspectual verb classes (Greene 2013: p. 30-33)

- a. States: $\lambda e.P(e)$
- b. Processes: $\lambda e.(DO(P))(e)$
- c. Transitions: $\lambda e.(BECOME(P))(e)$

The templates associated with processes and transitions involve two semantic operators from Dowty (1979): DO and BECOME. The denotations of these operators are given in (2) and (3), accompanied by notes regarding their truth conditions.

- (2) a. $DO(\alpha, \varphi) \leftrightarrow \varphi \ \& \ \text{u.t.u.c.o.a.}(\varphi)$
b. "...the abbreviation [u.t.u.c.o.a.] stands for 'is under the unmediated control of the agent (individual denoted by α)' and is this is of course a blatant fudge since I have no way of giving a standard (explicit model-theoretic) interpretation for this notion." (Dowty 1979: p. 118)
- (3) a. [BECOME φ] is true at I iff there is an interval J containing the initial bound of I such that $\neg\varphi$ is true at J and there is an interval K containing the final bound of I such that φ is true at K .
b. Interval: Let T be the set of real numbers. Let $<$ be the standard dense linear ordering of T . I is an interval iff $I \subset T$ and for all moments $t1, t2, t3$, if $t3 \in I$, and $t1 < t2 < t3$, then $t2 \in I$.
c. Initial and final bound: t is an initial bound for I iff t is the latest moment just before I . Final bound is defined similarly. (Dowty 1979: p. 139f.)

Greene (2013: p. 31-2) remarks that the DO operator may ultimately need revision in order to be based on a property like [+ stages] (from Landman 1992) or [+dynamic], instead of agentivity. For my purposes here, either semantic analysis of DO will suffice.

Greene's (2013) analysis of Kwakwala lexical aspect classes is designed to capture the interpretation of bare verbal predicates independently of their interactions with argument structure. Integrating Greene's proposal with the semantic analysis of object case in this dissertation requires three steps: first, ascertaining where subevental structure exists relative to the lexical aspect templates in (1); second, considering what predictions subevental structure

makes for how verbs in each lexical aspect class realize (or fail to realize) objects; and third, seeing whether these predictions line up with the predictions of the Initiating Subevent Theory.

In the remainder of this appendix I will discuss transitions (Section E.2), processes (Section E.3), and states (Section E.4), and will then summarize the results (Section E.5).

E.2 Transitions

On Greene's (2013) analysis, transitions lexically encode a change from one state to another state, making use of Dowty's BECOME operator (4).

(4) Transitions: $\lambda e.(\text{BECOME}(P))(e)$

Greene's transition template can be mapped onto subevental structure by identifying the interval preceding the lexicalized transition point as an *initiating* subevent, and the interval following the transition point as a *non-initiating* subevent. Then, since transitions lexically encode both *initiating* and *non-initiating* subevents, we predict that in theory there could be transitions with instrumental objects, transitions with accusative objects, and transitions with alternating objects. More specifically, we predict that any internal argument which is an event participant in the phase prior to the lexicalized transition point will qualify as a *Co-initiator* and be marked instrumental; any internal argument which participates in the event phase that is subsequent to the transition point will qualify as a *Non-initiator* and be marked accusative; and any internal argument which participates in the event both prior to and subsequent to the lexicalized transition will undergo case alternation.

These predictions are borne out, as illustrated in (5)-(7) with three transition verbs: the verb *bəw-* 'leave', which takes an instrumental object (5); the verb *q̇a-* 'find', which takes an accusative object (6); and the verb *čo-* 'give', which takes an alternating object (7).

(5) Transitions can take an instrumental object

ləm̄uχ Hannahχ λəw̄uχ Katiyəχ ǧʷaɫaɫa qəs bəweʔsuχ caχsiχ				
lə=ʔm	=uχ	Hannah=χ	λəw̄ =uχ	Katie=χ
AUX=VER	=3MED	Hannah=VIS	CONJ =3MED	Katie=VIS
ǧʷaɫ-ɫa	qa =is		bəw=eʔ	=s=uχ
finish-STAT	PREP =3REFL.POSS		leave=NMZ	=3POSS=3MED
	caχis=χ			
	Fort.Rupert=VIS			

'Hannah and Katie are getting ready to leave **Fort Rupert** (INST).' (VF)

(6) Transitions can take an accusative object

q̇ami Katiyəχus dalaχi				
q̇(a)=ʔm	=i	Katie	=χ=us	dala-_haχi
find=VER	=3DIST	Katie	=ACC=3REFL.POSS	money-container

'Katie did find **her wallet** (ACC).' (VF)

(7) Transitions can take an alternating object

$\dot{c}ow\acute{a}n \check{x}a \{sa, \check{x}a\} \check{\lambda}at\acute{a}m\check{l}$
 $\dot{c}o =\acute{a}n \check{x}a \{=s=a, =\check{x}=a\} \check{\lambda}at\acute{a}m\check{l}$
 give =1 CONN {=INST=DET, =ACC=DET} **hat**
 ‘I gave **the hat** {INST, ACC}.’ (VF, VF)

Once the semantics of Dowty’s BECOME operator is explicitly connected with the notions of subevental structure I have employed here, the existence of transitions with instrumental objects, accusative objects, and alternating objects shows that the predictions of the Initiating Subevent Theory are aligned with Greene’s analysis of this verb class.

E.2 Processes

On Greene’s (2013) analysis, processes lexically encode an event defined in terms of Dowty’s DO operator (8).

(8) Processes: $\lambda e.(DO(P))(e)$

In terms of their subevental structure, processes are predicates with at least one subevent — namely, the subevent which satisfies the condition placed on the DO operator, which I identify as an *initiating* subevent. Beyond this, Greene’s analysis is consistent with processes being subdivided into two classes based on whether they consist of an *initiating* subevent only, or consist of both *initiating* and *non-initiating* subevents. These two subtypes of processes correspond to Vendler’s (1957) activity and accomplishment classes, respectively. Given the assumptions of the Initiating Subevent Theory, we then predict that activity-like processes should only take instrumental objects, since they only possess an *initiating* subevent, while accomplishment-like processes should be able to take accusative objects, possibly in addition to other instrumental or alternating objects.

Evaluating these predictions is not always straightforward, as it is sometimes not obvious whether a given root needs to be lexically-specified as either an activity or an accomplishment. Many roots can occur, for instance, be expressed in either activity-like or accomplishment-like frames. This is illustrated below in (9)-(10) with the root *qas-* ‘walk’, which can fit a variety of syntactic frames. This root can be used in activity-like predicates in an intransitive frame (9a) or in a transitive one with an instrumental object (9b); or it can be used as an accomplishment-like predicate with an accusative object (10a), an accomplishment-like predicate with a Path-denoting PP (10b), or an accomplishment-like predicate with both an alternating object and a Path-denoting PP (10c).

(9) Activity-like processes: *qas*- ‘walk’

- a. ləm̩is ʔoʔəm̩ n̩ix qəs leʔ qasʔida qəs ʔiweʔəʃa təpi
 lə=ʔm̩=is ʔwa=ʔm̩ n̩ik q(a) =is la=iʔ
 AUX=VER=and so=VER say PREP =3REFL.POSS go=NMZ
 qas-xʔid-a q(a) =is ʔiweʔ =ʃ=a təp-xʔid
 walk-BEC-A PREP =3REFL.POSS forget =ACC=DET break-BEC
 ‘So he just decided to go walking to forget about what he had broken (ACC).’ (VF)
- b. qasux̣ Normansa **sikaḡaweʔ**
 qas =ux̣ Norman =s=a **sikaḡaweʔ**
 walk =3MED Norman =INST=DET **cane**
 ‘Norman’s walking **with a cane** (INST).’ (VF)

(10) Accomplishment-like processes: *qas*- ‘walk’

- a. qasəndi Vickiyəʃa **loʔs** qaʔs leʔ laʃa ʔəpsud
 qas-ʔ¹-xʔid =i Vicky =ʃ=a **loʔs** qa =is
 walk-ʔ-BEC =3DIST Vicky =ACC=DET **tree** PREP =3REFL.POSS
 la=iʔ la =ʃ=a ʔəpsud
 go=NMZ PREP =ACC=DET other.side
 ‘Vicky walked across **the tree** (ACC) to get to the other side.’ (VF)
- b. ʔəʃʔeʃsdən qən qasʔideʔ **laʃa kəlwilas**
 ʔəʃʔ-ʔeʃsd =1 qa =ən qas-xʔid=eʔ **la** =ʃ=a
 DO-desire =1 PREP =1POSS walk-BEC=NMZ PREP =ACC=DET
kəlwilas
store
 ‘I want to walk **to the store** (*la*).’ (VF)
- c. luʃ Shelliʃ qasa {**sida, ʃida**} **waci laʃa ʔəmaʔis**
 lə =ux̣ Shelly=ʃ qas-a {=s=i=da,
 AUX =3MED Shelly=VIS walk-A {=INST=3DIST=OST,
 =ʃ=i=da} **waci la** =ʃ=a **ʔəmaʔis**
 =ACC=3DIST=OST} **dog** PREP =ACC=DET **beach**
 ‘Shelly’s walking **the dog** {INST, ACC} **to the beach**.’ (VF, JF)

A reasonable assumption is that *qas*- ‘walk’ is an activity-like process which occurs in accomplishment-like frames as a results of grammatical processes which modify event structure. On the other hand, strongly transitive roots like *-(g)ila* ‘make, do’ may need to be lexically specified as accomplishment-like processes. In any case, the predictions regarding case marking are clear once we have decided, for any given root, whether it is an activity-like process or an accomplishment-like one. To the best of my knowledge, the predictions regarding case possibilities with process predicates are generally borne out.

¹ The form of *-xʔid* here (*-nd*) is the form which usually signals the presence of a lexical suffix. It’s possible that the suffix *-(x)sʔ* ‘across’ is here, but inaudible to me.

It's worth noting here that researchers have, in recent years, posited even more fine-grained subevental structure than this, for instance positing *process* and *result* subevents (Ramchand 2009, Tatevosov 2008) corresponding to a subdivision within what I've been referring to as *non-initiating* subevents. Since object case marking in Kwakwaka only directly reflects the distinction between *initiating* and *non-initiating* subevents, I leave the possibility of further decomposition for future research.

E.4 States

Finally, let's consider Greene's class of states, which have the lexical aspect template in (11).

(11) States: $\lambda e.P(e)$

Given that states lack subevental structure, we predict that it will be impossible to realize case-marked objects with lexical states.

To the best of my knowledge, this prediction is borne out only with respect to a specific subset of the predicates which satisfy Greene's tests for being states: namely, states which express permanent or essential properties, which Carlson (1977) refers to as individual-level states. Examples of stative roots of this kind include *pisa* 'hard' (12) and *gəltəxst* 'tall' (13).

(12) *pisoχda dzəxʔən*
 pis =oχ=da dzəxʔən
 hard =3MED=OST metal
 'The metal is/was hard.' (Greene 2013, p. 34)

(13) *Context: Hannah's been very tall for her age her entire life.*

gəltəxsti
gəlt-hxst =i
 long-hind.end =3DIST
 'She is tall'. (Greene 2013, p. 90)

I have not come across examples of bare individual-level state predicates with instrumental or accusative objects, though it's possible that more research on these predicates would uncover examples. If individual-level states with objects were found to exist, they would require an explanation which the Initiating Subevent Theory currently does not provide.

On the other hand, states which name transitory or accidental properties — Carlson's (ibid.) stage-level states — can take case-marked arguments, despite meeting Greene's (2013) criteria for state-hood. Some examples of state-like predicates with objects include *qut-* 'full' (14), *kʷənq-* 'wet' (15), and *lawis-* 'angry' (16).

(14) *Context: There is a bowl on the table, and it's half-full of apples.*

ʔomũx qaquṭũxda luʔx̣wəgeʔx̣sa ʔabəls
 ʔwa=ʔm =uṣ̣ qa~quṭ' =uṣ̣=da luʔx̣wəgeʔ=x̣
 SO=VER =3MED REDUP~full =3MED=OST bowl=VIS
 =s=a ʔabəls
 =INST=DET **apple**
 'The bowl is somewhat full **of apples** (INST).' (VF)

(15) ḳwənquṣ̣da həṃxdəmiṭiṣ̣sa ẉap
 ḳwənq =uṣ̣=da həṃxdəmiṭ=x̣ =s=a ẉap
 wet =3MED=OST table=VIS =INST=DET **water**
 'The table is wet **from water** (INST).' (JF)

(16) *Context: Katie was having a good day, but then the bus came a half hour late.*

ḷawisoṣ̣ Katiyəṣ̣ẉa bəs
 ḷawis =oṣ̣ Katie =ṣ̣=ẉ=a bəs
 angry =3MED Katie =ACC=3MED=DET **bus**
Speaker: "Katie got mad **at the bus** (ACC)." (VF)

One possible explanation for the ability to realize objects in stage-level state predicates is that these predicates are not actually interpreted as states, but are interpreted as covert (non-agentive) processes (14)-(15) or transitions (16). If this were the case, then the events described by these predicates would possess covertly-signalled subevental structure, and the realization of objects in these examples could be captured by the Initiating Subevent Theory. Otherwise, the realization of instrumental and accusative objects in these state-like predicates is a challenge to my theory in its current form.

E.5 Conclusion

In this Appendix, I've proposed an integration of Greene's (2013) analysis of lexical aspect classes in K^wak^wala with the Initiating Subevent Theory of object case. Greene's lexical aspect templates are restated in (17), and in (18) I've summarized what predictions are associated with these templates pertaining to object realization. A 'yes' in (18) indicates that the Initiating Subevent Theory predicts that with verbs from the indicated lexical aspect class, the indicated object type should in principle be possible.

(17) K^wak^wala aspectual verb classes (Greene 2013: p. 30-33)

- a. States: $\lambda e.P(e)$
- b. Processes: $\lambda e.(DO(P))(e)$
- c. Transitions: $\lambda e.(BECOME(P))(e)$

(18) Predicted possible case frames, by lexical aspect class

	<i>Verb class</i>	INST	ACC	INST/ACC
a.	Transitions	yes	yes	yes
b.	Activity-like processes	yes	no	no
c.	Accomplishment-like processes	yes	yes	yes
d.	States	no	no	no

While the predictions in (18) regarding transitions and processes are satisfied, the predictions made about states are not satisfied in the case of stage-level states. More investigation is needed in order to see whether there is any justification for considering the events described by these predicates as possessing subevental structure. With the possible exception of stage-level states, Greene's (2013) analysis of lexical aspect classes in K^{wakwala} is in alignment with the predictions of the Initiating Subevent Theory.