The Semantics of Kwakwała Object Case

By

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A dissertation submitted in partial satisfaction of the requirements for the degree of Doctor of Philosophy in Linguistics in the Graduate Division of the University of California, Berkeley

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Abstract

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In this dissertation, I investigate factors underlying the distribution of object case in Kʷakʷala, an endangered Northern Wakashan language of British Columbia, Canada. Kʷakʷala has two types of objects, instrumental (=s) and accusative (=kʷ). 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 Kʷakʷala’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 Kʷakʷala’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, Kʷakʷala 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. Kʷakʷala’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

Kwak'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 -xʔid, though it has the following realizations: (i) on stems with no lexical suffixes -xʔid, -xʔi, -ʔid, -ʔi; on stems with lexical suffixes -d, -nd, -ud (-xʔid, -d, -nd, ud)
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
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DET</td>
<td>Determiner, existential deictic category (Black 2011)</td>
</tr>
<tr>
<td>DIM</td>
<td>Diminutive</td>
</tr>
<tr>
<td>DIM.PL</td>
<td>Diminutive plural</td>
</tr>
<tr>
<td>DIST.PAST</td>
<td>Distant past tense</td>
</tr>
<tr>
<td>DO</td>
<td>Dummy verbal root</td>
</tr>
<tr>
<td>EMBED</td>
<td>Embedding vowel</td>
</tr>
<tr>
<td>EXCLAM</td>
<td>Exclamatory</td>
</tr>
<tr>
<td>FUT</td>
<td>Future tense</td>
</tr>
<tr>
<td>GRAD.ADV</td>
<td>Gradual advancement</td>
</tr>
<tr>
<td>HORT</td>
<td>Hortative</td>
</tr>
<tr>
<td>HYP</td>
<td>Hypothetical</td>
</tr>
<tr>
<td>INDEF</td>
<td>Indefinite root</td>
</tr>
<tr>
<td>INST</td>
<td>Instrumental case</td>
</tr>
<tr>
<td>INST.PASS</td>
<td>Instrumental passive, voice suffix targeting instrumental-marked arguments</td>
</tr>
<tr>
<td>INVIS</td>
<td>Invisible; I use this as a blanket gloss for the following more specific deictic categories: third person distal invisible (=ʔ, =ʔʔ, =ʔ); third person medial invisible (=ʔʔʔ, =ʔʔʔ); third person proximal invisible (=ʔʔʔ)</td>
</tr>
<tr>
<td>IMP</td>
<td>Imperative</td>
</tr>
<tr>
<td>JF</td>
<td>Judged form</td>
</tr>
<tr>
<td>LOC</td>
<td>Locative root</td>
</tr>
<tr>
<td>LOC.PASS</td>
<td>Locative passive</td>
</tr>
<tr>
<td>MEANS</td>
<td>Means case, an inherent instrumental case assigned to the complement of a covert preposition</td>
</tr>
<tr>
<td>MOD</td>
<td>Modal</td>
</tr>
<tr>
<td>NEG</td>
<td>Negation</td>
</tr>
<tr>
<td>NEG.EXIST</td>
<td>Negative existential</td>
</tr>
<tr>
<td>NMZ</td>
<td>Nominalizer</td>
</tr>
<tr>
<td>O.POSS</td>
<td>Oblique possessor, marks third person Agents in passives</td>
</tr>
<tr>
<td>OST</td>
<td>Ostensive determiner (Black 2011)</td>
</tr>
<tr>
<td>PASS</td>
<td>Passive</td>
</tr>
<tr>
<td>PEJ</td>
<td>Pejorative</td>
</tr>
<tr>
<td>PL</td>
<td>Plural</td>
</tr>
<tr>
<td>PART</td>
<td>Participle, result nominalizer</td>
</tr>
<tr>
<td>PREP</td>
<td>Preposition</td>
</tr>
<tr>
<td>QUES</td>
<td>Question</td>
</tr>
<tr>
<td>REC.PAST</td>
<td>Recent past tense</td>
</tr>
<tr>
<td>RECIPI</td>
<td>Reciprocal</td>
</tr>
<tr>
<td>REDUP</td>
<td>Reduplicant</td>
</tr>
<tr>
<td>REPORT</td>
<td>Reportative</td>
</tr>
<tr>
<td>STAT</td>
<td>Stativizer</td>
</tr>
<tr>
<td>VER</td>
<td>Verum focus (Littell 2016)</td>
</tr>
<tr>
<td>VF</td>
<td>Volunteered form</td>
</tr>
<tr>
<td>VIS</td>
<td>Visible; I use this as a blanket gloss for the following more specific deictic categories: third person distal visible (—); third person medial visible (=ʔ, =ʔʔ, =ʔ); third person proximal visible (=ʔʔʔ, =ʔʔʔ)</td>
</tr>
<tr>
<td>WH</td>
<td>Generic wh element</td>
</tr>
</tbody>
</table>
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
Ø Dummy root
3.IND Third person, indicative mood
PL Plural
Acknowledgments

An extraordinary aspect of writing this dissertation has been getting to experience the feeling of being on the brink which separates the known from the unknown. It’s a feeling which I feel fortunate to have experienced, and I could not have had it without the support, encouragement, and effort of many people around me.

Everything I know about Kwı̓k̓w̓ala comes ultimately from the teachings of the Kwı̓k̓w̓ala elders with whom I’ve been privileged to work and spend time with. My Kwı̓k̓w̓ala teachers, in order of when we first met, are Ruby Dawson Cranmer, Mildred Child, Violet Bracic, Julia Nelson, Lily Johnny, and one teacher who has asked to remain anonymous. To my Kwı̓k̓w̓ala teachers: thank-you for inviting me into your homes, being patient with me, and laughing with me. In the course of sharing your language and perspective, you’ve changed my values and given me a new perspective on why language is important. I am also very grateful to Sarah Child and family for welcoming me into the community and for all the work you do, everyday, to keep the language alive.

I owe a great deal of thanks to my dissertation chair Line Mikkelsen, for being everything I could have asked for in an advisor. Line has always been willing to step into my projects, to learn the ins and outs of my thinking so she can help help me improve my work from the inside out. Line is a true catalyst, and her honest and detailed feedback has played a crucial role in bringing coherence and focus to this project. I am also grateful to the other members of my committee, whose honest and incisive feedback has improved the work considerably. I would like to thank Amy Rose Deal for carefully diagnosing the weak points in my arguments and for fine-tuning the way I think about events. I would like to thank William Hanks for continually bringing my unconscious assumptions to the fore, and for helping me always keep the bigger picture in mind. You have all taught me how to value feedback and make the most of it.

The Berkeley linguistics department has provided what was in many ways the ideal environment to bring this project to fruition, both as a place where multiple theoretical approaches were able to cross-fertilize, and as a place where solid linguistic data was placed in high regard. I am especially thankful to Andrew Garrett, both for his mentorship throughout the graduate program and for giving me the opportunity to work in the Survey of California and Other Indian Languages, where I learned how important archival materials can be to people reclaiming their languages. To each and every one of my fellow graduate students at Berkeley, I am grateful for the intellectual and emotional support you’ve given me and for ample shenanigans, for whom I have in particular to thank Sara Bakst, Nico Baier, Erik Maier, Jonathan Manker, and Orchid Pusey. Many thanks are extended also to the undergraduate students in my classes, whose ‘ah-hah’ moments in office hours and sections were simply awesome. I am especially grateful to Halia DeWeese for her meticulous work as my undergraduate partner in the Linguistics Research Apprenticeship Program. Finally, none of this would have been possible without the thoughtful and diligent work of Belén Flores and Paula Floro, who helped make the linguistics department a home away from home.

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It was very important for me over the course of graduate school to have spaces to let my mind out and play. For offering these spaces, I have four Bay Area communities to thank, including Upswing Aerial Dance Company, Athletic Playground, Wormhole, and Trapeze Arts.

Thank-you to my mom, for supporting my decision to go to graduate school from beginning to end. Your perseverance has inspired the same quality in me.

And thank-you to Devon, for relocating to be with me, for helping me to take breaks when I wouldn’t let myself, and for being a consistently wonderful part of my life.
Prologue: Language and Territory

Kʷakʷala is the language of the Kʷakʷəkʷakʷ, the ‘Kʷakʷala-speaking peoples’, an indigenous people of coastal British Columbia. The language is also known as Bakʷamkala, from the root bkʷ 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 (Kʷaguʔɬ).

The traditional territory of the Kʷakʷəkʷakʷ 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 Straight and Queen Charlotte Straight.

The intergenerational transmission of Kʷakʷala 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 Kʷakʷəkʷakʷ children attended St. Michael’s Residential School in Alert Bay which operated from the 1920s to the 1970s, where speaking Kʷakʷala was strictly prohibited and subject to punishment. Though a great deal of damage was done, the language and culture did not disappear.

Today Kʷakʷala is spoken as a first language by fewer than 200 Kʷakʷəkʷakʷ (First Peoples’ Cultural Council 2014), but an increasing number of people are learning to speak the language as adults. Kʷakʷala 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 Kʷakʷala. 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 Kʷakʷəkʷakʷ teachers and friends have taught me is that in order to understand what Kʷakʷala words refer to, you have to be acquainted with the land, the waters, and the relationships that exist and evolve within Kʷakʷəkʷakʷ territory. Then, when taken as a whole, the lexical resources of the Kʷakʷala language can be seen to represent the total set of ontological categories that divide the Kʷakʷəkʷakʷ 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 Kʷakʷala words refer to the places, people, and relationship that carve up the Kʷakʷəkʷakʷ universe, then Kʷakʷala 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 Kʷakʷala 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.

Kʷakʷala examples in Appendix A are written in two orthographies: U’mista and NAPA (University of Victoria variety). Throughout the rest of the dissertation, Kʷakʷala 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 Kʷakʷala 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

Kʷakʷala has two object case markers, =s ‘instrumental’ and =x ‘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. kəlxʷʔidsa dala
      kəlxʷ-xʔid =s=a dala
      buy-BEC =INST=DET money
      ‘to buy with money (INST)’

   b. bəwsən ʔəmukʷ
      bəw =s=ən ʔəmukʷ
      leave =INST=1POSS friend
      ‘to leave my friend (INST)’

   c. mayúləsa babaŋʷəm
      mayúlə =s=a babaŋʷəm
      give.birth =INST=DET little.boy
      ‘to give birth to a little boy (INST)’

   d. ʔiʔkiləsa ʔəxquləm
      ʔiʔkila =s=a ʔəxquləm
      heal/bless =INST=DET illness
      ‘to heal from an illness (INST)’

   e. ʔiʔkiləsa waldəm
      ʔiʔkila =s=a waldəm
      heal/bless =INST=DET word
      ‘to bless with words (INST)’

   f. ɡəlsəsa ʔiʔña
      ɡəlsa =s=a ʔiʔña
      paint =INST=DET eulachon.grease
      ‘to paint with eulachon grease (INST)’
The second kind of relation is one in which a verb takes an argument in the accusative case (=x), as in (2). I’ll refer to this type of relation as **strict-accusative**.¹

(2) **Strict-accusative (=x) relations**

a. tüsʔidxʷənikʷ
tüs-xʔid =x=a kʷənikʷ=𝕩
cut-BEC =ACC=DET bread=VIS
‘to cut bread (ACC)’

b. łəmxʷʔidxʷəmdzəkʷ
ləmxʷ-ƛid =x=a əmdzəkʷ
dry-BEC =ACC=DET salmonberry
‘to dry salmonberries (ACC)’

c. məxʔidxətaxəla
məx-xʔid =x=a=da taxəla
punch-BEC =ACC=DET=OST door
‘to punch the door (ACC)’

d. ǧəlsaʔa gukw
ǧəlsə =x=a gukw
paint =ACC=DET house
i. ‘to paint (on) a house (ACC)’
ii. ‘to paint a house-image (ACC)’

e. ʔiʔkilaʔa ʔədaq
ʔiʔkila =x=a ʔədaq
heal/bless =ACC=DET woman
‘to heal/bless a woman (ACC)’

f. duqʷəlaʔa bədi
duqʷ-ƛ =x=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, =\hat{x}\} relations

a. ǧixʷʔid\{sa, ŕa\} ǧʷilgʷela
   ǧixʷ-xʔid \{=s=a , =\hat{x}=a\} ǧʷilgʷela
   hang-BEC \{=INST=DET , =ACC=DET\} clothes
   ‘to hang clothes \{INST, ACC\}’

b. mukʷa\{sa, ŕa\} dənəm
   mukʷa \{=s=a , =\hat{x}=a\} dənəm
   tie \{=INST=DET , =ACC=DET\} rope
   ‘to tie rope \{INST, ACC\}’

c. ʔəməla\{sa, ŕa\} yaci
   ʔəməla \{=s=a , =\hat{x}=a\} yaci
   play \{=INST=DET , =ACC=DET\} Yahtzee
   ‘to play Yahtzee \{INST, ACC\}’

d. ʰənxʷənd\{sa, ŕa\} digiləci
   ʰənxʷənd \{=s=a , =\hat{x}=a\} digiləci
   hollow.container.upright.on.fire \{=INST=DET , =ACC=DET\} teapot
   ‘to set a teapot \{INST, ACC\} down on the stove’

e. huqʷa\{sa, ŕa\} həme?
   huqʷa \{=s=a , =\hat{x}=a\} həme?
   vomit \{=INST=ACC , =ACC=DET\} food
   ‘to vomit food \{INST, ACC\}’

f. ƛiqə\{s, ŕ\} Mabel
   ƛiqə \{=s , =\hat{x}\} 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 Kʷakʷala 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 Kʷakʷala 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 =x (‘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 Kʷakʷala (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 q̓íq̓əʔeq̓əlaš Abbi
lə =ən q̓í-qa-eq-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.

ləʔəmləwís q̓əə̓xʔʔidəs
lə=ʔm=la=wis q̓əə̓xʔ=ʔid =s
AUX=VER=REP=and go.on-bec =INST
‘Then she turned it [the flashlight] (INST) on.’ (VF)

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

a. cəxamasuχ James=xuχda ?əwiʔənə?gʷił
cəx-a-mas =uχ James=x =x=uχ=da ?əwiʔənə?gʷił
slippery-A-CAUS =3MED James=VIS =ACC=3MED=OST floor.in.house
‘James made the floor (ACC) slippery.’ (VF)

b. gəχi Katie ləmxʷaχən soʔə
gəχ =i Katie ləmxʷ-a =x=ən soʔə
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 

\[ =s=ga=da \ kaday\=u=k \ (\text{INST} = \text{PROX} = \text{OST} \ \text{writing.} \text{utensil} = \text{PROX} . \text{VIS} ). \]

The prenominal deictic clitic strings that I have encountered for objects in my fieldwork are presented in Table 1.1, excluding possessives.3

<table>
<thead>
<tr>
<th>Deictic category</th>
<th>Instrumental</th>
<th>+OST</th>
<th>Accusative</th>
<th>+OST</th>
</tr>
</thead>
<tbody>
<tr>
<td>proximal</td>
<td>=sga</td>
<td>=sgada</td>
<td>=(\text{x})ga</td>
<td>=(\text{x})gada</td>
</tr>
<tr>
<td>medial</td>
<td>=su(\text{x})</td>
<td>=su(\text{x})da</td>
<td>=(\text{x})u(\text{x})</td>
<td>=(\text{x})u(\text{x})da</td>
</tr>
<tr>
<td>medial existential</td>
<td>—</td>
<td>—</td>
<td>(\text{x})a</td>
<td>(\text{x})ada</td>
</tr>
<tr>
<td>distal</td>
<td>=si</td>
<td>=sida</td>
<td>=(\text{x})i</td>
<td>=(\text{x})ida</td>
</tr>
<tr>
<td>existential5</td>
<td>=sa</td>
<td>=sada</td>
<td>=(\text{x})a</td>
<td>=(\text{x})ada</td>
</tr>
</tbody>
</table>

Table 1.1: Prenominal deictic forms for instrumental and accusative objects

In modern K\(^w\)ak\(^w\)ala, 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.

<table>
<thead>
<tr>
<th></th>
<th>Instrumental</th>
<th>Accusative</th>
</tr>
</thead>
<tbody>
<tr>
<td>proximal, visible</td>
<td>=s(\text{x})k</td>
<td>=q(\text{x})k</td>
</tr>
<tr>
<td>proximal, invisible</td>
<td>=sga(\text{w})</td>
<td>=(\text{x})ga(\text{w})</td>
</tr>
<tr>
<td>medial, visible</td>
<td>=su(\text{x})</td>
<td>=q(\text{w})</td>
</tr>
<tr>
<td>medial, invisible</td>
<td>=su(\text{w})</td>
<td>=q(\text{w}), =qu(\text{w})</td>
</tr>
<tr>
<td>distal, visible</td>
<td>=s</td>
<td>=q</td>
</tr>
<tr>
<td>distal, invisible</td>
<td>=si</td>
<td>=qi</td>
</tr>
</tbody>
</table>

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\(\text{x}\)a) 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 prenominal 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 $gax$- ‘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.

<table>
<thead>
<tr>
<th>Form</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>$gaxən$</td>
<td>1ˢ singular, instrumental or accusative</td>
</tr>
<tr>
<td>$gaxənʔs$</td>
<td>1ˢ plural inclusive, instrumental or accusative</td>
</tr>
<tr>
<td>$gaxənuʔxʷ$</td>
<td>1ˢ plural exclusive, instrumental or accusative</td>
</tr>
</tbody>
</table>

Table 1.3: First person object forms

<table>
<thead>
<tr>
<th>Form</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>loɬ̌ ~ loł</td>
<td>2ⁿ instrumental or accusative</td>
</tr>
<tr>
<td>qus ~ x̌us ~ łus</td>
<td>2ⁿ instrumental or accusative</td>
</tr>
</tbody>
</table>

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 =$x$ 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 =$x$ 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. $V$  $S$  $O$

| həlaq | =uɬ | Ted | =$sida$ | ləqʷa |
| həlaq | =uɬ | Ted | =$s=i=da$ | ləqʷa |
| pay  | =3MED Ted | =$=3DIST=OST$ | firewood |

‘Ted is paying/paid with firewood (INST).’ (VF)

b.  AUX  $S$  $V$  $O$

| ləʔəm | =$s$ | ?əxɬ̌u | =$sida$ | ?cušʷayu |
| ləʔəm | =$s$ | ?əxɬ̌u | =$s=i=da$ | ?cušʷ-əʔayu |
| AUX=VER | =2 | DO-inside | =$=3DIST=OST$ | wash-INST.PASS |

‘Then you put in soap (INST).’ (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

<table>
<thead>
<tr>
<th></th>
<th>V</th>
<th>S</th>
<th>O</th>
<th>PP*</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>V</td>
<td>S</td>
<td>O</td>
<td>PP*6</td>
</tr>
<tr>
<td>ii</td>
<td>Aux</td>
<td>V</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>iii</td>
<td>Aux</td>
<td>S</td>
<td>V</td>
<td>O</td>
</tr>
</tbody>
</table>

Wherever English translations are provided for Kʷakʷala 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 =x 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 =x 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) ǧəlsida ćədaq laḫis ğučəmeyəsa ƛ̓ina
    ǧəls =i=da ćədaq la =x=is غوچوم؟
    paint =3DIST=OST woman PREP =ACC=3REFL.POSS face
    =s=a ƛ̓ina
    =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 (Ωv=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 =x marked nominals which may appear outside of canonical object position which are excluded from my analysis. These =x marked nominals include relative clauses (11), temporal adverbial phrases (12), and appositives (13).

(11) **Masaki, haga ʔəʔedaqasa keʔgos ˑxuʔs gəluʔicəwʔuʔs**

Masaki, haga ʔo~ʔit-aqa =s=a keʔgos =x=uʔs
gəluʔ-xʔid-sw=ʔuʔs

steal-BEC-ACC.PASS=2POSS

‘Masaki, return the cake (INST) that you stole.’ (Littell 2016, p. 603)

(12) **lawisoʔda ʔəbəmpxɑ̃ ʔəmukʷə xa ɬənswəɬ**

lawis =ox=da ʔəbəmp =x=a ʔəm-ukʷ

angry =3MED=OST mother =ACC=DET one-person

=ʾx=a ɬənswəɬ

=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).
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 Kwak’ala 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) and the accusative passive -sw (ACC.PASS). 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 -sw 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 -sw 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 -sw. 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.  

walas =a

kal=-x?id =s=al kal-dzi  *aci

big/very =l scared-BEC =INST=DET big/very-Aug dog

‘I got really scared by the big dog (inst.).’ (VF)

b.  

walas =a

kal=-x?id =s=al  kal-dzi  *aci

big/very =l scared-BEC =INST=DET big/very-Aug dog

Lolinox =s=ox Katie

Literal: ‘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 -sw and that it is realized as either -sw or -suʔ depending on whether a vowel follows it (-sw) 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.
The distribution of -ayu and -səw is in correspondence with the distribution of =s objects and =x objects, in the way summarized in Table 1.5.

<table>
<thead>
<tr>
<th>Case</th>
<th>Voice suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>INST (=s)</td>
<td>-ayu</td>
</tr>
<tr>
<td>ACC (=x)</td>
<td>-səw</td>
</tr>
<tr>
<td>{INST (=s), ACC (=x)}</td>
<td>{ -ayu, -səw}</td>
</tr>
</tbody>
</table>

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*ak*ala translation line, and judged grammatical and felicitous with =x, the second choice within the brackets in K*ak*ala 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 =x. 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 =x 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, 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 =x 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 =x 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)

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: qaʔsís kíksi̱s̓ maq̓ás̓os w̓i̱líba ‘for he had not let go of his lance’ C 26:15.123; gaʔša q̓ásə ‘he came with sea otters’ C II 102.24; ləm̓aʔ̱̱t̕ísə k̓ʷaʔšəw̓i ‘then he measured with a cedar stick’ R 64.68. In other cases we should expect an object: lə hən̓ʔ̱̱t̕ísə̱ h̓aʔ̱̱sə̱m̓ ‘then he shot him (with) his arrow’ C 26:136.69; lə n̓ə̱pə̱sə t̕í̱səm̓ ‘then he threw (him with) a stone’ C 26:136.71;” (Boas 1947:285; emphasis added)

Boas clearly believed =ʔs to be a semantic case for Instruments. What surprised him about the distribution of =ʔs 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 =ʔs, 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 =ʔs. The problem we inherit from Boas’ early descriptions, then, is that they only partially enable us to predict the distribution of =ʔs objects and =ʔx objects.

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

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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 =ʔs. I take these other uses of =ʔs to be synchronically distinct from =ʔs as an instrumental object marker.
Table 1.6: Examples of labels used to refer to Kʷakʷala object markers

<table>
<thead>
<tr>
<th>Source</th>
<th>Label for =t̕</th>
<th>Label for =s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hall (1888)</td>
<td>objective</td>
<td>_14</td>
</tr>
<tr>
<td>Boas (1947)</td>
<td>objective</td>
<td>instrumental</td>
</tr>
<tr>
<td>Levine (1980)</td>
<td>object</td>
<td>oblique</td>
</tr>
<tr>
<td>Anderson (1984)</td>
<td>objective</td>
<td>instrumental</td>
</tr>
<tr>
<td>Davis &amp; Sardinha (2011)</td>
<td>accusative</td>
<td>oblique</td>
</tr>
<tr>
<td>Rosenblum (2013)</td>
<td>primary object</td>
<td>secondary object</td>
</tr>
<tr>
<td>Greene (2013)</td>
<td>accusative</td>
<td>oblique</td>
</tr>
<tr>
<td>Sherer (2014)</td>
<td>accusative</td>
<td>oblique possessor</td>
</tr>
<tr>
<td>Janzen (2015)</td>
<td>accusative</td>
<td>oblique</td>
</tr>
<tr>
<td>Littell (2016)</td>
<td>accusative</td>
<td>oblique</td>
</tr>
</tbody>
</table>

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 Kʷakʷala 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 Kʷakʷala 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 Kʷakʷala is that there is no unambiguous mention of the {=s, =t̕} case alternation observed in (3). 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,

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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\textsuperscript{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 =ś objects involve stems with the meaning of ‘put’ (17), while all of the examples with =x̌ objects involve verb stems which in the modern language can only take =x̌ objects (18).\textsuperscript{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 (=ś)

a. qaʔs ?o̰̊xəendo̰̊s
qa =is ṣʔ-x̌讲故事 -xʔid=i =ś
PREP =3REFL.POSS DO-on.fire-BEC=NMZ =INST
‘and he puts it (INST) on the fire.’ (Boas 1947: p. 273)

b. ?o̰̊xəganťs laʔax̌ qulaći
ʔo̰̊x̌-(q)ega-xʔid =ś la =x̌=a qulaći
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. ?o̰̊x̌stonťs
ʔo̰̊x̌-ʔsta-xʔid =ś
DO-in.water-BEC =INST
‘he puts it (INST) into water’ (Boas 1947:p. 273)

\textsuperscript{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.

\textsuperscript{17} In Boas’ era, the pronominal forms of accusative objects contain =q, rather than =x̌. In the modern language, =q is almost always spirantized to =x̌.
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 čos (čo=s) ‘he gives it (INST)’, and čankašas (čankaš=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. 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

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18 It’s worth noting 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’, yaqʷ– ‘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 Kʷakʷala, 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 Qʷiqʷəsūnuxʷ of Gilford Island. Two examples from this text involving ‘put’ verbs are shown in (19). The relevant verb stem in both examples is ḥəʔəxʷə- ‘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. ləʔa la x ʔəx əlsaq laʔ naqamaləsas qəluluyəqʷə laʔ kʷəcəínəyas
   lə=la  =i  ḥəʔəxʷəla  =q  la  =x  naqama-laʔas
   AUX=REP  =3DIST  DO-outside  =ACC  PREP  =ACC  front-CONT-LOC.PASS
   =s  qəluluyəqʷə  la  =x  kʷə-sʔəs틀əyəq =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. ləʔa ɫəʔas ḥəʔəxəlsaɑ qəyuʔəkʷə ˈcaqəms łaʔə ṣəʔənikusı
   lə=la  =i  ḥəʔəxʷələʔas  ḥəʔəxʷəla  =q  la  =x  ḥəʔəxʷə-ʔənikusı
   AUX=REP  =3DIST  finish-A  AUX-LOC.PASS  DO-outside-A
   =s=ə  qəyuʔəkʷə=ə  ‘caqəms  la
   =INST=DET  softened=VIS  cedar.bark  PREP
   =x=ə  ṣəʔənikusı=ə
   =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

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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. 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 **Kwa** 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 **Kwa**, 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.

<table>
<thead>
<tr>
<th>Initiative subevent</th>
<th>Non-initiating subevent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temporal dimension:</strong></td>
<td><strong>Causal dimension:</strong></td>
</tr>
<tr>
<td>initial bound / beginning</td>
<td>cause</td>
</tr>
<tr>
<td>final bound / end</td>
<td>effect / result</td>
</tr>
</tbody>
</table>

**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

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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 -sav 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 -sav has become a default voice morpheme in the modern language, seemingly in order to account for the observation that it -sav 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 -sav is a default (namely, because -sav is in correspondence with accusative, and accusative is a default case), I’ve also found the distribution of -sav to be more restricted than what Sherer (p. 42) reports. My field data suggest that -sav’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 (=\*x) 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 (=\*x) objects instantiate an event role I refer to as *Non-initiator*.\(^{22}\) These correspondences are summarized in Figure 1.2.

<table>
<thead>
<tr>
<th>Semantics:</th>
<th>participant in initiating subevent</th>
<th>participant in non-initiating subevent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syntax:</td>
<td>=s object</td>
<td>=*x object</td>
</tr>
<tr>
<td>Event role:</td>
<td><em>Co-initiator</em></td>
<td><em>Non-initiator</em></td>
</tr>
</tbody>
</table>

**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 (=\*x) 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 Kʷakʷala 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 Kʷakʷala.

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 Kʷakʷala (Chapters 3-5, 7) and of assessing how Kʷakʷala’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 Kʷak̓ala language and on the empirical basis of the research. I begin by orienting the reader to the scholarly tradition on Kʷak̓ala, 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 Kʷak̓ala 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 ?ax- ‘do’ and the indefinite interrogative root wy-.

- In Chapter 4, I present my semantic analysis of object case in Kʷak̓ala, 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 Kʷak̓ala 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 Kʷak̓ala’s object case system tells us about language in general. I begin by showing that Kʷak̓ala’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 Kʷakʷala 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 modeled directly off of Kratzer’s (2004) analysis of accusative case in Finnish. I then discuss how Kʷakʷala 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 (=x̌) 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 Kʷakʷala.

- 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 Kʷakʷala.

- Appendix E integrates the Initiating Subevent Theory developed in this dissertation with the analysis of lexical aspect classes in Kʷakʷala proposed in Greene (2013), thereby showing the compatibility of these two analyses.
2

Kwak'wala Orientation and Methodology

2.1 Introduction

Kwak’wala 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). Kwak’wala is a member of the Northern branch, which also includes three more closely-related languages, Haisla, Heiltsuk, and Oowekalya (Lincoln & Rath 1980, Rath 1984), while the Southern branch includes Nuu-chah-nulth, Ditidaht, and Makah (Haas 1969, Jacobsen 1969, Jacobsen 2007). Kwak’wala 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).

Kwak’wala has five dialects (Anonby 1997) which are distributed geographically as shown in Figure 2.1. The northernmost dialect is ’Nak’wala, which is spoken today in C’ałg’adi. Two of the six speakers I have consulted with speak this dialect. The northwestern dialect is Ḩałasiq’wala, which is reported to have few, if any, speakers. The southeastern dialect is ḡucala (also known as ḡuca), which is spoken in Quatsino. The central dialect is Kwak’wala, 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 Kwak’wala Territory (Pasco, Compton & Hunt 1998: p. 3)
The purpose of this chapter is to orient the reader to basic features of the Kʷak̓ʷala 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 Kʷak̓ʷala, 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 Kʷak̓ʷala 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, Kʷak̓ʷala 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 (Kʷak̓ʷala), 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 Kʷak̓ʷala 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 Kʷak̓ʷala 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 Kʷak̓ʷala 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 Kʷakʼala, 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 /a/ in Kʷakʼala, 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 Kʷakʼala) (Wilson 1978), and metrical structure in Wakashan (Wilson 1986).


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 Kʷakʼala 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 Kʷakʼala 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 -nukʷ, 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 Kʷakʷala 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 Kʷakʷala, which is a finding I return to discuss in Chapter 6, Section 6.3.1.3.

One of the things Kʷakʷala 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 Nicholsen & 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 Kʷakʷala from the Proto-Northern Wakashan preposition *his is discussed in Sardinha (2011a).

Targeted research on Northern Wakashan languages other than Kʷakʷala 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 Kʷakʷakʷwakʷ 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 Kʷakʷakʷwakʷ world (Pasco, Compton, & Hunt 1998), and a book of Kʷakʷala 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 Kwak’ala 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

Kwak’ala 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. Kwak’ala’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). Kwak’ala’s consonants are summarized in Table 2.1.

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Alveolar</th>
<th>Lateral</th>
<th>Palatalized Velar</th>
<th>Labialized Velar</th>
<th>Uvular</th>
<th>Labialized Uvular</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stops</td>
<td>p b</td>
<td>t d</td>
<td>k g</td>
<td>kw gw</td>
<td>q g</td>
<td>q w</td>
<td>q w g w</td>
<td>?</td>
</tr>
<tr>
<td>Ejectives</td>
<td>ŋ ‡</td>
<td>t f</td>
<td>k ŋ</td>
<td>kw ŋ</td>
<td>q ŋ</td>
<td>q w ŋ</td>
<td>q w g w</td>
<td>ŋ</td>
</tr>
<tr>
<td>Affricates</td>
<td>c dz</td>
<td>ň λ</td>
<td>ĉ ň</td>
<td>ň ň</td>
<td>ĉ ň</td>
<td>ĉ ň</td>
<td>h</td>
<td></td>
</tr>
<tr>
<td>Ejective Affricates</td>
<td>č ų</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricatives</td>
<td>s ŋ x</td>
<td>x x w</td>
<td>ň x w</td>
<td>ň x w</td>
<td>h</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sonorants</td>
<td>m n 1 y w</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glottalized Sonorants</td>
<td>m ŋ ĭ y w</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2.1: Kwak’ala consonants

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

<table>
<thead>
<tr>
<th></th>
<th>Front</th>
<th>Central</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>i</td>
<td>u</td>
<td></td>
</tr>
<tr>
<td>Mid</td>
<td>ē</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>a</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2.2: Kwak’ala vowels

¹ For a more extensive introduction to Kwak’ala 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, Kʷakʷala 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 (‘d’). A summary of six of the most commonly encountered Kʷakʷala orthographies is provided in Appendix B.

With respect to its morphology Kʷakʷala 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). Kʷakʷala 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. ʔixpaloxda lum
ʔik-pala =ox=da lum
‘The room smells good.’ (JF)

b. ʔabəs-paloxda haṃiksilaʔas
ʔabəs-pala =ox=da haṃ-i-ksi-laʔas
‘The kitchen smells like apples.’ (VF)

(22) a. ʔoxʔilida ćədaqe ḱənqauktola
ʔox-(g)ila =i=da ćədaq =x=a ḱənqauktola
DO-make =3DIST=OST woman =ACC=DET button.blanket
‘The woman is making/made a button blanket (ACC).’ (VF)

b. kʷəʔstαgiloxda ćədaq
kʷəʔsta-gila =ox=da ćədaq
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 -(ǧ)m ‘face’ adds information about the Path of Monica’s spitting, while in (24), the suffix -i’ll ‘in house’ adds information about where Eddie is walking (24a) and where something is spilled (24b).

(23) kʷisəmdu̱jax Monica wax̱is ça̱ya̱, lə̱ni-su̱x ɬiqʷa

\[
\begin{align*}
\text{kʷis-} & \text{(ɡ)m-x}^\prime \text{id} = \text{u}x & \text{Monica wax} = \text{x}=\text{is} \\
\text{spit-face-BEC} & = \text{3MED} & \text{Monica try} = \text{ACC}=\text{3REFL.POSS} \\
\text{ça̱ya} & \text{la}=2\text{m}=\text{is} & \text{=u}x & \text{ɬiqʷ-a} \\
\text{younger.sibling} & \text{AUX=VER=and} & = \text{3MED} & \text{miss-A}
\end{align*}
\]

‘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. ga̱xu̱x Eddiyox qadxił lαxis gukʷ ga̱x =ux Eddie=x qas-ɬił la =x=is gukʷ
come =3MED Eddie=VIS walk-in.house PREP =ACC=3REFL.POSS house

‘Eddie walked into his house.’ (VF)

b. mə:su̱xda qobili̱x lαxʷa gukʷi̱x mas =u̱x=da qopi=il=x la =x=wa=a gukʷ=x

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, 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.

<table>
<thead>
<tr>
<th>Phonological change</th>
<th>Indication in glosses</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>reduplication</td>
<td>’’</td>
<td>-əm ‘small, diminutive’</td>
</tr>
<tr>
<td>vowel lengthening</td>
<td>’’</td>
<td>-əm ‘true, genuine’</td>
</tr>
<tr>
<td>consonant weakening</td>
<td>’’</td>
<td>-i’ll ‘in house’</td>
</tr>
<tr>
<td>consonant hardening</td>
<td>’’</td>
<td>-eśeq ‘in mind’</td>
</tr>
<tr>
<td>consonant deletion</td>
<td>’(deleted segment)’</td>
<td>-(g)ila ‘do, make’</td>
</tr>
</tbody>
</table>

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 ‘~’.

Kʷakʷala 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.

<table>
<thead>
<tr>
<th>Form</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>=ən</td>
<td>1st person</td>
</tr>
<tr>
<td>=ənʔs</td>
<td>1st person plural inclusive</td>
</tr>
<tr>
<td>=ənʔx</td>
<td>1st person plural exclusive</td>
</tr>
<tr>
<td>=s</td>
<td>2nd person</td>
</tr>
<tr>
<td>=k</td>
<td>3rd person proximal visible</td>
</tr>
<tr>
<td>=gaʔ</td>
<td>3rd person proximal invisible</td>
</tr>
<tr>
<td>=ux̌</td>
<td>3rd person medial visible</td>
</tr>
<tr>
<td>=uʔ</td>
<td>3rd person medial invisible</td>
</tr>
<tr>
<td>=iq</td>
<td>3rd person distal visible</td>
</tr>
<tr>
<td>=ʔʔ</td>
<td>3rd person distal invisible</td>
</tr>
</tbody>
</table>

Table 2.4: Subject pronominal enclitics

Nominal arguments, when expressed, are accompanied by two sets of clitic determiners: prenominal determiners, and postnominal determiners. Prenominal (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 prenominal 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 prenominal deictics, respectively. All three examples contain postnominal visibility deictics corresponding to the category ‘visible’.

<table>
<thead>
<tr>
<th>pre-NP location</th>
<th>- ostension</th>
<th>+ ostension</th>
<th>NP-internal visible</th>
<th>invisible</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROX</td>
<td>=ga</td>
<td>=gada</td>
<td>=@(o)x</td>
<td>---</td>
</tr>
<tr>
<td>MED</td>
<td>=ux̌=ʔox</td>
<td>=ux̌da/=oʔx</td>
<td>=(e)x</td>
<td>---</td>
</tr>
<tr>
<td>DIST</td>
<td>=i</td>
<td>=ida</td>
<td>=i, =ʔʔ</td>
<td>=ʔʔ, =eʔ, =ʔʔ</td>
</tr>
</tbody>
</table>

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’.
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) ǧəls=la=guk
  Ċis=la=la=ga=guk
  paint=3DIST=ACC=DET sun.shine-CONT=ACC=DET house
  ‘She [DIST] is painting a sun (ACC) onto the house.’ (VF)


In addition to its system of clitic determiners, Kwak’ala 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 =ƛ. In this example the future tense clitic attaches to three elements in the same sentence: the main verb miƛʔid ‘tease’, the auxiliary verb lə- ‘now, then’, and the adverbial predicate, ʔu̇gʷaqa ‘also, too’.

(29) laux=Simon ƛ=Monica=vis ʔu̇gʷaqa=xus ńula=x, Simon
  AUX=FUT=3MED Monica=VIS tease-BEC=FUT=also=FUT
  ńula=x Simon
  ‘Monica’s gonna go tease her older brother back (ACC), Simon.’ (VF)
Kʷakʷala 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 Kʷakʷala 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 =x ‘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. 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 Kʷakʷala. 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, Kʷakʷala 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

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30

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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 Kwakwala, all the while making sure that the Kwakwala 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:** “?əm.” [‘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. ʔəŋʷux ʁəʔokʷes Katie λaqʷaʔɪ kəlkəlsiʔəlaux
ʔəŋʷ =ux ʁəʔokʷ =s Katie λaqʷ-ə
who =3MED companion =3POSS Katie push-A
=τ=x=a kəlkəlsiʔəla=x
=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. ṭasux ᵇəxəʔeʔ qəs λaqʷeʔxʷada kəlkəlsiʔəla
mas =ux ᵇəx-la=eʔ =s qa =s
what =3MED do-cont=NMZ =O.POSS prep =3REFL.POSS
λaqʷ=eʔ =τ=x=a=da kəlkəlsiʔəla
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 Kʷakʷala. 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: \textit{kikəx̌əlaŋə ‘crows’}

a. \texttt{ʔo: duqʷ-ʔid-a kikəx̌əlaŋəx}\n\texttt{ʔo duqʷ-xʔid-a \(=\text{dx} =\text{w}=\text{a} \quad \text{ki-košəlaŋə=dx} \quad \text{EXCLAM see-BEC-A =2 =ACC=3MED=DET REDUP~crow=VIS ‘Oh, look at the crows (ACC).’}}

b. \texttt{wa:las naquxda waladzid… yuʔomxənt ?əbəmpsuxda ?əmeʔbidux}\n\texttt{walas naq =u̱x̌=da \quad \text{walas-dzi-d? … yu\textasp;} =m=\text{m}x̌=nt \quad \text{big/very drink =3MED=OST \quad \text{big/very-AUG-?6 be.3MED=VER=MOD}}}
\texttt{?əbəmp \(=\text{s}=\text{u}=\text{x} \quad \text{?əmeʔ=bidu}=\text{x} \quad \text{mother} \quad \text{=3POSS=3MED=OST \quad \text{little=DIM=VIS}}}
\texttt{‘The big one’s really drinking… it must be the mother of the little one.’}

c. \texttt{kiʔsuʃ hilqalaŋa naqaxʷa wapix}\n\texttt{kiʔs =u̱x̌ \quad \text{hilqala} =\text{dx} \quad \text{naq-a} =\text{dx}=\text{w}=\text{a} \quad \text{wap}=\text{dx} \quad \text{NEG =3MED allow =ACC drink-A =ACC=3MED=DET \quad \text{water=VIS}}}
\texttt{‘She’s not letting her [the little crow] (ACC) drink any of the water (ACC).’}

\footnote{This ‘d’ is probably the initial segment of a word which the speaker stopped saying.}
d. higaʔm həmapuxda ʔəbəmpi̍x, yəʔxə̓xsis xʷənukʷbidu
   higaʔm =u̱x həmap =u̱x=da ʔəbəmpi̍x
   only=VER =3MED eat =3MED=OST mother=VIS
   yəʔxə̓x =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 katəmdayuwus?” [‘What are you taking a picture
with?’]
   Speaker: “O.” [Volunteers (a)]

   a. həmən katəmdayuwili katəmakʷesi Willi
      heʔm =ən kat-əm-xʔid-ayu =i
      be.3DIST=VER =1POSS write-NMZ-BEC-INST.PASS =3DIST
      kat-əm-ə=kʷ =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

![Storyboard Images]

a. **Image 3**

lə̓m̓i Mari dzə̓lə̓xʷə̓lə̓sə
laʔ=ʔm ̓ =i Mary dzə̓lə̓xʷ-ʔls-a
AUX=VER ̓ =3DIST Mary run-outside-A
‘Then Mary ran outside.’ (VF)

b. **Image 4**

kʷə̓xʔilsox Mariyə̓x, lə̓m̓isox kuʔʷʔiduʕ gugʷə̓yəʕʔs
kʷə̓x-ʔls ̓ =oʔ Mary=ʔ̓ Mary=ʔm=is ̓ =uʔ
trip-outside ̓ =3MED Mary=VIS AUX=VER=and ̓ =3MED
kuʔʷ-ʔid ̓ =uʔ gugʷə̓y̓u=ʔ̓ =s
snap-BEC ̓ =3MED leg/foot=VIS ̓ =3POSS
‘Mary tripped and her leg got broken.’ (VF)
c. Image 5

\[
\begin{align*}
gaxi \text{nɨmuk}^* & \text{=} s \text{ liəla qa leʔ?əmle?} \\
gax & =i \text{nɨmuk}^* =s \text{ liəla} \\
\text{come} & =3\text{MED REDUP~friend} =3\text{POSS invite-CONT} \\
\text{qa} & \text{ la=}i =s \text{ ?əmle=}e? \\
\text{PREP go=}\text{NMZ} & =3\text{POSS play=}\text{NMZ} \\
\end{align*}
\]

‘Then her friends came to invite her to go play.’ (VF)

d. Image 6

\[
\begin{align*}
\text{kiʔsən wəl lawələs} \\
\text{kiʔs} & =ən \text{ wəl laʔls-ə} \\
\text{NEG} & =1 \text{ ABIL go-outside-A} \\
\text{[Mary said]} & \text{‘I can’t go outside.’} \text{ (VF)}
\end{align*}
\]

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 Kwak’ala 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 Kwak’ala 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: liweʔ ‘forgetting’

\text{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. lux James kiłə
lə =ux James kił-a
AUX =3MED James fish.with.net-A
‘James went fishing.’ (VF)

b. lux James, ḥo: kiʔsən ḥəwileʔxən dadačəwakʷ
lə =ux James ḥo kiʔs=ƛə =ən ḥəwileʔ=ƛ
AUX =3MED James EXCLAM NEG=FUT =1 forget=FUT
=x=ən dadačəwakʷ
=ACC=1POSS jacket
‘And James was like, ‘Oh, I’m not going to forget my jacket (ACC).’ (VF)

c. ḥəmə:n konaʔisʔid la leʔgən kəyosən dadačəwakʷə?
λum =ən kənaʔis-xʔid la l=aʔi=ə=ən
really =1 cold.in.body-BEC go AUX=EMBED=NMZ=3PROX=1POSS
kəyos =ən dadačəwakʷə?
NEG.EXIST =1POSS jacket=INVIS
‘I got really cold when I didn’t have my jacket.’ (VF)

d. λəʔmən kiʔs ḥəwileʔəx
lə=ʔm =ən kiʔs ḥəwileʔ=ƛ =x
AUX=VER =1 NEG forget=FUT =ACC
‘I’m not going to forget it (ACC).’ (VF)

e. λəʔməs Ωxʔids qa kiʔseʔs ḥəwileʔxə laʔxada háṃxəm̓iʔl
lə=ʔm=is Ωx-xʔid =s qa kiʔseʔ=ə =s
AUX=VER=and DO-BEC =INST PREP NEG=NMZ =3POSS
 ḥəwileʔ =x la =x=a=da háṃxəm̓iʔl
forget =ACC PREP =ACC=DET=OST table
‘And he put it (INST) so he wouldn’t forget it (ACC) on the table.’ (VF)

f. λəʔməs la, λəʔməs kiʔʔida, ləʔəm pusqə
lə=ʔm=is la lə=ʔm=is kiʔʔ-xʔid-a
AUX=VER=and go AUX=VER=and fish.with.net-BEC-A
lə=ʔm pusqə
AUX=VER hungry
‘Then he went, and he fished, and he was hungry.’ (VF)

g. ḥo:la ḥəwileʔxis həmə?
ʔwa-la ḥəwileʔ =x=is həm=ə?
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.
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’ (xʷit-), ‘break’ (topid), and ‘walk’ (qas-).
### (35) Story-builder ‘Pick-3’ Example Story

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 nanilela ‘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 nanilela about the characters. For instance, in one episode of the game, consultants engaged in nanilela 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 Kwašala word — and the language consultant is invited to create a short narrative which involves the concept in some way. If the Kwašala 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:** [...] “maxca.”

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

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

a. lu:mu:x maxcu:x Tedix ţus ŋomukwix

λum =u:x ma:xc =u:x Ted=ţ

really =3MED ashamed =3MED Ted=VIS

=ţ=us ŋomuk=ţ

=ACC=3REFL.POSS friend=VIS

‘Ted is really ashamed of his friend (ACC).’ (VF)

b. lu:x golu?ixá dala laxada guk=e? sux ?ănise=s

lə =u:x golu-l-xid =ţ=a dala la =ţ=a=da

AUX =3MED steal-BEC =ACC=DET money PREP =ACC=DET=OST

guk=e? =s=u:x ?ănise=e? =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). 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 kəłkəlxʔid laʔ ʷgukʷes Suzie
do =än kəłkəlxʔid ʔa =x ʷgukʷ =s ˈsuzee
AUX =1 drive-BEC PREP =ACC house =3POSS Suzie
‘I drove over to Suzie’s house.’ (VF)

b. lən ?əxstuʔa ˈtəxəla laʔən kəłkəlxʔisəla
do =än ?əx-stu =x=a ˈtəxəla ʔa
AUX =1 DO-round.opening =ACC=DET door PREP
 =x=än kəłkəlxʔisəla
 =ACC=1POSS car
‘And I opened the door (ACC) on my car.’ (VF)

c. lən ò: , kiʔsən ˈqəɬəla ˈmasida ɡaʔ!
do =än ò =x=än ˈqəɬ-la ˈma=da ɡaʔ
AUX =1 EXCLAM NEG =1 know-CONT what =3DIST=OST come
‘Then o:h, I didn’t know what had come!’ (VF)

d. ləʔəm ˈpikʷʔidəx həbəsa
do =m ˈpikʷ-ʔid =x ˈhəbəsa
AUX=VER feel-BEC =ACC furry
‘I felt something furry (ACC).’ (VF)

e. ləʔəm: waʔlasuʔ ɡʷəɬəgila?
do =m =a=i ˈwaʔlasuʔ ɡʷəɬ-əgila
AUX=VER =EMBED=3DIST=ACC big/very =3MED scream-BEC.SOUND=INVIS
‘And the scream was colossal.’ (VF)

f. ?uʔəqaʔəsmida ˈwoʔoči kəłʔida ˈluʔəw Suzie
ʔuʔəqaʔa=ʔm =i=da ˈwoʔoči kəłʔida ˈluʔəw 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.
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, *hinumux Anna təpidašaxux Dennisəx kʷəʔsta* [(a)]…?”

a. *hinumux Anna təpidašaxux Dennisəx kʷəʔsta*
   hinum =uˑx Anna=ə x təp-xʔid-a-mas =x=uˑx
   on.purpose =3MED Anna=VIS broken-BEC-A-CAUS =ACC=3MED
   Dennis =x=a kʷəʔsta
   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.
In a semantic judgment task, the speaker is presented with a context and a grammatical sentence, and is asked to judge whether the sentence is felicitous in that context. An example of a semantic judgment task resulting in a ‘felicitous’ judgment is shown in (39b); the lead up to this example including (39a) is also shown, since it provides the context necessary to understand the example.

(39) Context: *It’s late at night, and Katie is sitting in the living room reading and waiting for Hannah to come over, when she hears the door opening. She goes over to it and no one’s there, so she gets scared that it’s a ghost, and goes and hides under a blanket. A few minutes later Hannah arrives at the door…*

KS: “And I’m so excited to see that it’s her and not a ghost, and I say, ‘The door didn’t open itself! You opened it!’”

Speaker: [Volunteers (a)]

a. *kiʔs qʷəlisimʔa ʔəxəla ?əxstuda, suʔəm ?əxstudaʔ*
   *kiʔs qʷəlisimʔ =i=da ʔəxəla ?əxʔ-ʔstu-xʔid-a*
   *NEG by.oneself =3DIST=OST door DO-round.opening-BEC-A*
   *suʔəm ?əxʔ-ʔstu-xʔid =x*
   *be.2=VER DO-round.opening-BEC =ACC*
   ‘The door didn’t open all on its own, it was you who opened it (ACC).’ (VF)

KS: “And could I ever just say, *kiʔs ?əxstudida ʔəxəla. suʔəm ?əxstudaʔ* [(b)]…”

Speaker: “Yup.”

b. *kiʔs ?əxstudida ʔəxəla, suʔəm ?əxstudaʔ*
   *kiʔs ?əxʔ-ʔstu-xʔid =i=da ʔəxəla*
   *NEG DO-round.opening-BEC =3DIST=OST door*
   *suʔəm ?əxʔ-ʔstu-xʔid =x*
   *be.2=VER DO-round.opening-BEC =ACC*
   ‘The door didn’t open, it was you who opened it (ACC).’ (JF)

When one case marker is substituted into a sentence for the other case marker, and the speaker is asked to judge the sentence containing the substitution, the task can also be referred to as a substitution test.

2.4.10 Preference judgment task

Preference judgment tasks are similar to judgment tasks, except that the language consultant is asked to compare two sentences and judge which one she prefers. Preference judgment tasks are therefore a kind of forced choice task.

Semantic preference judgments involve asking the language consultant which of two grammatical sentences is more felicitous in a given context. An example of a semantic preference judgment task is shown in (40). Both (40a) and (40b) are possible in the relatively sparse context provided, but (40a) with an accusative object is preferred to (40b) with an instrumental one.
(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. ƛətu’dux  Ediŋyaƛ xʷa  ɭənxə  ƛətəml
 ƛə-t-u-xʔid  =uƛ  Eddie=x  =xʷ~a
overhang-off/out-BEC  =3MED  Eddie=VIS  =ACC=3MED=DET
 ɭənx-a  ƛətəml
  green-A  hat
‘Eddie took off the green hat (ACC).’ (VF)

KS: “Can I say, ƛətu’dux  Ediŋyaƛ  ɭənxə  ƛətəml [(b)]…?”
Speaker: “Mhm [‘Yes’]. It sounds legal.”

b. ƛətu’dux  Ediŋyaƛsa  ɭənxə  ƛətəml
 ƛə-t-u-xʔid  =uƛ  Eddie=x  =s=a
overhang-off/out-BEC  =3MED  Eddie=VIS  =INST=DET
 ɭənx-a  ƛətəml
  green-A  hat
‘Eddie took off the green hat (INST).’ (JF)

Speaker: “Well I think it sounds legal. ƛətu’dux  Ediŋyaƛ  sa...  I guess that sounds okay.”
KS: “Yeah. Do you like either of them better?”
Speaker: “Hm?”
KS: “Do you like it better with xʷa  ɭənxə  ƛətəml?”
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 is B 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 ʔiʔeʔaɬa ‘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) # ʔiqeʔqoluš Mabelšsis ʔump, ʔiʔstuš Mabelš ʔiqeʔqøla qeʔis ʔump
  ʔiqeʔq-la =uxš Mabel=š =š=is
  worry-CONT =3MED Mabel=VIS =INST=3REFL.POSS
  ?ump  ʔiʔs=ša =uxš Mabel=š  ʔiqeʔq-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 kəɬ- ‘afraid’ is expressed in instrumental (=š) 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) kəɬluš Mabelšsa bədi, ʔiʔstuš Mabelš kəɬla qeʔeda bədi
  kəɬ-la =uxš Mabel=š =š=a bədi ʔiʔs=ša
  afraid-CONT =3MED Mabel=VIS =INST=DET cougar NEG=but
  =uxš Mabel=š kəɬ-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 =š 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.
KS: “Um, another question I had was, um, ‘to fall down from something’. Um, I think you taught me before, *tiqa*, *tiqax*?”

Speaker: “Mhm. [‘Yes’]”

KS: “*tiqax*. 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. *tiqaxuxda ʰʷʔsta laʔʷa həm-dzuʔ*
   *tiq-aʔ =ux=da ʰʷʔsta la =x=ʷa*
   fall-down =3MED=OST cup PREP =ACC=3MED=DET
   həm-dzu=x
   eat-flat.surface=VIS
   ‘The cup fell off the table.’ (VF)

KS: “…Can I say, *tiqaxuxda ʰʷʔstaʔsuʔ həmʔdzuʔ [(b)]…?”

Speaker: “*ki.*” [‘No.’]

b. * *tiqaxuxda ʰʷʔstaʔsuʔ həmʔdzuʔ*
   *tiq-aʔ =ux=da ʰʷʔsta=x =s=ux həm-dzu=x*
   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: “*ʔidzaqʷalaʔ.*” [‘Repeat it.’]

KS: “Mhm [‘Yes’]. *tiqaxuxda ʰʷʔstaʔsuʔ həmʔdzuʔ.*” [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 Kwak’ala 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 Kwak’ala sentences

Kwak’ala 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 Kwak’ala phonology are, however, not italicized. Non-Kwak’ala 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 Kwak’ala 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 Kwak’ala 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 Kwak’ala and English differ substantially in the categories that must be expressed in every utterance. For instance, in Kwak’ala 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 Kwak’ala 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 Kʷak̓ala 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 Kʷak̓ala 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 Kʷakʼala, all of whom are fluent in both Kʷakʼala 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 Kʷakʼala 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 Kʷakʼala dialect spoken in Alert Bay, Hopetown, Kingcome Inlet, and Fort Rupert, while the remaining data come from two speakers of the northern Nakʼala dialect spoken in Cʼalįg̱adi.

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 Kʷakʼala is ġanuƛ̓, while in Nakʼala it is nıg̱okʷ. In the determiner domain, I’ve observed that speakers of Nakʼala, but not central Kʷakʼala, occasionally drop the final consonant of the third person medial deictic, resulting in variation between =uxʷ 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 =oƛ̓ʷ or =uƛ̓, 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 Kʷakʷala dialect whose case data I have found to be consistent. It is these speakers’ variety of Kʷakʷala 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 Kʷakʷala 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. At this point in time, then, all I can do is acknowledge the possibility that there exists a distinct variety of Kʷakʷala 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 Kʷakʷala 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 Kʷakʷala 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 Kʷakʷala speakers who speak the variety of Kʷakʷala 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 Kʷakʷala 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 Kʷakʷala 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 ’Nakʷala speakers to see whether instrumental (=s) case is interpretable or not for them. I leave this as a topic for future research.
The Semantic Basis of Object Case

3.1 Introduction

Previous research on K*akʷala 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*akʷala 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*akʷala 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 (=x) arguments, and verbs which take an alternating instrumental-accusative {=s, =x} 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 lax- ‘sell’ versus kəlxʷ- ‘buy’, and reverse-action verb pairs, such as ʔəx̌ʔəllil- ‘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 (=x) or alternating {=s, =x}. In predicates headed by the dummy root ʔəx̌-, the following patterns emerge: (i) monotransitive predicates containing =x 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 =x 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 ʔəx- possesses no entailments of its own, these semantic constraints on ʔəx- predicates’ interpretation must be contributed by object case itself. Thus, in addition to providing evidence that object case is semantically determined, the ʔəx- 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 (=x̌) relations, and alternating instrumental-accusative {=s, =x̌} 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 (=x̌) 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). I refer to this argument as an Incremental Theme, following Dowty (1991: p. 567-571).

<table>
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<tr>
<th>Creation Verbs²</th>
<th>=x argument</th>
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(44) ḡənxʔidənəxʷa quxʷcəyix
qən-xʔid =ən =xʷ=ə
quxʷcəy =x
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. yəxʔid ‘melt’), a change in the object’s location (.luʔxʷaxʷ ‘roll down’), a change in the spatial configuration of the object (e.g. ɣəλ- ‘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).

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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)iila ‘do, make’. With the exception of stems that have been conventionalized, such as gukʷiil ‘build’ (literally: ‘house-make’) and həmiksila ‘cook’ (literally: ‘food-make’), the objects of stems formed through noun incorporation with -(g)iila undergo case alternation. This phenomenon is discussed in Chapter 5, Section 5.4.
Change Verbs

The verb \( \text{ʔax} \) `open`, \( \text{ʔix} \) `clear`, \( \text{ʔi} \) `heal, bless`, \( g \) `awaken`, \( \text{ɡ̣alx} \) `shut`, \( \text{ɡ̣i} \) `separate, take apart`, \( \text{huni} \) `cook, make food`, \( \text{ha} \) `shoot`, \( \text{hi} \) `burn`, \( \text{hil} \) `fix, repair`, \( \text{kax} \) `fry`, \( \text{kis} \) `light`, \( \text{ku} \) `snap, split`, \( k \) `peel`, \( kə \) `light`, \( id \) `fry`, \( ʷʔ \) `burn`, \( ku̱x \) `fix, repair`, \( kis \) `repair`, \( \text{lx} \) `bathe`, \( \text{lx} \) `dry`, \( \text{lx} \) `flip, turn over`, \( \text{lx} \) `roll down`, \( \text{məd} \) `boil`, \( \text{mək} \) `iron`, \( \text{nəgala} \) `straighten`, \( ni`x \) `pull`, \( \text{papudi} \) `pretty up`, \( \text{pəx} \) `flatten (something round)`, \( q \) `rip, tear`, \( q \) `unscrew`, \( qis \) `smooth`, \( q \) `turn off, put out`, \( q \) `smash, grind up`, \( səlt \) `calm`, \( sup- \) `chop`, \( tək \) `crack`, \( təp \) `break`, \( ləm \) `curl`, \( təs \) `cut, chop`, \( wən \) `sink`, \( dən \) `drown`, \( wəx \) `bend`, \( xəlt \) `saw`, \( xəq \) `comb`, \( xəl \) `shuffle cards`, \( xəl \) `fillet`, \( yəv \) `move`, \( yəx \) `melt`, \( yəl \) `bundle`, \( yəx \) `spoil, ruin`, \( cəs \) `stretch`, \( cək \) `heat`, \( cət \) `crack`, \( cəx \) `wash` `wash away shame [metaphorical]`, \( lə \) `push; knead (dough)`, \( lək \) `move, relocate`, \( ləx \) `close`, \( lək \) `freeze`

\( (53) \) ləməx-\( ʔi \) -di Hannah\( ʔən \) səya
ləməx=\( ʔi \) =i Hannah =\( ̃x= \)\( ən \) səya
\( \text{dry-BEC} =\( 3 \)\( \text{DIST} \)\( \text{Hannah} =\( \text{ACC}=\text{1POSS} \)\( \text{hair} \)

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).

Ingestion Verbs

\( \text{həm} \) `eat`, \( \text{hən} \) `eat`, \( naq \) `drink`, \( qəqixən \) `overeat`

\( (46) \) walas \( naq-\)\( ʔi \) \( \text{da} \) \( \text{wəc} \) \( =\)\( ̃x= \)\( ə= \)\( da \) \( \text{wəp} \)
walas \( naq-\)\( ʔi \) \( =\)\( 1 \) \( \text{da} \) \( \text{wəc} \) \( =\)\( ̃x= \)\( ə= \)\( da \) \( \text{wəp} \)
\( \text{big/very} \) \text{drink-BEC} =\( 3 \)\( \text{DIST}=\text{OST} \) \text{dog} =\( \text{ACC}=\text{DET}=\text{OST} \) \text{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 \( \text{yəv} \) `move` 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).

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<th>Contact Verbs</th>
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<tr>
<td>Patient/Goal</td>
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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

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<th>Obtain Verbs</th>
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<tbody>
<tr>
<td>Obtained Goods</td>
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</tbody>
</table>

(48) gołulʔiduň Annaʔu qinəm kukiš laşi wədəʔači
    gołuk-ʔid =uš Anna =x=ux qinəm kukiš la =x=i
    steal-BEC =3MED Anna =ACC=3MED many cookie PREP =ACC=3DIST
    wədəʔači
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).

Transfer Verbs

<table>
<thead>
<tr>
<th>Transfer Verbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 This verb is cross-listed as a Verb of Obtaining because it can also mean ‘catch’.</td>
</tr>
<tr>
<td>7 This verb also can be used as an activity verb meaning ‘play soccer’.</td>
</tr>
</tbody>
</table>
Transfer Verbs


=\text{\textchar191} \text{argument} 
Recipient

<table>
<thead>
<tr>
<th>dzinaʔp</th>
<th>ḡołaq</th>
<th>ḡolahs</th>
<th>ḡat</th>
<th>laʔ</th>
<th>nap</th>
<th>yaqʷ</th>
<th>ḡow</th>
<th>ḡawʔent</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘share out, distribute’</td>
<td>‘pay’</td>
<td>‘send’</td>
<td>‘write to’</td>
<td>‘sell’</td>
<td>‘throw’</td>
<td>‘give in potlatch’</td>
<td>‘give’</td>
<td>‘give charitably, provide’</td>
</tr>
</tbody>
</table>

(49) čowida č̓adaq̓exa bágʷxanamesa ł̓ətm̓ł

=\text{i\textchar319} \text{=d̓a} č̓adaq̓ =\text{x̓=a} bágʷxanam
give =\text{3DIST\textchar319=OST} woman =\text{ACC\textchar319=DET} man
=\text{s\textchar319=a} ł̓ətm̓ł
=\text{MEANS\textchar319=DET} hat

‘The woman gave a man (\text{ACC}) a hat.’ (JF)

Communication Verbs


=\text{\textchar191} \text{argument} 
Recipient

<table>
<thead>
<tr>
<th>ʔidzaqʷ</th>
<th>ḡik</th>
<th>nil</th>
<th>nus</th>
<th>yaqʔent</th>
<th>ḡupal</th>
<th>ḡupal</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘repeat’</td>
<td>‘say’</td>
<td>‘tell, reveal’</td>
<td>‘tell legends, history’</td>
<td>‘talk’</td>
<td>‘whisper’</td>
<td></td>
</tr>
</tbody>
</table>

(50) ʔ̓ikl̓ux Vicki̓x, “ki, ḡic̓emən ḡʷaləla qən maleyə?”

=\text{\textchar319} \text{=x̓=u̓x} Vicky =\text{x̓=k̓i} (k)i̓s-(x̓)se=ʔm =ən
say=\text{REP} =\text{3MED} Vicky =\text{ACC} no NEG-still=\text{VER} =1
=\text{gʷaləla} qa =ən male=ə?
finish=\text{STAT} PREP =\text{1POSS} marry=\text{NMZ}

‘Vicky told him (\text{ACC}), “No, I’m still not ready to get married.”’ (VF)

Admire Verbs

ʔəx̓ʔexsd- ‘want’, ḡikʔak- ‘like’, m̓əxʷ- ‘covet, admire’, m̓aʔx- ‘respect’, m̓əs- ‘desire’, x̓il̓- ‘admire’

=\text{\textchar191} \text{argument} 
Object of 
Appraisal

<table>
<thead>
<tr>
<th>ʔəx̓ʔexsd</th>
<th>ḡikʔak</th>
<th>m̓əxʷ</th>
<th>m̓aʔx</th>
<th>m̓əs</th>
<th>x̓il̓</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘want’</td>
<td>‘like’</td>
<td>‘covet, admire’</td>
<td>‘respect’</td>
<td>‘desire’</td>
<td>‘admire’</td>
</tr>
</tbody>
</table>
(51) łumən xila̤xus dala̤ci, kiʔsλən ʔəxʔe̤xsd
łum =on xil-a =x=us dala̤ci
really =1 admire- =ACC=2POSS money-container kiʔs=λ
=on ʔəxʔe̤xsd-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

(52) q̓ə̑łələm Tedə̑=xʔaʔi̓xʔidaʔasi
q̓ə̑l-la=ʔm =i Ted =x=a ʔə̑xʔi̓xʔiʔaʔas=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
l̕iweʔ ~ l̕ə̑wileʔ ‘forget’, lə̑n- ‘forget’, ə̑gə̑xomas ‘forget’ [idiom]

(53) lə̑m̓ux Jamesə̑x ki̓la, lə̑mux l̕iweyə̑xis dada̤cwə̑kʷ
lə̑=ʔm =ȗx James=x ki̓l-a
AUX=VER =3MED James=VIS fish.with.net-A
lə̑=λ =ȗx l̕iweʔ =x=is dada̤cwə̑kʷ
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 ə̑gə̑xomas 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

<table>
<thead>
<tr>
<th>Perception Verbs</th>
<th>=.shell argument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ɂaʔsɬ- ‘pay attention to’, wəɬ- ‘hear’, yawɪx- ‘touch’</td>
<td></td>
</tr>
</tbody>
</table>

(54) ?iƛʔaʔən qən mišalaʔa polawas
\[\text{ʔiƛʔən qa =ən mis-la =}==\text{a polawas}\]
\[\text{like =} 1 \text{ PREP =} 1 \text{POSS smell-CONT =} \text{ACC=DET flower}\]
‘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

<table>
<thead>
<tr>
<th>Fear Verbs</th>
<th>=s argument</th>
</tr>
</thead>
</table>

(55) ʔiƛʔaʔən qən mišalaʔa polawas
\[\text{ʔiƛʔən qa =ən mis-la =}==\text{a polawas}\]
\[\text{like =} 1 \text{ PREP =} 1 \text{POSS smell-CONT =} \text{ACC=DET flower}\]
‘I like to smell flowers (ACC).’ (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

<table>
<thead>
<tr>
<th>Shame Verbs</th>
<th>=s argument</th>
</tr>
</thead>
<tbody>
<tr>
<td>ɁɁudʔaq- ‘awkward, off-feeling’, maʔɬɬa- ‘ashamed, embarrassed’, ɁɁmεʔ columnIndex</td>
<td>Source of Emotion</td>
</tr>
</tbody>
</table>

(56) wałasuʔ Abbiƛ maʔɬasuʔ Normanɂ
\[\text{walas =uƛ Abbi=}==\text{x maʔɬa =}==\text{uƛ Norman}=\text{x}\]
\[\text{big/very =} 3 \text{MED Abbi=VIS ashamed =} \text{INST=DET=OST ghost}\]
‘Abby’s really ashamed of Norman (INST).’ (VF)

---

10 One speaker I have consulted with allows the internal argument of maʔɬa 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).

<table>
<thead>
<tr>
<th>Sadness/Longing Verbs</th>
<th>=s argument</th>
</tr>
</thead>
</table>

(57) łumən wosbidušada wači
łum =an wos=bidu =s=a=da wači
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’, mayul- ‘give birth to’, and ʔiʔkil- ‘heal/bless (from)’, 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. qəm- ‘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, =x} 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. 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.

---

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 badaʔduw- ‘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 ᵉxawəʔ ‘neck’. With this verb, when a la- phrase is not expressed, the subject’s throat is assumed to be the Location.
Put Verbs

\( \text{put underneath} \), \( \text{put on a flat surface} \), \( \text{immerse in water} \), \( \text{put inside} \), \( \text{put on the ground outdoors} \), \( \text{put down in house} \), \( \text{put outdoors} \), \( \text{butten a flat surface} \), \( \text{dromskilel-} \) ‘salt’, \( \text{dzup-} \) ‘jar, can’, \( \text{gaxw,} \) ‘hang’, \( \text{gæw-} \) ‘add in’, \( \text{gicu-} \) ‘put inside’, \( \text{gíst-} \) ‘immerse in liquid’, \( \text{hæn-} \) ‘set a hollow container upright’, \( \text{hønxλ-} \) ‘set a hollow container upright on fire or stove’, \( \text{høpst-} \) ‘immerse in colour or dye’, \( \text{kapəm-} \) ‘put on a cap’, \( \text{kaxcæn-} \) ‘put on a bracelet’, \( \text{kʷət-} \) ‘attach by sticking’, \( \text{naxw-} \) ‘wrap’, \( \text{pæncu-} \) ‘pour liquid’, \( \text{pæncu-} \) ‘pump in’, \( \text{qæp-} \) ‘pour, spill’, \( \text{qiqəlcan-} \) ‘put a ring on’, \( \text{quxcæ-} \) ‘dress, put on clothes’, \( \text{tikʷ-} \) ‘hang’, \( \text{tikʷaxaw-} \) ‘put on a necklace’, \( \text{tipsidz-} \) ‘put shoes on’, \( \text{xølpaλ-} \) ‘twist on’, \( \text{yawapst-} \) ‘curtain’, \( \text{cək’cu-} \) ‘pour liquid inside’, \( \text{cəq-} \) ‘dress, put on clothes’, \( \text{cixʷ-} \) ‘pour liquid’, \( \text{λətəm-} \) ‘put on a hat’

(58) lu̱x Katiyə̱x \( \text{ʔøəlila} \) {sa, ɬa} \( \text{λətəml la̱x a} \text{kʷaxda̱nilix} \)
\( \text{la } =\text{u̱x } \text{Katie=vis } \text{DO-a-on.floor.in.house-a} \) {\( =\text{INST}=\text{DET}, \)}
\( =\text{̌a} \) {\( =\text{ACC}=\text{DET} \)} hat \( \text{PREP } =\text{ACC}=\text{DET} \) 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.

Manipulation/Change Verbs

\( \text{kuxw-} \) ‘fold’, \( \text{mukw-} \) ‘tie’, \( \text{qəs-} \) ‘coil, wind’, \( \text{qʷil-} \) ‘untie, unravel’, \( \text{xølpaλ-} \) ‘twist on’

(59) mukʷu̱x Simon {sa, ɬa} dənəm
\( \text{mukw-} =\text{u̱x } \text{Simon } \) {\( =\text{s}=\text{a} , =\text{̌a} \)} dənəm
\( \text{tie } =\text{MED } \text{Simon } \) {\( =\text{INST}=\text{DET} , =\text{ACC}=\text{DET} \)} 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.

**Stir/Tow Verbs**

<table>
<thead>
<tr>
<th>$\text{Stir/Tow Verbs}$</th>
<th>{=$s$, $\neq x$} arguments</th>
</tr>
</thead>
</table>
| $\text{dap}$- ‘tow’, $\text{xʷit}$- ‘stir, mix’ | i. Instrument (what is done with) [=$s$ bias]  
ii. Patient (what is done to) [=$\neq x$ bias] |

(60) $\text{xʷit}$àn{ṣgada, Ỉgada} $\text{kegəsilasuwa}$

$x^\text{it} =\text{àn} \{=s=\text{ga}=\text{da} \, , \neq x=\text{ga}=\text{da}\}$ $\text{kegəs}-(g)\text{ila-saw}=\text{àn}$

$\text{stir} =1 \{=\text{INST}=3\text{PROX}=\text{OST} \, , =\text{ACC}=3\text{PROX}=\text{OST}\}$ cake-make-A-ACC_PASS=1POSS

‘I’m stirring the cake {INST, ACC} I’m making.’ (VF, JF)

(61) $\text{xʷit}$àn{ṣgada, Ỉgada} $\text{xʷidayu}$

$x^\text{it} =\text{àn} \{=s=\text{ga}=\text{da} \, , \neq x=\text{ga}=\text{da}\}$ $x^\text{it}=-\text{ayu}=\text{x}$

$\text{stir} =1 \{=\text{INST}=3\text{PROX}=\text{OST} \, , =\text{ACC}=3\text{PROX}=\text{OST}\}$ 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).

**Transfer Verbs**

<table>
<thead>
<tr>
<th>$\text{Transfer Verbs}$</th>
<th>{=$s$, $\neq x$} argument</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\text{dzina?p}$- ‘share out, distribute’, $\text{həlq}^-$ ‘pay’, $\text{həlaxs}$- ‘send’, $\text{kat}$- ‘write to’, $\text{laux}$- ‘sell’, $\text{nap}$- ‘throw’, $\text{cə}$- ‘give’, $\text{lawənt}$- ‘give charitably, provide’</td>
<td>Theme</td>
</tr>
</tbody>
</table>

(62) ɬowux Shelli{sis, Ỉsis} dzastu ɬəmdzuʔu laɬu Vicki

$\text{cə} =\text{ux}$ Shelly \{=$s$=is , $\neq x=is$\}

give $\text{=}3\text{MED}$ Shelly \{=$\text{INST}=3\text{REFL.POSS} \, , =\text{ACC}=3\text{REFL.POSS}\}$

dzastu ɬə̱mdzuʔu la $=\text{ux}$ Vicki

blue.colour dress PREP $=\text{ACC}=3\text{MED}$ Vicki

‘Shelly gave her blue dress {INST, ACC} to Vicki.’ (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).

<table>
<thead>
<tr>
<th>Bodily Process Verbs</th>
<th>Argument</th>
<th>Theme</th>
</tr>
</thead>
</table>

(63) hasdaxuɗ Abbi{suxda, x̌a} yolaŋ

hasdax-u-xʔid =ux Abby {=}s=ux=da, =ACC=3MED=DET
breathe-out/off-BEC =3MED Abby {=}INST=3MED=OST, =x̌=w=a
yu-la=x̌
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).

<table>
<thead>
<tr>
<th>Performance Verbs</th>
<th>Argument</th>
<th>Expressed</th>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>ḥonl- ‘play (a game)’, ḥonl- ‘sing’, ḥot- ‘draw, create (artwork)’, ḥakadokʷsil- ‘read (aloud)’, ḥlip- ‘play cards’, ḥus- ‘tell history or legend’, ḥyaŋʷ- ‘dance (in the Bighouse)’</td>
<td>{=}s, =x̌</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(64) ḥonlulux Mabel{sxa, x̌a} ḥomdɔm

donl-x̌ Mabel {=}a, =x̌=a} ḥomdɔm

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

<table>
<thead>
<tr>
<th>Communication Verbs</th>
<th>Argument</th>
<th>Message</th>
</tr>
</thead>
</table>

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.
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.

<table>
<thead>
<tr>
<th>Annoy Verbs</th>
<th>{=s, =x} argument</th>
</tr>
</thead>
</table>

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.

<table>
<thead>
<tr>
<th>Jealousy Verbs</th>
<th>{=s, =x} argument</th>
</tr>
</thead>
<tbody>
<tr>
<td>babal- ‘jealous’, liq- ~ leiq- ‘jealous’</td>
<td>Source/Target of Emotion</td>
</tr>
</tbody>
</table>

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: cənkʷ usually takes an =s object (68), while lawis- usually takes a =x 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

\( \text{cəŋk}^\circ \text{-} \text{‘offended, furious’,} \ \text{lawis-} \text{‘angry’} \)

\{=s, =\ddot{x}\} \ \text{argument}
Source/Target of Emotion

(68) \( \lambda\text{umuŋ} \ \text{Elsa}=\ddot{x} \ \text{cəŋk}^\circ \text{suŋ} \ \text{Karen}=\ddot{x} \ \text{kiʔsaʔax} \ \text{məlk}^\circ=\ddot{a} \ \text{qa} \ \text{nileʔ} \)
\( \lambda\text{um} =\ddot{x} \ \text{Elsa}=\ddot{x} \ \text{cəŋk}^\circ =\ddot{s}=\ddot{u} \ \text{Karen}=\ddot{x} \)
\text{really} \ =3\text{MED} \ \text{Elsa}=\text{VIS} \ \text{offended} =\text{INST}=3\text{MED} \ \text{Karen}=\text{VIS} \)
\( \text{kiʔsaʔax} =\ddot{s}=\ddot{a}=\ddot{x} \ \text{məlk}^\circ=\ddot{a} \ \text{qa} =\ddot{i}s \ \text{nileʔ} =\ddot{s} \)
\text{NEG}\text{=EMBED}\text{=VIS} \ \text{remember-CONT} \ \text{PREP} =3\text{REFL.POSS} \ \text{show}=\text{NMZ} =3\text{POSS} \)

‘Elsa was really offended by Karen (\text{INST}) when she didn’t remember to mention her.’ (VF)

(69) \( \lambda\text{awisi} \ \text{Ketiʔa}=\ddot{x} \ \text{bibag}^\circ=\ddot{a} \ \text{mən} \)
\( \text{lawis} =i \ \text{Katie}=\ddot{x} =\ddot{x}=\ddot{a} \ \text{bı-bibag}^\circ=\ddot{a} \ \text{mən} \)
\( \text{angry} =3\text{DIST} \ \text{Katie}=\text{VIS} =\text{ACC}=\text{DET} \ \text{REDUP-man} \)

‘Katie’s angry at the men (\text{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.

\begin{align*}
\text{Think Verbs} & \\
\text{gigəeq-} \text{'ponder, imagine’,} & \text{’nikeʔq-} \text{'think, judge, decide’ [Literally ‘say in mind’],} & \text{nanoqixil-} \text{'consider, think seriously about’,} & \text{nanuk}^\circ- \text{'ruminate about someone who hasn’t returned’,} & \text{qayeqʔq-} \text{'worry’,} & \text{qiyeʔq-} \text{'worry’,} & sənysa- \text{'think, ruminate’}^{18} \\
\{=s, =\ddot{x}\} \ \text{argument} & \\
\text{Thought} & \\
\end{align*}

(70) a. \( \text{gigəeqɬaŋ} \text{λas} \ \text{waldəmaʔsa} \ \text{ŋəmuk}^\circ \)
\( \text{gigəeqɬa} =\text{on} \ \text{λa} =\text{s} \ \text{waldəm}=\text{aʔ} \)
\( \text{ponder-CONT} =1 \ \text{CONN}=\text{INST} \ \text{word}=\text{INVIS} \)
\( =\text{s}=\text{a} \ \text{friend} \)
\( =3\text{POSS}=\text{DET} \ \text{friend} \)

‘I’m thinking about what a friend said (\text{INST}).’ (VF)

b. \( \text{gigəeqɬaŋ} \text{λaxa} \ \text{sayuňak}^\circ=\ddot{a} \)
\( \text{gigəeqɬa} =\text{on} \ \text{λa} =\ddot{x}=\text{a} \ \text{siɬ}^\circ=\text{a} \ \text{ŋak}^\circ=\ddot{a} \)
\( \text{ponder-CONT} =1 \ \text{CONN}=\text{ACC}=\text{DET} \ \text{paddle-GRAD.ADV} \)

‘I’m thinking about the boat that’s going by (\text{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.
<table>
<thead>
<tr>
<th>Verb classes with strict-accusative (=x) relations</th>
<th>=x argument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creation Verbs</td>
<td>Incremental Theme</td>
</tr>
<tr>
<td>Change Verbs</td>
<td>Patient</td>
</tr>
<tr>
<td>Ingestion Verbs</td>
<td>Incremental Theme</td>
</tr>
<tr>
<td>Contact Verbs</td>
<td>Patient/Goal</td>
</tr>
<tr>
<td>Obtain Verbs</td>
<td>Obtained Goods</td>
</tr>
<tr>
<td>Transfer Verbs</td>
<td>Recipient</td>
</tr>
<tr>
<td>Communication Verbs</td>
<td>Recipient</td>
</tr>
<tr>
<td>Admire Verbs</td>
<td>Object of Appraisal</td>
</tr>
<tr>
<td>Know Verbs</td>
<td>Mental Content</td>
</tr>
<tr>
<td>Forget Verbs</td>
<td>Lost Mental Content</td>
</tr>
<tr>
<td>Perception Verbs</td>
<td>Stimulus</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Verb classes with strict-instrumental (=s) relations</th>
<th>=s argument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fear Verbs</td>
<td>Source of Emotion</td>
</tr>
<tr>
<td>Shame Verbs</td>
<td>Source of Emotion</td>
</tr>
<tr>
<td>Sadness/Longing Verbs</td>
<td>Source of Emotion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Verb classes with alternating (=s, =x) relations</th>
<th>=s, =x argument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Put Verbs</td>
<td>Locatum</td>
</tr>
<tr>
<td>Manipulation/Change Verbs</td>
<td>Instrument/Patient</td>
</tr>
<tr>
<td>Stir/Tow Verbs</td>
<td>Instrument, Patient</td>
</tr>
<tr>
<td>Transfer Verbs</td>
<td>Theme</td>
</tr>
<tr>
<td>Bodily Process Verbs</td>
<td>Theme</td>
</tr>
<tr>
<td>Performance Verbs</td>
<td>Expressed Theme</td>
</tr>
<tr>
<td>Communication Verbs</td>
<td>Message</td>
</tr>
<tr>
<td>Annoy Verbs</td>
<td>Source/Target of Emotion</td>
</tr>
<tr>
<td>Jealousy Verbs</td>
<td>Source/Target of Emotion</td>
</tr>
<tr>
<td>Anger Verbs</td>
<td>Source/Target of Emotion</td>
</tr>
<tr>
<td>Think Verbs</td>
<td>Thought</td>
</tr>
</tbody>
</table>

**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
describe specific perspectives taken on those events by the speaker, perspectives that are not ‘in
the events’ in any direct way” (p. 17). For instance if I walk into a store and purchase juggling
balls and another person in the store sees the transaction take place, this observer could describe
the event as in (71) with the verb *sell*, or as in (72) with the verb *buy*.

(71) The shopkeeper **sold** juggling balls to Katie.

(72) Katie **bought** juggling balls from the shopkeeper.

This situation can be described with either *sell* or *buy* because these verbs name alternative
perspectives on a single overarching commercial transaction situation (Parsons 1990: p. 84,
Wechsler 2005: p. 183-184, 188-193). The verb *sell* encodes this situation as an event from the
perspective of the seller, who is mapped to subject position, while the verb *buy* encodes the
situation as an event from the perspective of the buyer, who is mapped to subject position; this
makes it so that the shopkeeper is the *Initiator* of the event in (71), while Katie is the *Initiator*
of the event in (72). A defining feature of perspectively-opposed verb pairs like *sell* versus *buy* is
thus that whenever one verb in the pair can be used to describe a situation, the other can be used
as well; in other words, there is complete overlap in these verbs’ contexts of use. Other
examples of perspectively-opposed pairs include *flee* versus *chase*, *win* versus *beat*, and *give*
versus *receive* (Gleitman 1990: pg. 16).

What is relevant for our purposes here is the encoding of the direct object in these verb
pairs. Thus, in a pair like *sell* versus *buy*, we’re interested in how the Theme is encoded.
Looking at English, there’s no obvious difference in how the Theme ‘juggling balls’ is encoded
in (71) and (72). However, when we turn to look at Kʷakʷala — a language with two distinct
ways of marking objects — we find that there is a clear difference in how the object is encoded
by the verbs in these pairs. In particular, we find that one verb in the pair has an alternating \{=s,
=\t\} Theme, while the other verb in the pair has a strict-accusative (\=x\} Theme. This difference
is illustrated below with the verb pairs *la\x- ‘sell’ versus *k\olxʷ- ‘buy’ (73), *\co- ‘give’ versus *lo\l- ‘receive, get’ (74), and *n\p- ‘throw’ versus *\qap- ‘catch’ (75). The ‘a’ examples below have
alternating \{=s, =\t\} objects, while the ‘b’ examples have strict-accusative \=x\} objects.

(73) *la\x- ‘sell’ versus *k\olxʷ- ‘buy’

a. ləmi\ux Scott lam\ux{\sa, \xa} k\olk\langs\la
   lə=ʔm =u\ux Scott lam\ux-u-x?i\idd \\{=s=\a, =\t=\a\}
   AUX=VER =3MED Scott sell-out/off\3P-BEC \\{=INST=DET, =ACC=DET\}
   k\olk\langs\la
   car
   ‘Then Scott sold the car \{INST, ACC\}.’ (VF, JF)
b.  kalxʷuux Shelli xŭx kalkəl̪salasə dala
    kalxʷ  =uux  Shelly  =x=uux  kalkəl̪sala
    buy  =3MED  Shelly  =ACC=3MED  car
    =s=a  dala
    =MEANS=DET  money
‘Shelly bought the car (ACC)(*INST) with money.’ (VF)

(74)  čo- ‘give’ versus loƛ- ‘receive, get’

a.  čowuux Shelli {sis, ŝis} dzastu qʷəmdzuʔu lḁux Vicki
    čo  =uux  Shelly  {s=is , =x=is}
    give  =3MED  Shelly  {=INST=3REFL.POSS , =ACC=3REFL.POSS}
    dzastu  qʷəmdzuʔu  la  =x=uux  Vicky
datacolour  dress  PREP  =ACC=3MED  Vicky
‘Shelly gave her blue dress {INST, ACC} to Vicky.’ (VF, JF)

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

lolox  Ketiyəxə qəsəne?
loł.  =oʔ  Katie  =x=a  qəsəne?
obtain  =3MED  Katie  =ACC=DET  shirt
‘Katie got a shirt (ACC)(*INST).’ (VF)

(75)  nəp- ‘throw’ versus qəp- ‘catch’

a.  nəpiduux Monica {sis, ŝis} gaganaʔəm lḁ Simon
    nəp-xʔid  =uux  Monica=x  {s=is , =x=is}
    throw-BEC  =3MED  Monica=VIS  {=INST=3REFL.POSS , =ACC=3REFL.POSS}
    gaganaʔəm  la  =x= Simon
data  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.

qəpən̓xgada ballx
qap  =an  =x=ga=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 qəp- ‘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 perspectivally-opposed to the verb nəp- (cf. the two possible translations in 75a).
Table 3.2: Case marking of the Theme in perspectivally-opposed verb pairs

<table>
<thead>
<tr>
<th>Verbs (‘a’) Gloss</th>
<th>Case</th>
<th>Verbs (‘b’) Gloss</th>
<th>Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>lax- ‘sell’</td>
<td>{INST, ACC}</td>
<td>kəlxʷ- ‘buy’</td>
<td>(ACC)</td>
</tr>
<tr>
<td>ˈco- ‘give’</td>
<td>{INST, ACC}</td>
<td>loʊɬ- ‘get’</td>
<td>(ACC)</td>
</tr>
<tr>
<td>nap- ‘throw’</td>
<td>{INST, ACC}</td>
<td>ˈqap- ‘catch’</td>
<td>(ACC)</td>
</tr>
</tbody>
</table>

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 (lax-, ˈco-, and nap-) are alike in that they all describe events in which a Theme is transferred to a Recipient, while the ‘b’ verbs (kəlxʷ-, loɬ-, and ˈqap-) 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 Kʷakʷala 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, =x} object, while the other member has a strict-accusative (=x) one. This is illustrated below with the verb pairs ʔəxʔaliɬ- ‘put down on surface indoors’ versus da- ‘pick up, take in hand’ (78), giču- ‘put inside’ versus ʔəxʷəɬc̕u- ‘take out from inside’ (79), and kʷətaɬ- ‘stick on surface’ versus lawe- ‘remove’ (80).
(78) *x*alil- ‘put down on surface indoors’ versus da- ‘pick up, take in hand’

a. ləmuł Katiyəl *su*da, *x*u*da* ᵃ.ləm*I la*xa ᵃ.ʔəwi*na?gʷil
   lə=m =ux  Katie=x  ᵃ.ʔ*xmlil
   AUX=VER  =3MED  Katie=VIS  DO=on.floor.in.house  {'=INST=3MED=OST,
   =x=ux=da,  ᵃ.ləm*I  la  =x=w=a  ᵃ.ʔəwi*na?gʷil
   AUX=VER  =3MED  loc=inside-BEC  =3MED  Katie  {'=INST=3MED=OST,
   =x=w=a  ᵃ.ləm*I  la  =x=w=a
   REDUP~pull-A=VIS
   ‘Katie is putting the hat {INST, ACC} down on the floor.’ (VF, JF)

b. ləmuł dax?iduł Katiyəlxʷa *lm*I la*xa ʔəwi*na?gʷil
   lə=m =ux  da-x?id =ux  Katie =x=w=a
   AUX=VER  =3MED  take.in.hand-BEC  =3MED  Katie  {'=INST=3MED=OST,
   =x=w=a  ᵃ.ləm*I  la  =x=w=a  ᵃ.ʔəwi*na?gʷil
   AUX=VER  =3MED  loc=inside-BEC  =3MED  Katie  {'=INST=3MED=OST,
   =x=w=a
   REDUP~pull-A=VIS
   ‘Katie is picking the hat (ACC)(*INST) up off the floor.’ (VF)

(79) *gi*cu- ‘put inside’ versus ?x*waľˈcu- 'take out from inside'

a. ləmuł gi*cu? Kati {su*da, *x*a} *lm*I la*xa ni*ni*xa
   lə=m =ux  gi-çu-x?id =ux  Katie =x=w=a
   AUX=VER  =3MED  take.in-hand-BEC  =3MED  Katie  {'=INST=3MED=OST,
   =x=w=a  ᵃ.ləm*I  la  =x=w=a
   ni*ni*xa
   REDUP~pull-A=VIS
   ‘Katie put the hat {INST, ACC} into the drawer.’ (VF, JF)

b. ʔx*waľˈcu? Katiyəlxʷa *lm*Ili xʷa ni*ni*xa
   ʔx-wal-ču-x?id =ux  Katie =x=w=a
   DO=out.from-inside-BEC  =3MED  Katie  {'=INST=3MED=DET
   ᵃ.ləm*I=x  la  =x=w=a  ni*ni*xa
   ᵃ.ləm*I=x  la  =x=w=a
   REDUP~pull-A=VIS
   ‘Katie took the hat (ACC)(*INST) out of the drawer.’ (VF)

(80) kʷ*talə- ‘stick on surface’ versus lawe- ‘remove’

a. kʷ*taləluł Mabo*la {sa, *x*a} ᵃ.kəm*I la*xa hən̓xsolas
   kʷ*talə-la =ux  Mabel=ɬ =x=x
   stuck-on.surface-CONT  =3MED  Mabel=VIS  {'=INST=DET,  =ACC=DET
   ᵃ.kəm*I  la  =x=x
   picture  PREP  =ACC=3MED=DET window
   ‘Mabel is sticking/stuck a picture {INST, ACC} onto the window.’ (VF, JF)
This data in (78)-(80) is summarized in Table 3.3.

<table>
<thead>
<tr>
<th>Verbs (‘a’)</th>
<th>Gloss</th>
<th>Case</th>
<th>Verbs (‘b’)</th>
<th>Gloss</th>
<th>Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>ʔəxəʔalil-</td>
<td>‘put down in house’</td>
<td>{INST, ACC}</td>
<td>da-</td>
<td>‘pick up’</td>
<td>(ACC)</td>
</tr>
<tr>
<td>gičo-</td>
<td>‘put inside’</td>
<td>{INST, ACC}</td>
<td>ʔəxəʔalču-</td>
<td>‘take out’</td>
<td>(ACC)</td>
</tr>
<tr>
<td>kʷətala-</td>
<td>‘stick on’</td>
<td>{INST, ACC}</td>
<td>lawe-</td>
<td>‘remove’</td>
<td>(ACC)</td>
</tr>
</tbody>
</table>

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 Possessum. 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, =x};
ii. Verb-argument relations in which the argument ends up WITH the Initiator at the event’s final bound are strict-accusative (=x).

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, ʷiːgilə ‘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) tůsʔidux Mabel ʔəxʷa kʷəninikʷ
tůs-xʔid =uʔ Mabel =xʷ=a kʷəninikʷ
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) nəpidi Eddi\textipa{\textae} ətəml
nap-xʔid =i Eddie =\textipa{x}=a ətəml
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 \textipa{tus}- ‘cut’ entails that normal \textipa{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 ətəml ‘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 \textipa{\textx}=\textipa{\textx}=\textipa{\texta}lə- ‘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 \textipa{x}=\textipa{\texta}layu, a particular kind of traditional knife used for filleting fish (84). A somewhat weaker verb is \textipa{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 \textipa{\textg}=\textipa{n}(\textipa{\textg}=\textipa{\texta})\textipa{\textx}=\textipa{\textz}=\textipa{\textn}d ‘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: \(\hat{x}^\ast a\hat{\lambda}-\) ‘fillet’

\[
\begin{align*}
\hat{x}^\ast a\hat{\lambda}\hat{u}^\ast Abbi\hat{x}... \\
\hat{x}^\ast a\hat{\lambda} = u\hat{x} & \quad Abby=\hat{x}... \\
\text{fillet} = 3\text{MED} & \quad Abby=\text{VIS}... \\
\text{‘Abby is filleting/filleted...’}
\end{align*}
\]

a. \(\ldots \text{sa }\hat{x}^\ast a\hat{\lambda} \text{ayu}
\ldots = s = a & \quad \hat{x}^\ast a\hat{\lambda} \text{ayu}
\ldots = \text{INST}=\text{DET} & \quad \text{fillet.knife}
\ldots \text{‘...with a fillet-knife (INST).’ (JF)}
\]
b. \(\# \ldots \text{sa kawayu}
\ldots = s = a & \quad \text{kawayu}
\ldots = \text{INST}=\text{DET} & \quad \text{knife}
\ldots \text{‘...with a knife (INST).’ (JF)}
\]
c. \(\# \ldots \text{sis }\hat{i}^\ast \hat{\omega}^\ast \hat{\omega}^\ast \text{su}
\ldots = s = i & \quad \hat{i}^\ast \hat{\omega}^\ast \hat{\omega}^\ast \text{su}
\ldots = \text{INST}=\text{3REFL.POSS} & \quad \text{REDUP~hand/arm}
\ldots \text{‘...with her hands/arms (INST).’ (JF)}
\]

(85) Intermediate strength verb: \(t\hat{u}^s\text{us-}\) ‘cut’

\[
\begin{align*}
\hat{t}u\hat{s}^\ast \text{Mabel} \hat{x}^\ast a \k^{\omega}^\ast \hat{\text{nik}}^\ast & \ldots \\
\hat{t}u\hat{s} = u\hat{x} & \quad \text{Mabel} = \hat{x}^\ast = a & \quad k^{\omega}^\ast \hat{\text{nik}}^\ast & \ldots \\
\text{cut} = 3\text{MED} & \quad \text{Mabel} = \text{ACC}=3\text{MED}=\text{DET} & \quad \text{bread} & \ldots \\
\text{‘Mabel is cutting/cut bread (ACC)...’}
\end{align*}
\]

a. \(\ldots \text{sa }\hat{t}u\hat{s}^\ast \text{ayu}
\ldots = s = a & \quad \hat{t}u\hat{s}\hat{\text{w}}^\ast \text{w}^\ast \text{ayu}
\ldots = \text{MEANS}=\text{DET} & \quad \text{carve}=\text{INST.PASS}
\ldots \text{‘...with a knife.’ (JF)}
\]
b. \(\ldots \text{sa gles}
\ldots = s = a & \quad \text{gles}
\ldots = \text{MEANS}=\text{DET} & \quad \text{glass}
\ldots \text{‘...with glass.’ (JF)}
\]
c. \(\# \ldots \text{sis }\hat{i}^\ast \hat{\omega}^\ast \hat{\omega}^\ast \text{su}
\ldots = s = i & \quad \hat{i}^\ast \hat{\omega}^\ast \hat{\omega}^\ast \text{su}
\ldots = \text{MEANS}=3\text{REFL.POSS} & \quad \text{RED~hand/arm}
\ldots \text{‘...with her hands/arms.’ (JF)}
\]
In fact, these verbs possess the same relative strengths with respect to their Patient arguments, as well. Thus the strongest verb šʷuł- 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, ǧʷi̊gʷəłcənd, 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.

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

---

24 In the words of one speaker: “You could ǧʷi̊ləNd many, 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, Kʷakʷala possesses a verb with this property: the dummy root ʔəx-.

3.4.2 Evidence from the dummy root ʔəx-

ʔəx- is a dummy root in Kʷakʷala, glossed as ‘do’ in examples in Boas (1911) and more recently in Littell (2016).25 Syntactically, ʔəx- passes several of the tests for verbhood outlined in Littell (2016) and Sardinha (2013).26 Most significantly for us here is the fact that ʔəx- does not possess any entailments. To begin with, ʔəx- 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.”

lə̱m Merlin ʔəxə bəgʷənəm qa ʔəxʷi̱dʔes
lə=m Merlin ʔəx =x=a bəgʷənəm
AUX=VER =3DIST Merlin ʔəx =x=a bəgʷənəm
qa ʔəxʷ-xʔideʔ=ʔeʔ =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 Kʷakʷala, ʔə- (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, ʔəx- consistently takes postnominal -ɛʔ (from -aʔ ‘invis’) in argument position, takes passive morphology, and forms indefinite object constructions with -nukʷ similar to other verbs.
Context: We’re standing in a haunted basement, when we turn around and look at a table that previously had nothing on it.

Dummy ?əx- occurs in indefinite nominalizations meaning ‘someone’ (89) or ‘something’ (90). It’s also the root of the word ?əxaya, 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 ?əx- having an indefinite meaning, though it’s also possible that this meaning could arise from other sources. Outside of this possibility, ?əx- does not contribute any obvious semantic constraints on the interpretation of the sentence.

(89) ʔəxiduxa ?əxeʔə lał gigaʔolnukʔesa ʔədaq
  ʔak-xʔid =uxʔa ʔə=ʔeʔ=x la =x gigaʔolnuk= Collapse
  bad-BEC =3MED=OST DO=NMZ=VIS PREP =ACC relative
  =s=a  ʔədaq
  =3POSS=DET woman
  ‘Somebody in the woman’s family died.’ (VF)

(90) malmlaqʷəlaʔus ʔiʔəxeʔqus
  məl~məlqʷ-la =x=us ?i~ʔəx=ʔeʔ =q =us
  REDUP~remember-cont =ACC=2POSS REDUP~DO=NMZ =CONN=2POSS
  ‘Remember your things (ACC).’ (VF)

(91) ʔənişiʔə wənxʔid lał, ʔəxaya, bəneyeʔis gəʔelas
  ʔə=ʔm=is =ux wən-xʔid la =x ʔəxaya bən-ay=ʔeʔ
  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)
(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.’”

<noiw>'m̓ref̓x ?əxəyaʔenuxʷsa celay̓u qəs sixʷʔixus xʷəkʷənaʔx
loʔm̓ =ux ?əx-aʔaʔaʔnexʷ =s=a celay̓u qa =is
AUX=VER =3MED DO-aʔayə-28-expert =INST=DET bailer PREP =3REFL.POSS
sixʷ-xʔid =x̌=us xʷəkʷəna=x̌
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 ?əx- 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 ?əx- 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 ?əx-.

(93) **Example stems involving ?əx- with lexical suffixes**

<table>
<thead>
<tr>
<th>Stem</th>
<th>Arguments</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. ?əxila</td>
<td>i. ___ [ACC]</td>
<td>‘__ make [something]’</td>
</tr>
<tr>
<td>?əx-(g)ila</td>
<td>DO-make</td>
<td></td>
</tr>
<tr>
<td>b. ?əxstu</td>
<td>i. ___</td>
<td>‘__ be open’</td>
</tr>
<tr>
<td>?əx-stu</td>
<td>ii. ___ [ACC]</td>
<td>‘__ open [something]’</td>
</tr>
<tr>
<td>DO-round.opening</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. ?əxʔəxsd</td>
<td>i. ___ [ACC]</td>
<td>‘__ desire [something]’</td>
</tr>
<tr>
<td>?əxʔ-əxsd</td>
<td>ii. ___ [qa …]</td>
<td>‘__ desire [for something]’</td>
</tr>
<tr>
<td>DO-desire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. ?əxədzu</td>
<td>i. ___ [la…]</td>
<td>‘__ be on flat surface [somewhere]’</td>
</tr>
<tr>
<td>?əx-ʔdzu</td>
<td>DO-flat</td>
<td></td>
</tr>
<tr>
<td>ii. ___ [INST/ACC] [la…]</td>
<td>‘__ put [something] on flat surface [somewhere]’</td>
<td></td>
</tr>
</tbody>
</table>

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 ?əx-’s status as a dummy root.
What I am interested in here is predicates where ṭəx- appears without any lexical suffixes — what I’ll refer to as bare ṭəx- predicates. Bare ṭəx- predicates may include suffixes specifying temporal and aspectual information, such as those listed in Table 3.4.

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>-ala</td>
<td>‘stationary position, stative’</td>
</tr>
<tr>
<td>-la</td>
<td>‘continuative, pluractional’</td>
</tr>
<tr>
<td>-xid/-d/-nd/-ud</td>
<td>‘momentaneous, inchoative, become’</td>
</tr>
<tr>
<td>-nakʷala</td>
<td>‘gradual advancement’</td>
</tr>
</tbody>
</table>

Table 3.4: Common aspectual suffixes in Kʷakʷala

However, for an ṭəx- predicate to qualify as ‘bare’, no lexical suffixes may be present. As a consequence, bare ṭəx- predicates possess no lexical content and therefore possess no semantic selectional restrictions.

There are two kinds of discourse contexts in which bare ṭəx- predicates typically occur. Firstly, ṭəx- predicates are volunteered when the manner of an action being described is nonspecific, either because it’s unimportant to specify, is unknown, or is easily recoverable from context. Example (87) presented above, for instance, illustrates the use of a bare ṭəx- predicate in a context where nothing specific is known about the manner of the action being described. Secondly, bare ṭəx- predicates are volunteered in situations where a speaker has trouble remembering a more specific word. In (94) for instance, the speaker has trouble remembering a Kʷakʷala root with the specific meaning approximating the English verb ‘cover’; to approximate this meaning, she volunteers a bare ṭəx- predicate.
(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, ʔaɬən̓əm pəna [clears throat] ʔoʔəm… Uh, ʔəxʔisada moss qa wileʔs ʔoʔəm moss-ida cross. Uh, it – they’d put the moss on the cross, and just cover it.”

ʔaɬən̓əm pəna ʔoʔəm ʔəxʔisada moss qa wileʔs ʔoʔəm moss-ida cross
sometimes so-VER DO-BEC =INST=DET=OST moss
qa wila=œ? =s ʔwa-ʔəm 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 ʔəx- 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 ʔəx- predicates, or if their interpretation is left up to pragmatics alone.

In short, ʔəx- contributes no entailments, making it a maximally weak verb. Bare ʔəx- predicates therefore provide an ideal environment for investigating whether object case contributes semantic value given the following logic: since ʔəx- 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 ʔəx- predicates must derive from case marking itself. Hence, bare ʔəx- predicates can be used to diagnose whether object case contributes semantic information.

To illustrate this use of ʔəx- 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 ʔəx- 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 ʔəx- predicates with instrumental (=s) objects were translated with the English verb ‘use’ (95a) while bare ʔəx- predicates with an accusative (=x) 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 ḥə- predicates

a. ḥəʔiduḥ Mabelḥəa ḥəṭəml
   ḥəʔ-xʔid =uḥ Mabel=ḥ  =s=a ḥəṭəml
   DO-BEC =3MED Mabel=VIS =INST=DET hat

   **Speaker:** “Mabel used the hat (INST).” (JF)

b. ḥəʔiduḥ Mabelḥəa ṭəṭəml
   ḥəʔ-xʔid =uḥ Mabel=ḥ  =x=a ṭəṭəml
   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 (=x) 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 ḥə- predicate contradiction test

   ḥəʔiduḥ Mabelḥəa ṭəṭəml, ḥiʔstuḥ Mabelḥə ḥəʔidəḥə ṭəṭəml
   ḥəʔ-xʔid =uḥ Mabel=ḥ  =s=a ṭəṭəml
   DO-BEC =3MED Mabel=VIS =INST=DET hat

   ḥiʔs=tə =uḥ Mabel=ḥ  ḥəʔ-xʔid =x=a ṭəṭəml
   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, ḥi.” [‘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 ḥəʔluḥ Mabelḥəa ṭəṭəml, and occurs in all of the volunteered examples with this meaning of ‘use’ in my data. By hypothesis this is because the meaning of ḥəʔid adds an inchoative meaning (‘start to use’) which I assume is a pragmatically rare meaning to want to express.
So far, bare ʔəx- 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 Kʷakʷala fieldwork corpus revealed seven distinct interpretations that bare ʔəx- predicates can receive, including five possible interpretations for monotransitive bare ʔəx- predicates and two possible interpretations for ditransitive bare ʔəx- 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 ʔəx- predicates are shown in (97)-(101). Bare ʔəx- 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 ʔəx- predicates with accusative (=x) objects can receive all five of these possible interpretations, as indicated by the ‘b’ examples below.

(97) USE (something): =s (VF), =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. ʔəxəlox Eddiyəxsis ƛ̓axʷstu subayu
   ?əx-la =ǒx Eddie=ə̌x =s=is ƛ̓axʷstu subayu
   DO-CONT =3MED Eddie=VIS =INST=3REFL.POSS red.colour axe
   ‘Eddie’s using his red axe (inst).’ (VF)

b. ʔəxəlox Eddiyəxsis ƛ̓axʷstu subayu
   ?əx-la =ǒx Eddie=ə̌x =x=is ƛ̓axʷstu 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), =x (JF)

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

a. ʔəxəlox Monicaəxsa dzastu ᵃʷəmdzu’yu
   ?əx-la =ǒx Monica=x =s=a dzastu ᵃʷəmdzu’yu
   DO-CONT =3MED Monica=ACC =INST=DET blue.colour dress
   ‘Monica’s wearing a blue dress (inst).’ (VF)

b. ʔəxəlox Monicaəx dzastu ᵃʷəmdzu’yu
   ?əx-la =ǒx Monica=x =x=a dzastu ᵃʷəmdzu’yu
   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 ʔəx- predicate can take either an instrumental (=s) or accusative (=x) object, instrumental objects are more often volunteered when these interpretations are intended.
(99) TAKE (something): # =s (JF), =x (VF)

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

a. ʔəx̌ʔid Shellyəsis ʔọṭe? ʔọʔalaxde?
   ʔọx-xʔid =i Shelly =s=is ʔọṭ=e?
   DO-BEC =3DIST Shelly =INST=3REFL.POSS medicate=NMZ
   ʔọʔala-郓=e?
   morning-R.PST=INVIS
   Intended: ‘Shelly took her medicine (INST) this morning.’ (JF)

b. ʔəx̌ʔid Shellyəx̌is ʔọṭe? ʔọʔalaxde?
   ʔọx-xʔid =i Shelly =x=is ʔọṭ=e?
   DO-BEC =3DIST Shelly =ACC=3REFL.POSS medicate=NMZ
   ʔọʔala-郓=e?
   morning-R.PST=INVIS
   ‘Shelly took her medicine (ACC) this morning.’ (VF)

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

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

a. ʔəx̌ʔid Eddiəsa ɗəmba
   ʔọx-xʔid =i Eddie =s=a ɗəmba
   DO-BEC =3DIST Eddie =INST=DET jeans
   Intended: ‘Eddie got a pair of jeans (INST).’ (JF)

b. ʔəx̌ʔid Eddiəx̌a ɗəmba
   ʔọx-xʔid =i Eddie =x=a ɗəmba
   DO-BEC =3DIST Eddie =ACC=DET jeans
   ‘Eddie got a pair of jeans (ACC).’ (VF)

(101) DO-TO (something): # =s (JF), =x (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. ʔəx̌ʔidox̌da bagʷənəməsan pəlawas
   ʔọx-xʔid =ox-da bagʷənəm =s=ən pəlawas
   DO-BEC =3MED=OST man =INST=1POSS flower
   Intended: ‘The man is doing something to my flowers (INST).’ (JF)
b. ʔəx?idoxda bagʷanəmaʔan palawas
ʔəx-x?id =ox=da bagʷanəm =x=an palawas
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 ʔəx- 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 ʔəx- predicates with instrumental objects is a subset of the range of possible interpretations of ʔəx- 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 ʔəx- predicates are shown in (102)-(104). Bare ʔəx- 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]

luʔ Katie=xʔiidsuxda λətməl laʔ=a ʔəʔaʔací
lə =uʔ Katie=xʔiidsuxda λətməl
AUX =3MED Katie=VIS DO-BEC =INST=3MED=OST hat
la =x=w=a ʔəʔaʔací
PREP =ACC=3MED=DET cold-container
‘Katie is putting the hat (INST) into the fridge.’ (VF)

Bare ʔəx- predicates with an accusative (=x) 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 ʔəx- predicate, accusative object, and prepositional la phrase are ambiguous.

(103) PUT (something)(somewhere): =x, la

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

luʔ Katie=xʔiidsuxda λətməl laʔ=a ʔəʔaʔací
lə =uʔ Katie=xʔiidsuxda λətməl
AUX =3MED Katie=VIS DO-BEC =ACC=3MED=OST hat
la =x=w=a ʔəʔaʔací
PREP =ACC=3MED=DET cold-container
‘Katie is putting the hat (ACC) into the fridge.’ (JF)
GET (something) FROM (somewhere): =x, la

(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 ʔəx- predicates depends on which object case is present provides strong evidence for object case having a semantic basis. This is because ʔəx- 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 ʔəx- predicates can receive, and their relations to particular case frames.

<table>
<thead>
<tr>
<th>Case frame</th>
<th>Possible interpretations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ʔəx- + INST</td>
<td>‘use something’, ‘wear something’</td>
</tr>
<tr>
<td>ʔəx- + ACC</td>
<td>‘use something’, ‘wear something’, ‘take something’, ‘obtain something’, ‘do to something’</td>
</tr>
<tr>
<td>ʔəx- + INST + la</td>
<td>‘put something somewhere’</td>
</tr>
<tr>
<td>ʔəx- + ACC + la</td>
<td>‘put something somewhere’, take something from somewhere’</td>
</tr>
</tbody>
</table>

Table 3.5: Possible interpretations of bare ʔəx- predicates

Since ʔəx- 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 =x objects.

A topical question to answer before moving on is why the range of meanings available for bare ʔəx- predicates is restricted to the ones listed in Table 3.5. That is, given that ʔəx- 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 ʔəx- 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 ʔəx- predicates should be used to describe events which Kʷakʷala does not have an independently lexicalized verb for describing. This is plausibly why bare ʔəx- predicates are used to describe ‘using’ events, as there is no independently lexicalized verb in Kʷakʷala with this meaning. The same is also true of ‘wearing’ events, insofar as while Kʷakʷala possesses
ample lexical and compositional means of describing specific kinds of ‘wearing’ events (e.g. \(q\ddot{x}\)sis\(\ddot{\alpha}\)la ‘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 \(\ddot{x}\)- predicates provide a means of expressing ‘taking’ events which do not involve hands. In short, the fact that there relatively few observed interpretations for bare \(\ddot{x}\)- 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 \(\ddot{x}\)- 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 \(wigila\).

### 3.4.3 Evidence from \(wigila\)

The indefinite interrogative root, \(\dot{w}y\)- 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 \(\dot{w}y\)-, the stem \(wigila\) is formed, which is used to question what an Agent is ‘doing’ or ‘occupied with’. The stem \(wigila\) is stronger than \(\ddot{x}\)-, 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 \(wigila\) event can be like.

Restrictions on the interpretation of \(wigila\) predicates once again reveal the semantics of object case. When \(wigila\) is used to question what an Agent is doing ‘with’ an object, the instrumental (=\(s\)) case appears, and accusative (=\(\dot{x}\)) is infelicitous (105). When \(wigila\) is instead used to ask what someone is doing ‘to’ an object, the accusative (=\(\dot{x}\)) 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…

\begin{itemize}
  \item[a.] \(\ddot{w}igila\dot{x} Mabelesa \ddot{q}\ddot{\omega}mdzu\ddot{\gamma}u\)
  \(\ddot{w}i-(\(g\))ila=\ddot{x} \quad =i \quad Mabel \quad =s=a \quad \ddot{q}\ddot{\omega}mdzu\ddot{\gamma}u\)
  ‘What is Mabel going to do with the dress (inst)?’ (VF)

  \item[b.] # \(\ddot{w}igila\dot{x} Mabele\dot{x}a \ddot{q}\ddot{\omega}mdzu\ddot{\gamma}u\)
  \(\ddot{w}i-(\(g\))ila=\ddot{x} \quad =i \quad Mabel \quad =\ddot{x}=a \quad \ddot{q}\ddot{\omega}mdzu\ddot{\gamma}u\)
  Intended: ‘What is Mabel going to do with the dress (acc)?’ (JF)
\end{itemize}

**Speaker:** {whispers sentence to herself} “Yeah, if you put \(\ddot{x}a\) 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. wigili Mabelaŋə qʰəmdzu’yu
    wî-(g)ila =i Mabel =x=a qʰəmdzu’yu
    WH-make/do =3DIST Mabel =ACC=DET dress
   ‘What is Mabel doing to the dress (ACC)?’ (VF)

b. # wigili Mabelaŋə qʰəmdzu’yu
    wî-(g)ila =i Mabel =s=a qʰəmdzu’yu
    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 ḟəx- above. As a weak verb, wigila 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 wigila, 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 Kʷakʷala. 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: perspectivally-opposed verb pairs, such as ləx- ‘sell’ versus kəlxʷ- ‘buy’; and reverse-action verb pairs, such as Ḟəxəlil- ‘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 ḟəx-, object case constrains the possible interpretations of the predicate. I also showed that transitive predicates headed by another weak verb, wigila ‘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 (\(=\tilde{x}\)) object case are. We already know from previous literature that semantic Instruments in K*ak*ala 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.

<table>
<thead>
<tr>
<th>Verb-argument-case relation</th>
<th>Thematic roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>strict-accusative ((=\tilde{x}))</td>
<td>Incremental Theme, Patient, Patient/Goal, Obtained Goods, Recipient, Object of Appraisal, Mental Content, Lost Mental Content, Stimulus</td>
</tr>
<tr>
<td>strict-instrumental ((=s))</td>
<td>Instrument, Source of Emotion</td>
</tr>
<tr>
<td>alternating ({=s, =\tilde{x}})</td>
<td>Locatum, Instrument/Patient, Theme, Expressed Theme, Message, Source/Target of Emotion, Thought</td>
</tr>
</tbody>
</table>

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 \({=s, =\tilde{x}}\);

ii. Verb-argument relations in which the argument ends up WITH the Initiator at the event’s final bound are strict-accusative \((=\tilde{x})\).

Finally, we found in Section 3.4 that object case constrains the interpretation of weak predicates. In predicates headed by the dummy root \(\textcircled{2}x\)-, we found the range of possible interpretations repeated below in Table 3.5. Significantly, the set of possible interpretations of bare \(\textcircled{2}x\)-predicates with instrumental \((=s)\) objects was found to be a subset of the set of possible interpretations of bare \(\textcircled{2}x\)- predicates with accusative \((=\tilde{x})\) objects.
In predicates headed by another weak verb, ḥibila ‘do what’, we observed the interpretive possibilities listed in Table 3.7.

Abstracting over 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 (=x) objects are those arguments ‘done to’ or obtained, and alternating {=s, =x} 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 Kwak'ala 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 (=x̌), and alternating {=s, =x̌} relations.

There are only two object cases in Kwak'ala, instrumental (=s) and accusative (=x̌), 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 (=x̌) 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 (=x̌) is associated with internal arguments that participate in a non-initiating subevent (Non-initiators).

**Claim-II:** Instrumental case (=s) is interpretable, while accusative case (=x̌) 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 Kwak'ala 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 ?a-x-, and explain why this data motivates an asymmetrical semantic analysis in which instrumental (=s) case is interpretable and accusative (=x) 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 Kʷakʷala. 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 (=x), and alternating {=s, =x} case relations in Kʷakʷala.

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 Kʷakʷala’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 Kʷakʷala root ʼkwis- ‘snow’. The verb denotes a function of type <v, t> (from events to truth values) which returns true if and only if the input is an event of snowing.

(108) \[ [\text{kwis-}] = \lambda e..\text{snowing}(e) \]

The root ʼkwis- ‘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 qən- ‘sew’ in Kʷakʷala, 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) ʼqoni Mabel

<table>
<thead>
<tr>
<th>ʼqon</th>
<th>=i</th>
<th>Mabel</th>
</tr>
</thead>
<tbody>
<tr>
<td>sew</td>
<td>=3DIST</td>
<td>Mabel</td>
</tr>
</tbody>
</table>

‘Mabel is sewing/sewed.’

(110) ʼqoni Mabelesa walas ʼqonayu

<table>
<thead>
<tr>
<th>ʼqon</th>
<th>=i</th>
<th>Mabel</th>
<th>=s=a</th>
<th>ʼqonayu</th>
</tr>
</thead>
<tbody>
<tr>
<td>sew</td>
<td>=3DIST</td>
<td>Mabel</td>
<td>=INST=DET</td>
<td>sewing.needle</td>
</tr>
</tbody>
</table>

‘Mabel is sewing/sewed with a big sewing needle (INST).’

(111) ʼqoni Mabeleša ɬənštu qʷəmdzu'yu

<table>
<thead>
<tr>
<th>ʼqon</th>
<th>=i</th>
<th>Mabel</th>
<th>=x=a</th>
<th>ɬənštu</th>
<th>qʷəmdzu'yu</th>
</tr>
</thead>
<tbody>
<tr>
<td>sew</td>
<td>=3DIST</td>
<td>Mabel</td>
<td>=ACC=DET</td>
<td>green.colour</td>
<td>dress</td>
</tr>
</tbody>
</table>

‘Mabel is sewing/sewed a green dress (ACC).’

(112) ʼqoni Mabel lax[a] ʷakʷəna

<table>
<thead>
<tr>
<th>ʼqon</th>
<th>=i</th>
<th>Mabel</th>
<th>la</th>
<th>=x=a</th>
<th>ʷakʷəna</th>
</tr>
</thead>
<tbody>
<tr>
<td>sew</td>
<td>=3DIST</td>
<td>Mabel</td>
<td>PREP</td>
<td>=ACC=DET</td>
<td>canoe</td>
</tr>
</tbody>
</table>

‘Mabel is sewing/sewed in a canoe.’

(113) ʼqoni Mabeleša ɬənštu qʷəmdzu'yusa walas ʼqonayu lax[a] ʷakʷəna

<table>
<thead>
<tr>
<th>ʼqon</th>
<th>=i</th>
<th>Mabel</th>
<th>ɬənštu</th>
<th>qʷəmdzu'yu</th>
<th>=s=a</th>
</tr>
</thead>
<tbody>
<tr>
<td>sew</td>
<td>=3DIST</td>
<td>Mabel</td>
<td>=ACC=DET</td>
<td>green.colour</td>
<td>dress</td>
</tr>
<tr>
<td>ʼqonayu</td>
<td>la</td>
<td>=x=a</td>
<td>ʷakʷəna</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sewing.needle</td>
<td>PREP</td>
<td>=ACC=DET</td>
<td>canoe</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

‘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)

<table>
<thead>
<tr>
<th>Entity</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mabel</td>
<td>Initiator</td>
</tr>
<tr>
<td>big needle</td>
<td>Co-initiator</td>
</tr>
<tr>
<td>green dress</td>
<td>Non-initiator</td>
</tr>
<tr>
<td>canoe</td>
<td>Location</td>
</tr>
</tbody>
</table>

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 Kwak’ala, 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 Kwak’ala, Locations are introduced by the preposition la followed by =x.\(^2\) 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 Kwak’ala, 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

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\(^1\) Note, though, that not all subjects are Initiators. For instance, in the sentence topixuča k’αʔsta ‘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.
For the purpose of defining subevents here, I’ve combined the first two of these ways of thinking about event structure. 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

<table>
<thead>
<tr>
<th>Temporal dimension:</th>
<th>Initiating subevent</th>
<th>Non-initiating subevent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial bound / beginning</td>
<td></td>
<td>Final bound / end</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Causal dimension:</th>
<th>Initiating subevent</th>
<th>Non-initiating subevent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cause</td>
<td></td>
<td>Effect / result</td>
</tr>
</tbody>
</table>

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 Kₚak̓ala’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 (=x) 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. Second, there is the event role Non-initiator, which refers to an internal

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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). 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 (=x̌) case (117b).

(116) a. t̕us-xʔid Karenxʔa ?abəls
t̕us-xʔid =ī Karen =x̌=a ?abəls
cut-BEC =3DIST Karen =ACC=DET apple
‘Karen is cutting/cut the apple (ACC).’ (VF)

b. * t̕us-xʔid Karen?sʔa ?abəls
t̕us-xʔid =ī Karen =s=a ?abəls
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. bəwu̕xis la̕wanəm
bəw =u̕x =s=is la̕wanəm
leave =3MED =INST=3REFL.POSS husband
‘She left her husband (INST).’ (VF)

b. * bəwu̕xis la̕wanəm
bəw =u̕x =x̌=is la̕wanəm
leave =3MED =ACC=3REFL.POSS husband
‘She left her husband (ACC).’ (JF)

Speaker: “bəwu̕x is...? 𝕜 ’ki.” [‘No.’]

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7 What is happening in (116b), specifically, is that Instrumental case is coercing an instrumental interpretation onto the strict-accusative argument of t̕us- ‘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.
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

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 another 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.

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.

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) \( \hat{{k}}atux\) *Tedsa gamala kadayu*

\[ \begin{align*}
  & kat =u\bar{x} \quad Ted =s=a \quad gamala \quad \hat{{k}}at-\bar{a}yu \\
  & write =3\text{MED} \quad Ted =\text{INST=DET} \quad strange \quad write-\text{INST.PASS}
\end{align*} \]

‘Ted’s writing with a strange pen (INST).’ (VF)

(121) \( q^w\text{acændalu}x\) *Abby\(\hat{\text{x}}s\)a h\(\hat{\text{x}}\)ayyu la\(\bar{x}\)=a \(\text{ayændzi}x\)\(\hat{\text{x}}\)

\[ \begin{align*}
  & q^w\text{as-}(\text{g})\text{om-x}?id-la =u\bar{x} \quad Abby=\bar{x} =s=a \\
  & \text{peel-face-BEC-CONT} =3\text{MED} \quad Abby=\text{VIS} =\text{INST=DET} \\
  & h\dot{\text{om-}}\bar{a}yu \quad la =\bar{x}=s=a \quad \text{ayændzi}=\bar{x} \\
  & \text{eat-INST.PASS} \quad \text{PREP =ACC=3MED=DET} \quad orange=\text{VIS}
\end{align*} \]

‘Abby’s peeling an orange (INST) with a fork.’ (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 are 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.
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 *ʔəxʷənuqʷ*ad ‘own, be endowed with’ (126) and the argument of *cəxʷə* ‘be sick’ (127).

(126) *ʔəxʷənuqʷ*adida gənanəmesa kəʷənaq

<table>
<thead>
<tr>
<th>*ʔəxʷ-*nuqʷ-ad</th>
<th>=i=da</th>
<th>gənanəm</th>
<th>=s=a</th>
<th>kəʷənaq</th>
</tr>
</thead>
<tbody>
<tr>
<td>do-have-have</td>
<td>=3DIST=OST</td>
<td>child</td>
<td>=INST=DET spoon</td>
<td></td>
</tr>
</tbody>
</table>

‘The child owns a spoon (INST).’ (VF)

(127) *ʔəxʷidi先后* Betti le? *cəxʷəsida cancer*

<table>
<thead>
<tr>
<th>*ʔəxʷ-<em>ʔid-a-ʔən</em>la</th>
<th>=i</th>
<th>Betty</th>
<th>lo=a</th>
<th><em>cəxʷə</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>bad-BEC-A-GRAD.ADV</td>
<td>=3DIST</td>
<td>Betty</td>
<td>AUX=EMBED sick</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>=s=i=da</th>
<th>cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>=INST=3DIST=OST</td>
<td>cancer</td>
</tr>
</tbody>
</table>

‘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 *hil*- ‘fix’ (130).

(129) tus-idi Karen xa ?abals
   tus-x?id =i Karen =x=a ?abals
   cut-bec =3DIST Karen =acc=det apple
   ‘Karen is cutting/cut the apple (acc).’ (VF)

(130) hil?duitx Sara x=a kilom=kx
   hil-x?id =ux Sara =x=a kilom=ix
   fix-bec =3med Sara =acc=3med=det net=vis
   ‘Sara is fixing/fixed 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 *qon*- ‘sew’ (132); or it can measure out the event in terms of its location on a path, like the argument of *qasand* ‘walk across’ (133); or it can measure out the event in terms of some inherent scalar property, like the argument of *lomx=xid* ‘dry’ (134) (which also satisfies *change*).
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.

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

(137) həɬaxdəzəmənsən ?ump qa le? daxʔiƛə paʔə? laʔə paʔələ
dəɬaxʔə,əm =ən =s=ən ?ump qa =ən le=ʔ?
send-NMZ =1 =O.POSS=1POSS dad PREP =1POSS go=NMZ
da-xʔid =x=a paʔɨʔə? la =x=a paʔələ
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) loƛən ƛaƛ ƛədəkʷ
loƛə =ən ƛa =x=i ƛədəkʷ
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 *co*- ‘give’ entails that its Theme undergoes a change from one possessor to another possessor in the course of an event, a verb like *lo*- ‘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.
### Co-initiator Conditions

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. <strong>dependent cause</strong></td>
<td>The argument is a means by which an Initiator instigates the event</td>
</tr>
<tr>
<td>ii. <strong>initial bound</strong></td>
<td>The argument’s existence or presence with an Initiator delimits the initial bound of the event</td>
</tr>
<tr>
<td>iii. <strong>possession (initial bound)</strong></td>
<td>The argument is possessed by an Initiator at the initial bound of the event</td>
</tr>
</tbody>
</table>

### Non-initiator Conditions

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. <strong>change</strong></td>
<td>The argument undergoes some causally-induced change</td>
</tr>
<tr>
<td>ii. <strong>final bound</strong></td>
<td>The argument’s existence or presence delimits the final bound of the event</td>
</tr>
<tr>
<td>iii. <strong>possession (final bound)</strong></td>
<td>The argument comes to be possessed by the Initiator by the final bound of the event</td>
</tr>
</tbody>
</table>

**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 (=x). 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 (=x). 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).
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 (=x) 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).

An alternating argument satisfies dependent cause, change

qəsida bagʷanəm{sa, ūx} dənəm
qəs =i=da bagʷanəm {=s=a , =x=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 ćo- ‘give’ (141) realize this possibility.

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.

ləmí Ted ćicola{sa, ūx} ʔiʔayəndzis laƛə lələqʷələkə?
lə=ʔm =i ćic-ćə-la {=s=a , =x=a} ləʔqʷələkə
AUX=VER =3DIST REDUP=give-CONT {=INST=DET , =ACC=DET} ləʔqʷələkə
ʔi~ʔayəndzis la =x=a lələqʷələkə?
REDUP~orange PREP =ACC=DET lələqʷələkə
laʔqʷələkə
‘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 it 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 ń̓ik-‘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

\[
\begin{align*}
\text{ń̓ikła} & \{\text{sus, ſus}\} \text{ wald̓om̓x } \text{ʔoʔama } \text{ʔulaqʷa} \\
\text{ń̓ik-l} & \{-=s=us\} \text{, } =\text{x=us}\} \text{ wald̓om} = \text{x } \text{ʔwa=ʔm=a } \text{ʔulaqʷa} \\
\text{say-IMP } & \{-=\text{INST=2POSS\,\,\,}, =\text{x=ACC=2POSS}\} \text{ word=vis } \text{so=VER=A} \text{ quietly} \\
\text{‘Say what you said } \{\text{INST, ACC}\}, \text{ just quietly.’ (VF, VF)}
\end{align*}
\]

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. ń̓ən̓x-‘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 ƛ̓iq-‘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 Kʷakʷala 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.

\[ \text{'Shelly’s jealous of Hope’s long hair'} \]

A similar line of reasoning can be constructed to explain case alternation with Annoy Verbs\(^{15}\) 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']. \(\text{gix\textquoteleft id... gix\textquoteleft al\ell\textquoteleft du\textquoteleft x... Who’s doing it? Katie’?}\)"
KS: “Katie.”
Speaker: “Hm.”
KS: “\(\text{\textquoteleft ho\textquoteleft yulis. ’ [Always’]}\)"
Speaker: “\(\text{gix\textquoteleft al\ell\textquoteleft du\textquoteleft x Kati\textquoteleft x\textquoteleft a la\textquoteleft x\textquoteleft a... [(a)] I don’t even know what ‘door handle’ is. There is a name. kis\textquoteleft on mol\textquoteleft g\textquoteleft ala.’ [‘I don’t remember.’]}\)"
KS: “It could be any kind of knob. Or ‘hook’ even.”
Speaker: “Okay, okay, um... \(\text{gix\textquoteleft al\ell\textquoteleft du\textquoteleft x Kati\textquoteleft x\textquoteleft a la\textquoteleft x\textquoteleft a... gix\textquoteleft al\ell\textquoteleft a... gix\textquoteleft al\ell\textquoteleft du\textquoteleft x Kati\textquoteleft x\textquoteleft a la\textquoteleft x\textquoteleft a... gix\textquoteleft al\ell\textquoteleft a. ’ [(b)]}\)"

\(^{15}\) 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).
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: “qɔxˈcɑnux Hopexis qɔxˈcɑne? [(a)].”
KS: “… cánux, qɔx, qɔx… qɔxˈcɑnux…”
Speaker: “…Hopexis qɔxˈcɑne?.”
KS: “…xis qɔx…”
Speaker: “She just put it on, she put it on her wrist.”
KS: “Kay. qɔxˈcɑnux Hopexis…”
Speaker: “…qɔxˈcɑne?. ʔe?.”
KS: “qɔxˈcɑne?. Kay.”

a. qɔxˈcɑnux Hopexis qɔxˈcɑne?
    qɔxˈcɑna =uʌx Hope =x=is qɔxˈcɑn=e?
    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, qɔxˈcɑnux HopeSIS qɔxˈcɑne? [(b)]…?”
Speaker: “Didn’t we say that?”
KS: “No, we said qɔxˈcɑnux Hopexis qɔxˈcɑne?.”
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. qəxčanux Hopesis qəxčane?
qəx-čana =uš Hope =s=is qəxč-can=c?
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 be 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 (=x).

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. Therefore, we predict it will be strict-accusative and it is, as shown by its inability to appear in instrumental case (147b).

(146) a. katux Ted sa gamala kadayu
kat =uš Ted =s=a gamala kat-="ayu
write =3MED Ted =INST=DET strange write-INST.PASS
‘Ted’s writing with a strange pen (inst).’ (VF)

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. * katu̲x Ted̃a gamala̲ kadayu
   kat =u̲x Ted =̃a gamala k̃-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 garbley.”

(147) a. t̕usʔidi Kareña ?̄abøls
tus-xʔid =i Karen =̃a ?̄abøls
cut-BEC =3DIST Karen =ACC=DET apple
   ‘Karen is cutting/cut the apple (ACC).’ (VF)

b. # t̕usʔidi Kareña ?̄abøls
tus-xʔid =i Karen =s=a ?̄abøls
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 (=̃) relations come about when an argument only meets the semantic conditions for being a Non-initiator; and alternating {=s, =̃} 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 (\(=\ddot{x}\)) | 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, =\ddot{x}\}) | 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 (\(=\ddot{x}\)) 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 alteration \({=s, =\ddot{x}\} ;
   ii. Verb-argument relations in which the argument ends up WITH the Initiator at the event’s *final bound* are strict-accusative (\(=\ddot{x}\)).

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 \(\ddot{x}\ddot{x}-\), 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
Kʷakʷala’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 (=x) 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 (=x) 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 ʔəx- from Section 3.4, which are
repeated in (150)-(154) for convenience. These data illustrate the interpretive possibilities for
monotransitive predicates formed with dummy ʔəx-, 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.
<table>
<thead>
<tr>
<th>Case frame</th>
<th>Possible interpretations</th>
</tr>
</thead>
<tbody>
<tr>
<td>?əx- + INST</td>
<td>‘use something’, ‘wear something’</td>
</tr>
</tbody>
</table>

Table 4.2: Possible interpretations of monotransitive bare ?əx- predicates

(150) USE (something): =s (VF), =ʻ (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. ?əxəlox Eddiyoxlsxis ƛ̓axʷstu subayu
   ?əx-la =oʻx Eddie=ʻ =s=is ƛ̓axʷstu subayu
   DO-CONT =3MED Eddie=VIS =INST=3REFL.POSS red.colour axe
   ‘Eddie’s using his red axe (INST).’ (VF)

b. ?əxəlox Eddiyoxlsxis ƛ̓axʷstu subayu
   ?əx-la =oʻx Eddie=ʻ =x=is ƛ̓axʷstu 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), =ʻ (JF)

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

a. ?əxəlox Monicaxs dzastu Ɂwomdzuyu
   ?əx-la =oʻx Monica=ʻ =s=a dzastu Ɂwomdzuyu
   DO-CONT =3MED Monica=ACC =INST=DET blue.colour dress
   ‘Monica’s wearing a blue dress (INST).’ (VF)

b. ?əxəlox Monicax dzastu Ɂwomdzuyu
   ?əx-la =oʻx Monica=ʻ =x=a dzastu Ɂwomdzuyu
   DO-CONT =3MED Monica=ACC =ACC=DET blue.colour dress
   ‘Monica’s wearing a blue dress (ACC).’ (JF)
(152) TAKE (something): # =s (JF), =x (VF)

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

a. # ?oʔxʔidi Sheliyəsis pətə? Ɂəʔalaxde?
   ?oʔ-xʔid =i Shelly =s=is pətə=e?
   DO-BEC =3DIST Shelly =INST=3REFL.POSS medicate=NMZ
   Ɂəʔalax=ə?
   morning-R.PST=INVIS
   Intended: ‘Shelly took her medicine (INST) this morning.’ (JF)

b. ?oʔxʔidi Sheliyəxis pətə? Ɂəʔalaxde?
   ?oʔ-xʔid =i Shelly =x=is pətə=e?
   DO-BEC =3DIST Shelly =ACC=3REFL.POSS medicate=NMZ
   Ɂəʔalax=ə?
   morning-R.PST=INVIS
   ‘Shelly took her medicine (ACC) this morning.’ (VF)

(153) OBTAIN (something): # =s (JF), =x (VF)

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

a. # ?oʔxʔidi Eddiyəsa dzəmba
   ?oʔ-xʔid =i Eddie =s=a dzəmba
   DO-BEC =3DIST Eddie =INST=DET jeans
   Intended: ‘Eddie got a pair of jeans (INST).’ (JF)

b. ?oʔxʔidi Eddiyəxa dzəmba
   ?oʔ-xʔid =i Eddie =x=a dzəmba
   DO-BEC =3DIST Eddie =ACC=DET jeans
   ‘Eddie got a pair of jeans (ACC).’ (VF)

(154) DO-TO (something): # =s (JF), =x (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. # ?oʔxʔidoʔda bagʷənəməsan pəlawas
   ?oʔ-xʔid =oʔ=da bagʷənəmə =s=ən pəlawas
   DO-BEC =3MED=OST man =INST=1POSS flower
   Intended: ‘The man is doing something to my flowers (INST).’ (JF)
Recall that since ?əx- contributes no entailments of its own, any constraints on the interpretation of bare ?əx- 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 ?əx- predicates containing instrumental (=s) objects is a subset of the range of possible interpretations of bare ?əx- 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 ?əx- 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 ?əx- 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 ?əx- 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 ?əx- predicates are semantically restricted when an instrumental object is present, while ?əx- 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 ?əx- 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 ?əx- 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 ʔəx̌. 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 Kwaкла 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 \( F_{[\text{inst}]} \) — which is responsible for assigning instrumental case, along with a semantic interpretation, to the argument appearing in its specifier. The semantics associated with \( F_{[\text{inst}]} \) is stated in (155). 23

\[
(155) [F_{[\text{inst}]},] = \lambda R_{<e,v}\cdot \lambda x_v\cdot \lambda e_v\cdot R(x)(e) = 1 & x \text{ is Co-initiator of } e
\]

This \( F_{[\text{inst}]} \) 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.

\[
(156) \quad \lambda x_v\cdot \lambda e_v\cdot x \text{ is Co-initiator of } e
= (x \text{ is a dependent cause of } e) \lor (x \text{ defines the initial bound of } e) \lor (x \text{ is in the possession of an Initiator at the initial bound of } e)
\]

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-ness, while still a useful cluster concept for predicting the distribution of object case, is not a grammaticalized notion in Kwak’ala.

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, =\tilde{x}} relations in the grammar.

To understand the problem, consider the verb bəw- ‘leave’, which is an example of a verb in Kwak’ala 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. bəwuxis ɬawənəm
   bəw =ux =s=is ɬawənəm
   leave =3MED =INST=3REFL.POSS husband
   ‘She left her husband (INST).’ (VF)

b. * bəwux̣is ɬawənəm
   bəw =ux̣ =\tilde{x}=is ɬawənəm
   leave =3MED =ACC=3REFL.POSS husband
   ‘She left her husband (ACC).’ (JF)

Speaker: “bəwux̣ is...? kî.” [’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 "جاز"- ‘hang’. This prediction goes against the data in (158b), as well as many similar data presented elsewhere.

(158) a. ǧixʷʔidi Mabelesa naxʷone? la xa ǧixʷdaŋa
     ǧixʷ-xʔid =i    Mabel    =s=a naxʷ-(k)ən=ʔ
     hang-BEC =3DIST Mabel    =INST=DET wrap-body=NMZ
     la    =x=a ǧixʷdaŋa
     PREP =ACC=DET clothesline
‘Mabel hung up a blanket (inst) on a clothesline.’ (VF)

b. ǧixʷʔidi Mabeleša naxʷone? la xa ǧixʷdaŋa
     ǧixʷ-xʔid =i    Mabel    =x=a naxʷ-(k)ən=ʔ
     hang-BEC =3DIST Mabel    =ACC=DET wrap-body=NMZ
     la    =x=a ǧixʷdaŋa
     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 ʔəxʷ- predicates discussed in Sections 3.4 and 4.3. Recall that in monotransitive bare ʔəxʷ- predicates, ʔəxʷ- 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 ʔəxʷ- 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 Kʷakʷala — 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 :both ‘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 ʔəw- ‘leave’ assign lexical instrumental case to the internal argument in their complement. On this alternative analysis, the presence of F\{inst\}
alternating objects, like ġixʷ- ‘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 Kʷakʷala. 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 Kʷakʷala 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 Kʷakʷala, 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 Kʷakʷala 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. In conclusion, while the Kʷakʷala’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.

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 Kʷakʷala’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 Kʷakʷala 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

25 In Chapter 6, I will argue that Kʷakʷala 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 Kʷakʷala (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**
--- | --- | ---
Co-initiator | participant in initiating subevent | \( =_s \) object
Non-initiator | participant in non-initiating subevent | \( =_\bar{x} \) object

To participate in a subevent, it's 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 in 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.

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

**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 (=\(\bar{x}\)) 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 \(\exists\bar{x}\)-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 \(F_{\text{init}}\) as shown in (155); the specific semantic value of Co-initiator-hood is presented in (156).
(155) $[[F_{\langle \text{init}\rangle}]] = \lambda R_{\langle x,t \rangle}. \lambda x. \lambda e. R(x)(e) = 1 \& x$ is Co-initiator of $e$

(156) $\lambda x. \lambda e. x$ is Co-initiator of $e$

$= (x$ is a dependent cause of $e) \lor (x$ defines the initial bound of $e) \lor (x$ is in the possession of an Initiator 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 Kwakwala object case in place, its 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 $\Rightarrow$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 Kwakwala 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 Kwakwala 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 Kwakwala 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, its worth acknowledging that Boas’ intuition about certain $\Rightarrow$ objects semantically resembling $=\tilde{x}$ objects (e.g Boas 1947: p. 285) was clearly ahead of its time, since in the modern language, it is these same $\Rightarrow$ objects which can be alternatively expressed as $=\tilde{x}$ 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 Kwakwala 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 =x 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 Kʷakʷala.

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 Kʷakʷala’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 (=x) 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 (=x) 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 ḫx- take a strict-accusative (=x) 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: \[ \begin{array}{ccc}
\text{Initiator} & \text{Co-initiator} & \text{Non-initiator} \\
| & | & |
\end{array} \]
Syntax: Subject \(=s\) object \(=\tilde{x}\) object

Interpretation: \(x\) utilizes \(y\) to bring about some change in \(z\)
\((x\) is an \textit{Initiator}; \(y\) a \textit{Co-initiator}; \(z\) is a \textit{Non-initiator})

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 \textit{Initiator} in the course of the event. We’ll see that being direct manipulated by an \textit{Initiator} qualifies an argument as a \textit{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 \textit{Co-initiator} and its \textit{Non-initiator}, as schematized in (160).

(160) Event role: \[ \begin{array}{cc}
\text{Initiator} & \text{Co-initiator/Non-initiator} \\
| & |
\end{array} \]
Syntax: Subject \(=s\) object/\(=\tilde{x}\) object

Interpretation: \(x\) manipulates \(y\) to bring about some change in \(y\)
\((x\) is an \textit{Initiator}; \(y\) is both a \textit{Co-initiator} and a \textit{Non-initiator})

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 Kwak'ala which license the Direct Manipulation Alternation via lexical entailments: the Manipulation/Change Verbs, and the Stir/Tow Verbs.\footnote{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).}

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 *mukʷ* ‘tie’ (161), *kuxʷ* ‘fold’ (162), and *qs* ‘wind, coil’ (163).

\begin{align*}
(161) & \text{muk}^w \text{ux Simon } \{s=a}, \text{=} \{x=a\} \text{ danəm} \\
& \text{tie } =3\text{MED Simon } \{=\text{INST}=\text{DET}, =\text{ACC}=\text{DET}\} \text{ rope} \\
& \text{‘Simon tied the rope } \{\text{INST, ACC}\}. ’ \ (VF, VF)
\end{align*}

\begin{align*}
(162) & \text{kux}^w \text{sada, xada } \text{mamə} \\
& \text{fold } =1 \{=\text{INST}=\text{DET}=\text{OST}, =\text{ACC}=\text{DET}=\text{OST}\} \text{ blanket} \\
& \text{‘I’m folding blankets } \{\text{INST, ACC}\}. ’ \ (JF, VF)
\end{align*}

\begin{align*}
(163) & \text{qsida bəg'aname } \{s,a}, \text{=} \{x=a\} \text{ danəm} \\
& \text{coil/wind } =3\text{DIST}=\text{OST man } \{=\text{INST}=\text{DET}, =\text{ACC}=\text{DET}\} \\
& \text{rope} \\
& \text{‘The man is coiling/winding rope } \{\text{INST, ACC}\}. ’ \ (VF, VF)
\end{align*}

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.\footnote{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* *qayəsu* ‘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.}

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
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. dapalüx Simonxüxda ʔəmləm̪x kïläcïsida dənəm
dap-la  =üx  Simon  =x̌=üx=da  ʔəml-,əm=̌x
  tow-CONT  =3MED  Simon  =ACC=3MED=OST  play-NMZ=VIS
  kïläcï  =s=i=da  dənəm
  fishing.boat  =MEANS=3DIST=OST  rope
  ‘Simon is towing the toy fishing boat (ACC) with a rope.’ (VF)

b. dapalüx Simonx{xüda, ɣada} ʔəmləm̪x kïläcïya?
dap-la  =üx  Simon=̌x  {=s=üx=da} , =x̌=a=da}
  tow-CONT  =3MED  Simon=VIS  {=INST=3MED=OST} , =ACC=DET=OST}
  ʔəml-,əm=̌x  kïläcï-a
  play-NMZ=VIS  fishing.boat-\A
  ‘Simon is towing the toy fishing boat {INST, ACC}.’ (JF, VF)

c. dapalüx Simonx{xüda, ɣüda} dənəm̪x
dap-la  =üx  Simon=̌x  {=s=üx=da} , =x̌=üx=da}
  tow-CONT  =3MED  Simon=VIS  {=INST=3MED=OST} , =ACC=3MED=OST}
  dənəm=̌x
  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 -səw̌, while wh-questions targeting Co-initiators are formed with the voice suffix -ayu. The data in (165) show that questions formed with either -səw̌ (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 -səw̌ question targeting the Patient, and towards an -ayu question targeting the Instrument, speakers nevertheless accept either answer for both -səw̌ 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.
Wh-questions and their possible answers, with dap- ‘tow’

[Same context as (164)]

a. m̓asi dapəlasu̯weʔu̯ sux Simonx
   m̓as =i  dap-la-sow̓ =eʔ  =s=u̯x  Simon=x
   what =3DIST  tow-CONT-ACC.PASS=NMZ  =O.POSS=3MED  Simon=VIS

   ‘What is Simon towing (-sow̓)’? (VF, JF)
   Literally: ‘That which is being towed by Simon is what?’

   Possible answers: ṭəmləm kilači ‘toy fishing boat’ (preferred), dənəm ‘rope’ (also possible)

b. m̓asi dapəlayu̯weʔu̯ sux Simonx
   m̓as =i  dap-la-ayu̯ =eʔ  =s=u̯x  Simon=x
   what =3DIST  tow-CONT-INSTR.PASS=NMZ  =O.POSS=3MED  Simon=VIS

   ‘What is Simon towing with (-ayu̯)’? (VF, JF)
   Literally: ‘That which is being towed with by Simon is what?’

   Possible answers: dənəm ‘rope’ (preferred), ṭəmləm kilači ‘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 (=x) 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 itbart- ‘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*əcəm- ‘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*əcəmdalux Abbyxʷa ?ayəndzisiša hə́maya
    q*əs-(ť)əm-xʔid-la =uš Abby =xʷ=a
    peel-face-BEC-CONT =3MED Abby =ACC=3MED=DET
    ?ayəndzis=š =s=a hə́m-,ayu
    orange=VIS =MEANS=DET eat-INST.PASS
‘Abby’s peeling an orange (ACC) with a fork.’ (JF)

b. q*əcəmdalux Abbyxša hə́maya lašʷa ?ayəndzisiš
    q*əs-(ť)əm-xʔid-la =uš Abby=š =s=a
    peel-face-BEC-CONT =3MED Abby=VIS =INST=DET
    hə́m-,ayu la =xʷ=a ?ayəndzis=š
    eat-INST.PASS PREP =ACC=3MED=DET orange=VIS
‘Abby’s peeling an orange with a fork (INST).’ (VF)

c. q*əcəmdalux Abbiyəšʷa ?ayəndzisiš
    q*əs-(ť)əm-xʔid-a-la =uš Abby =xʷ=a
    peel-face-BEC-A-CONT =3MED Abby =ACC=3MED=DET
    ?ayəndzis=š
    orange=VIS
‘Abby’s peeling an orange (ACC).’ (VF)

d. #q*əcəmdalux Abbisuš ?ayəndzisiš
    q*əs-(ť)əm-xʔid-a-la =uš Abby =s=ᵘš
    peel-face-BEC-A-CONT =3MED Abby =INST=3MED
    ?ayəndzis=š
    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 =suš.” (JF)

What makes the event described by q*əcəm- ‘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 (=x̌) 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 *təpid* ‘break’, for instance, takes an internal argument which undergoes causally-induced change. 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 (=x̌) in this sentence resulted in the internal argument being interpreted as an Instrument, leading to a judgment of infelicity (167b).


a. təpididi Karenša kʷəʔsta
   təp-xʔid =i Karen =x=a kʷəʔsta
   broken-BEC =3DIST Karen =ACC=DET cup
   ‘Karen broke the cup (ACC).’ (VF)

b. # təpididi Karensa kʷəʔsta
   təp-xʔid =i Karen =s=a kʷəʔsta
   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, *təpidi Karenša kʷəʔsta.*”
KS: “Mhm [‘Yes’].”
Speaker: “*x̌a* is ‘the’.”
KS: “Mhm [‘Yes’].”
Speaker: “Yeah.”
KS: “Does *təpidi Karensa kʷəʔsta*… Does that mean that she broke WITH a cup?”

---

4 In its transitive use, that is. The verb *təpid* is derived from an underlingly stative root, *təp-‘broken’, which becomes an unaccusative when suffixed with *-xʔid* (*təpid* ‘get broken’). If an external argument is added (via zero-morphology), the verb denotes an externally-caused event (*təpid* ‘break (something)’).
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 (=x) case. This is illustrated with the same verb tøjid ‘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.

The woman broke a cup 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 yaxʔid ‘melt’. 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.

‘Then he melted some snow (ACC) to drink.’ (VF)

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5 The verb yaxʔid, like tøjid, is derived from an underlying stative root, yax- ‘melted’, which becomes an unaccusative when suffixed with -xʔid (yaxʔid ‘get melted’) and becomes an externally-caused event (yaxʔid ‘melt (something)’) when an external argument is added.
b. # yaxʔiduxsa kʷis qa naqide?
   yaʔ-xʔid =uʔ =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.

yaʔʔidi Monica{sa, xa} ƛuxʷ la̱xis ʔiʔəyəsu
yaʔ-xʔid =i Monica {=s=a , =x̌=a}
melt-BEC =3DIST Monica {=INST=DET , =ACC=DET}
ƛuxʷ la =x̌=is ʔiʔəyəsu
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). 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 qʷapid ‘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 Hopeʔa laqʷa
   kuxʷ-(x)sʔ-xʔid =i Hope=ƛ=a laqʷa
   snap-across-BEC =3DIST Hope=ACC=DET firewood
   ‘Hope snapped the firewood (ACC) in half.’ (VF)

b. kuxʷsʔəndi Hopesa laqʷa
   kuxʷ-(x)sʔ-xʔid =i Hope=s=a laqʷa
   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. qʷapidi Simone ḡa dzəmba
   qʷap-xʔid =i Simon =x=a dzəmba
   ripped-BEC =3DIST Simon =ACC=DET jeans
   ‘Simon ripped (a pair of) jeans (ACC).’ (VF)

b. qʷapidi Simone sa dzəmba
   qʷap-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, kuʷsʔənd ‘snap in half’ and qʷapid ‘rip’, are Change Verbs: they entail that their internal argument undergoes causally-induced change, so we expect them to be marked accusative (=x) 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 (=x) on the basis of verbal entailments are able to undergo case alternation in contexts where the argument is directly manipulated by an Initiator. 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 Kʷakʷala, and is schematized in (173).

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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.
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 Ḵʷaḵ̓ala which licenses the Caused Motion Alternation via lexical entailments is the class of Transfer Verbs. 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 nap- ‘throw’ (174), lax- ‘sell’ (175), and ḥawʷənt- ‘bestow, give charitably’ (176).

(174) napidida babagašame{sa, xa} siwayu laxa cācadaqəm
nap-xʔi{id} =i=da babagašam {=s=a , =x=a}
throw-BEC =3DIST=OST little.boy {=INST=DET , =ACC=DET}
sixʷ-ayu la =x=a cācadaqəm
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 nap- ‘throw’ and ḥələ̓qs- ‘send’ can occur either with a Location or Recipient, while verbs of Giving (e.g. əɨ ‘give’, yaqʷ- ‘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 (=x) 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.
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). 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

<table>
<thead>
<tr>
<th>tₙ</th>
<th>tₙ₋₁</th>
<th>tₙ₋₂</th>
<th>...</th>
<th>t₁</th>
<th>‘time line’</th>
</tr>
</thead>
</table>
| locₙ | locₙ₋₁ | locₙ₋₂ | ... | loc₁ | ‘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:\footnote{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).}

“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.\footnote{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).} 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 \textit{possessed (initial bound)} and the Non-initiator criterion \textit{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 Kʷakʷala, 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 \textit{la} phrase in the ‘b’ examples is interpreted as a Path, while in the ‘a’ examples it is interpreted as a Location.\footnote{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 \textit{-xʔid}, and \textit{-xʔid} is not necessary in the derivation of ‘put’ predicates.}
(178) ǧixʷ- ‘be hanging (a); hang (b)’

a. ǧixʷaɬən qəsone? la xuɨda ǧiwayuʃ
  ǧiʃʷ-ən qəsone? la =x=u=da
  hanging-STAT =1POSS shirt PREP =ACC=3MED=OST
  ǧiʃʷ-əuʃ=ʃ
  hanging-INST.PASS=VIS

’a.

b. ǧixʷidi Mabele{sa, ŋa} nəxʷəone? la xa ǧiʃʷədaŋa
  ǧiʃʷ-xʔid =i Mabel {=s=a , =x=a}
  hanging-BEC =3DIST Mabel {=INST=DET , =ACC=DET}
  nəxʷ-(k)ən=əʔ la =x=a ǧiʃʷədaŋa
  wrap-body=NMZ PREP =ACC=DET clothesline

b.

‘My shirt is hanging on the clothesline.’ (VF)

(179) ʔəxʷəl- ‘be on surface (a); put on surface (b)’

a. ʔəxʷəla digilə la xuɨda həmxdəmiliɫx
  ʔəx̌-əl =i=da di-(g)ila-əci
  DO-on.surface =3DIST=OST tea-make-container
  la =x=u=da həmxdəmili=ʃ
  PREP =ACC=3MED=OST table=VIS

’a.

b. ʔəxʷəlu=ʌx Katiyəx{suʃda, xʷa} ʔətomlə la xuʃ ʔaʃaʃa ʔəcəwəs
  ʔəxʷ-əl-xʔid =u=ʃ Katie=ʃ {=s=ʃ-da , =x=a}
  DO-on.surface-BEC =3MED Katie=VIS {=INST=3MED=OST , =ACC=DET}
  ʔətomlə la =x=u=ʃ ʔaʃa=ʔ=ʃ =s=a
  hat PREP =ACC=3MED back=NMZ=VIS =3POSS=DET
  kʷə-əqə-as
  sit-inside-LOC.PASS

‘Mabel hung up a blanket {INST, ACC} on a clothesline.’ (VF, JF)

b.

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, ʔʷəʔsta ‘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’).
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 (=x) 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) hemi Stevie ḡʷašašada məlik, nugʷatə dzupašada məlik, dzupačus lašida ḥəmxɑšgəm
he=ʔm =i Stevie ḡʷašaš-a =x=a=da məlik
be.3DIST=VER =3DIST Stevie fillet-A =ACC=DET=OST sockeye
nugʷatə dzupa-A =x=a=da məlik dzupa-ču
be.1=but can-A =ACC=DET=OST sockeye can-inside
= s la =x=i=da ḥəmxɑšgəm
=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 (=x) acquire the ability to alternate in the vicinity of a Path-denoting PP.

Example (183) involves the verb ṣq̃əyək- ‘kick’. When used as a transitive Verb of Contact, ṣq̃əyək- takes a strict-accusative (=x) 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) ṣq̃əyək- ‘kick’

a. ṣq̃əyəxʔidi Simonaʔa lu̲xʷsam ʔaq̃əyəkasu?
    ṣq̃əyək-xʔid =i Simon =x=a lu̲xʷsam ṣq̃əyək-a-səw  
    kick-BEC =3DIST Simon =ACC=DET spherical kick-A-ACC.PASS
    ‘Simon is kicking a ball (ACC).’ (VF)

b. # ṣq̃əyəxʔidi Simonasa lu̲xʷsam ʔaq̃əyəkasu?
    ṣq̃əyək-xʔid =i Simon =s=a lu̲xʷsam ṣq̃əyək-a-səw  
    kick-BEC =3DIST Simon =INST=DET spherical kick-A-ACC.PASS
    Intended: ‘Simon is kicking a ball (INST).’ (JF)

    Speaker: “Uhm, no. ṣq̃əyəxʔidi sis gugʷəyəʔoʔa.sa [‘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. ṣq̃əyəksudi Simona{sa, xə} lu̲xʷsam ʔaq̃əyəkasu? laʔa hən̂x̂soləs
    ṣq̃əyək-(x)so-xʔid =i Simon {=s=a , =x=a}
    kick-through-BEC =3DIST Simon {=INST=DET , =ACC=DET}
    lu̲xʷsam ṣq̃əyək-a-səw la =x=a hən̂x̂-(x)so-laʔas  
    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 =x] “Oh yeah. ḡʷixʔidaʔasnuxʷəʔm [‘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 (=x) 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. daluxda ćədaqeq əx kʷəʔsta
da-la =uxt=da ćədaq =x=a
take.in.hand=CONT =3MED=OST woman =ACC=DET
cup
‘The woman is holding a cup (ACC).’ (VF)

b. # dali Karenespa Ɂawas
da-la =i Karen =s=a Ɂawas
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:lason ܽyənasəsa ćədaq? ʔekaqilaqʷəa Ɂəʔoći, gaχeʔe ɬas daxʔideʔxən Ɂəcɨx…
walas =ən ܽyənas-a =s=a ćədaq=iʔ ʔekaqila
big/very =1 amazed-A =INST=DET woman=INVIS take.good.care
=ɬxʷəa Ɂəʔoći gaχ=a=i qa =is
=ACC=3MED=DET dog.PL come=EMBED=3DIST PREP =3REFL.INST
da-xʔid=eʔ =ɬ=x=g=ən Ɂəcɨx Ɂawas
take.in.hand=BE=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)

…ɬu:muχ Ɂəxəqa, qəs le? daxʔisux laχada dagʷada.
ɬum =uxt Ɂəxəqa qa =is la=iʔ
really =3MED sick PREP =3REFL.POSS go=NMZ
da-xʔid =s=uxt la =ɬx=a=da dagʷada
take.in.hand=BE=NMZ =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 ɬəqʷ- ‘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 (=x) 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) Ṽaqʷ- ‘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. Ṽaqʷi Eddi̱xa kʷa̱las, ̱ʔiw?stå we̱l y̱aw̱ix̱ʔidq
   Ṽaqʷ =i Eddie =x=a kʷə̱lʔas ̱ʔiw?stå
   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. # Ṽaqʷi Eddi̱sa kʷaḻas
   Ṽaqʷ =i Eddie =s=a kʷə̱lʔas
   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.

   Ṽaqʷi Eddi̱λə Shelli¡̱{sa, ̱xa} kʷa̱las lə̱xə hə̱miksiləʔas
   Ṽaqʷ =i Eddie ̱λə̱ =i Shelly {=s=a,
   push =3DIST Eddie COMJ =3DIST Shelly {=INST=DET,
   =x=a} kʷə̱lʔas la =x=a
   =ACC=DET} prone-LOC.PASS PREP =ACC=DET
   hə̱m-kši-laʔas
   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 (=x) 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 (=x) case. Example (186) illustrates this possibility with the verb ű̱ls-∗‘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
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. puxʷuŋ Mabelaŋʷa yusaŋ
   puxʷ =ux  Mabel   =xʷ=a  yusa=x
   blow =3MED  Mabel  =ACC=3MED=DET soup=ACC
   Can only mean: ‘Mabel blew on the soup (acc).’ (VF)
b.   # puxʷux Mabelasa yusax
    puxʷ =ux  Mabel =s=a  yusax=ɨx
    blow =3MED  Mabel =INST=DET soup=ACC
Speaker: “ki. ['No.'] puxʷux Mabelaxʷa yusax [(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.

pukʷstowi Shelli{sa, Ÿa} lolinox hamumu la xa ʔasanyi
pukʷ-(x)so =i Shelly {=s=a, =x=a}
    blow-through =3DIST Shelly {=INST=DET, =ACC=DET}
    lolinox hamumu la =x=a ʔasanyi
    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 ?əskə ‘sneeze’ appears with an alternating Theme argument and a Path-denoting PP.

(189) ?əskə ‘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!

ləmi Monica ?əksi{sa, Ÿa} dígomyu la xa tebal la xa ?əwiña?gʷiɬ
la=ʔm =i Monica ?əsx-ʔi{id {=s=a , =x=a} dígomyu
AUX=VER =3DIST Monica sneeze-BEC {=INST=DET , =ACC=DET} tea.towel
la =x=ʷ=ə tebal la =x=a ?əwiña?gʷiɬ
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 K*ak*ala 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 ?əx- 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]

luŋ Katiyəx ?əx?idsuŋda ḷətəml laŋa ṣəδσa či
lə =uŋ Katie=ʃ ?əx-x?id =s=ux=da ḷətəml
AUX =MED Katie=VIS DO-BEC =INS=MED=OST hat
la =x=w=a ṣəδσa či
PREP =ACC=MED=DET cold-container

‘Katie is putting the hat (inst) into the fridge.’ (VF)

(191) PUT (something)(somewhere): =x, la

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

luŋ Katiyəx ?əx?idxuŋda ḷətəml laŋa ṣəδσa či
lə =uŋ Katie=ʃ ?əx-x?id =x=ux=da ḷətəml
AUX =MED Katie=VIS DO-BEC =ACC=MED=OST hat
la =x=w=a ṣəδσa či
PREP =ACC=MED=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 ḥəx- 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 (=x) (192b).

(192) Case marking in -(g)ila predicates

<table>
<thead>
<tr>
<th>Stem</th>
<th>Suffix</th>
<th>Object case</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. ḥəx-</td>
<td>-(g)ila</td>
<td>*INST, ACC</td>
<td>‘to make (something)’</td>
</tr>
<tr>
<td>b. N-</td>
<td>-(g)ila</td>
<td>INST, ACC</td>
<td>‘to N-make an N’</td>
</tr>
</tbody>
</table>

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 đənəx- ‘sing’, ṣəxʷ- ‘dance (in the Bighouse)’, and ḥəmtl- ‘play (a game)’, which in Kʷakʷala 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 Kʷakʷala 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 Kʷakʷala which allow productive incorporation of nominal stems. An example of a -(g)ila predicate with an incorporated nominal, ḥəubəkʷ ‘BBQ-ed salmon’, is shown in (193). When a nominal is not incorporated, -(g)ila attaches to the dummy root ḥəx- ‘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. ḥm- ‘eat’, ḥəməgila ‘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.

'...doing two things at once; she’s cooking potatoes in the kitchen, and barbecuing salmon outdoors.' (VF)

(194) ‘She’s cooking potatoes and BBQ salmon-making outdoors.’ (VF)

(195) *?ə̱xilo̱xda ə̱daq
?ə̱x-(g)ila =ə̱x̌=da ə̱daq
DO-make =3MED=OST woman

Literally: ‘The woman is making.’ (JF)

Speaker: “But what is she ə̱xila?”

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 nə̱xʷə̱ne ‘blanket’. The expression of the object is optional in these predicates, as shown in (197b).

When -(g)ila attaches to the dummy root ə̱x-, expression of an object is obligatory (195).

(196) ə̱x-(g)ila takes a strict-accusative (=x) object

a. ə̱x?iliux Hopə̱xʷa ə̱ulaə̱ nə̱xʷə̱ne?
ə̱x-(g)ila =u̱x Hope =ɵx̌=a ə̱ula=ə̱ nə̱xʷ-(k)ə̱n=e?
DO-make =3MED Hope =ACC=3MED=DET black=VIS wrap-body=NMZ

‘Hope is making a black blanket (ACC).’ (VF)
b. # ?ɑ̃ʔiļux Hopišsxuč ʰuļič nɑxʷəne?

| 2g-(g)ila | ũx | Hope=̃x | =s=ux | ʰuļa=̃x | nɑxʷ-(k)ən=e? |
| 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 , =x } object

a. nɑxʷəne?gilux Hopĩx ʰuļič nɑxʷəne?

| nɑxʷ-(k)ən=e?- (g) ila | ũx | Hope=̃x | =s=a , =x=a |
| wrap-body=NMZ-make | =3MED | Hope=VIS | =INST=DET , =ACC=DET |

‘Hope is blanket-making a black blanket {INST, ACC}.’ (VF, JF)

b. nɑxʷəne?gilux Hopĩx

| nɑxʷ-(k)ən=e?- (g) ila | ũx | Hope=̃x |
| 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 ʰuļičʷənagilə ‘canoe-make’ in the first sentence being referred back to by the pronominal object form =xʷ 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.

| xʷakʷənagilən waxa. kešən ʰgʷalamasəxʷ | xʷakʷəna-(g) ila | øn wax-a | kiʔs=tə | øn ʰgʷal-a-mas | =x=w |
| 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 ʰgukʷila (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) *gukʷila ‘build’ takes a strict-accusative (=\(\tilde{x}\)) object

a.  gukʷilux Eddiyax \(\tilde{x}\)a ?a\(m\)=c? gukʷ  
gukʷ-(g)ila =u\(\tilde{x}\) Eddie=\(\tilde{x}\) =\(\tilde{x}\)=a ?a\(m\)=c? gukʷ  
house-make =3MED Eddie=VIS =ACC=DET small=invis house  
‘Eddie is building a small house (ACC).’ (VF)

b.  *gukʷilux Eddiyaxsa ?a\(m\)=c? gukʷ  
gukʷ-(g)ila =u\(\tilde{x}\) Eddie=\(\tilde{x}\) =s=a ?a\(m\)=c? gukʷ  
house-make =3MED Eddie=VIS =INST=DET small=invis house  
*Intended: ‘Eddie is building a small house (INST).’ (JF)

Speaker: “\(k\tilde{i}.\)” [‘No.’]

(200) *gukʷila ‘build’ can marginally take a non-hyponymous object

a.  ? gukʷili Eddixa qa\(q\)u\(\tilde{\alpha}\)a?as  
gukʷ-(g)ila =i Eddie =\(\tilde{x}\)=a qa\(q\)u\(\tilde{\alpha}\)a?as  
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.”

b.  * gukʷili Eddisa qa\(q\)u\(\tilde{\alpha}\)a?as  
gukʷ-(g)ila =i Eddie =s=a qa\(q\)u\(\tilde{\alpha}\)a?as  
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 *gukʷila 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 *gukʷila 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 Kw̓ak̓ala, 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. ʔuʔiicʔišʔał haʔum ?aapinis  Nuu-cha-nulth
       ʔu-ʔiicʔišʔał haʔum ?aapinis
       ∅-consume-3.IND-PL tasty apples
       ‘They are eating delicious apples.’ (Wojdak 2008: p. 43)

b.  *ʔuʔiicʔišʔał ?aapinis haʔum  Nuu-cha-nulth
    ʔu-ʔiicʔišʔał ?aapinis haʔum
    ∅-consume-3.IND-PL apples tasty
    ‘They are eating delicious apples.’ (Wojdak 2008: p. 43)

(202) a. ʔaapiniʔiicʔišʔał  Nuu-cha-nulth
       ?aapinis-ʔiicʔišʔał
       apples-consume-3.IND-PL
       ‘They are eating apples.’ (Wojdak 2008: p. 44)

b. *ʔaapiniʔiicʔišʔał haʔum  Nuu-cha-nulth
    ?aapinis-ʔiicʔišʔał haʔum
    apples-consume-3.IND-PL tasty
    *Intended: ‘They are eating delicious apples.’ (Wojdak 2008: p. 44)

(c. haʔumʔicʔišʔał ?aapinis  Nuu-cha-nulth
   haʔum-ʔiicʔišʔał ?aapinis
   tasty-consume-3.IND-PL apples
   ‘They are eating delicious apples.’ (Wojdak 2008: p. 43)

Though Kw̓ak̓ala 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.
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 naxʷoneʔ ‘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.

If the predicate naxʷonegila 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.

(203) a. *čultugilux Hopix̂a naxʷoneʔ?
    čultu-gila =uš Hope=č =č=a naxʷ-(k)an=eʔ
    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. *naxʷoneʔgilux Hopix̂a čultuwa?
    naxʷ-(k)an=eʔ-gila =uš Hope=č =č=a čultu=aʔ
    wrap-body=NMZ-make =3MED Hope=VIS =ACC=DET black=INVIS
    Intended: ‘Hope is making/made a black blanket (ACC).’ (JF)

c. *naxʷoneʔgilux Hopisa čultuwa?
    naxʷ-(k)an=eʔ-gila =uš Hope=č =s=a čultu=aʔ
    wrap-body=NMZ-make =3MED Hope=VIS =INST=DET black=INVIS
    Intended: ‘Hope is making/made a black blanket (INST).’ (JF)
5.4.2 Case alternation and the semantics of Performance Verbs

In order to understand how, exactly, nominal incorporation licenses case alternation, its 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 ʔə 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 ʔə ila predicate will be strict-accusative (=x̌) 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 ila (Literally: ‘house-make’) behaves like ʔə ila 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 Kʷala 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 dənx- ‘sing’, ʔəm- ‘play’ (as in ‘play a game’), and yəxʷ- ‘dance (in the Bighouse)’, shown in (205)-(207) below. Other members of this class include gət- ‘draw, create (artwork)’, kakadəkʷsilə ‘read (aloud)’, lip- ‘play cards’, and nus- ‘tell history or legends’.

(205) dənxəlux Mabelə {sa, xa} ṣəmdəm
   dənx-la =ux Mabel=x =x=a ṣəmdəm
   sing-CONT =3MED Mabel=VIS {=INST=DET, =ACC=DET} song
   ‘Mabel’s singing a song {INST, ACC}.’ (VF, VF)

(206) yəxʷox Shelliyəx {sa, xa} ɬəlqʷəla
   yəxʷ =ox Shelly=x {=s=a, =x=a} ɬəlqʷəla
   dance =3.MED Shelly=VIS {=INST=DET, =ACC=DET} ladies’dance
   ‘Shelly is dancing the ladies’ dance {INST, ACC}.’ (VF, VF)

(207) ?əmlən {sa, xa} Backgammon
   ?əml =ən {=s=a, =x=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 (=x) 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 events 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 donx- ‘sing’ name both the way in which the event is expressed or instantiated and functions to measure out the event, so too does the naxʷone? (‘blanket’) in a naxʷone?gila (‘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 Kʷakʷala, 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 Kʷakʷala. 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 Initiator in the course of the event | An otherwise strict-accusative (=x) argument acquires the ability to undergo \{=s, =x\} 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 (=x) argument acquires the ability to undergo \{=s, =x\} alternation; OR the presence of an alternating object is licensed where it otherwise wouldn’t be possible |
Semantic incorporation with -(g)ila ‘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 (=x) argument acquires the ability to undergo \{=s, =x\} 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 Kwak’ala 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 Kwak’ala. To do this, I’ll need to zoom out and consider Kwak’ala’s object case system from a wider, cross-linguistic perspective.
6
Kwak’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 Kwak’wala. The purpose of the current chapter is to zoom out and see Kwak’wala’s object case system in cross-linguistic perspective, to understand what the Kwak’wala system reveals about language in general.

The first finding that emerges when we begin to compare Kwak’wala’s object case system with case systems in other languages is that the Kwak’wala system is, in some ways, unique. To the best of my knowledge, Kwak’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 Kwak’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 Skwxwú7mesh (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 (Aydımir 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, Kwak’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 Kwak’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 Kwak’wala’s object case system and the partitive-accusative object case system in Finnish, which I’ll show is, semantically-speaking, the mirror

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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 Kwak’wala’s in the relevant respects.
opposite of Kʷakʷala’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 Kʷakʷala.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 Kʷakʷala object case that is based off of the analysis Kratzer (2004) provides for Finnish.

Seen in the light of this mirror opposition, Kʷakʷala 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; Kʷakʷala, 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 Kʷakʷala’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 Kʷakʷala, as opposed to Finnish, accusative case is uninterpretable. In particular, I show that in Kʷakʷala, 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 Kʷakʷala.

• In Section 6.4, I enumerate the specific ways in which the Kʷakʷala 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 Kʷakʷala. 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 Kʷakʷala is a hybrid structural-inherent case.

• In Section 6.5, I show that Kʷakʷala’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 Kʷakʷala speakers have at their disposal for communicating telicity. I argue there that there is no compelling evidence for telicity being grammaticalized at all in Kʷakʷala.
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 Kwak’ala 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 Kwak’ala.

By the end of this chapter, the reader should understand how Kwak’ala’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 Kwak’ala, has two object cases: partitive and accusative. In this section, I’ll provide an outline of the semantic analysis of these cases developed in work by Leino (1982), 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). 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’.

(208) Telic verbs (strict-accusative) (Kiparsky 1998, p. 281)

<table>
<thead>
<tr>
<th>Verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>ostaa ‘buy’</td>
</tr>
<tr>
<td>ottaa ‘take’</td>
</tr>
<tr>
<td>pudottaa ‘drop’</td>
</tr>
<tr>
<td>suorittaa ‘carry out’</td>
</tr>
<tr>
<td>kadottaa, menettää, hukata ‘lose (possession)’</td>
</tr>
<tr>
<td>häävitä ‘lose (game, fight)’</td>
</tr>
<tr>
<td>löytää ‘find’</td>
</tr>
</tbody>
</table>

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.
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)  

(209) a. löysin virheen  
I-found mistake.ACC  
‘I found a/the mistake (ACC).’ (Heinämäki 1994: p. 212)

b. * löysin virhettä  
I-found mistake.PART  
*Intended: ‘I was finding a/the mistake (PART).’ (Heinämäki 1994: p. 212)

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.

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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* *piirakka* ‘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:** *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], 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)

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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  
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  
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  
I-shook carpets.ACC 
‘I shook the carpets (ACC).’ (Heinämäki 1994: p. 214)

b. * ravistin jalkani  
I-shook legs.ACC.my 
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*
   Johanna read herself.ACC

b. Johanna luki juristiksi
   Johanna read lawyer.to
   ‘Johanna read (herself) (to be) a lawyer.’ (Heinämäki 1994: p. 215)

c. Johanna luki itsensä juristiksi
   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   \textit{Finnish}
\begin{verbatim}
I-read book.ACC / book.PART
\end{verbatim}
‘I read (all) the book (ACC) / I was reading the book (PART).’
\footnote{Heinämäki 1994: p. 221}

b. en lukenut *kirjan / kirjaa   \textit{Finnish}
\begin{verbatim}
NEG-I read book.ACC / book.PART
\end{verbatim}
‘I did not read the book (*ACC)(PART).’ \footnote{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 \textit{viiteen mennessä} ‘by five’ and \textit{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 / päivässä, päätimme ostaa sellaisen
\textit{Finnish}
\begin{verbatim}
When Ulla not sent us.to book.PART five
\end{verbatim}
‘When Ulla did not send us the book (PART) by five/in a day, we decided to buy a copy.’
\footnote{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  \textit{Finnish}
\begin{verbatim}
buy-PST-1SG newspaper-SG.ACC and book-PL-PART
\end{verbatim}
‘I bought the/a newspaper (ACC) and books (PART).’ \footnote{Kiparsky 1998: p. 275}
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
  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)

Recall that with inherently telic verbs, only accusative case is possible on objects. 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). 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
    get-1SG bear-PL.ACC
    ‘I’ll get the bears (ACC).’ (Kiparsky 1998: p. 268)

  b. saa-n karhu-j-a
    get-1SG bear-PL-PART
    ‘I’ll get bears (PART).’ (Kiparsky 1998: p. 268)

(223) a. löysin veden
    I-found water.ACC
    ‘I found the water (ACC).’ (Heinämäki 1994: p. 212, 223)

  b. löysin vettä
    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.
The NP-partitive contributes a meaning of quantitative indefiniteness in the nominal domain and as such, is not inherently associated with boundedness or unboundedness in the VP domain. Nevertheless, when the DP-partitive appears on the object of an alternating verb, its meaning interacts with the semantics of the VP and forces an unbounded interpretation of the event. This occurs because there is no way for an unbounded referent to be mapped onto the run-time of a bounded event, as doing so would require imposing a bound on the referent. Thus, while partitive-marked objects can be interpreted as bare plurals (224a), accusative objects can never be (224b).

(224) a. ammu-i-n karhu-j-a
    shoot-PST-1SG bear-PL-PART
    ‘I shot at (the) bears (PART).’ (Kiparsky 1998: p. 267)

b. ammu-i-n karhu-t
    shoot-PST-1SG bear-PL.ACC
    ‘I shot the bears (ACC).’ (Kiparsky 1998: p. 267)

Thus, even though the DP-internal partitive is a semantic case for nominals, its presence on an object can interact in certain circumstances with the aspectual interpretation of the VP.

In short, I’ve just described two environments in which partitive case is obligatory. First, partitive case is obligatory in the scope of negation, where it is syntactically required (Heinämäki 1984: p. 167-170). Second, there is a separate use of partitive case as a DP-internal semantic case for indicating quantitative indefiniteness. I have reproduced data and argumentation showing that these two uses of the partitive on objects require a separate analysis from the analysis of the object partitive offered above. I conclude that these two uses of partitive do not constitute a problem for that analysis.

In summary, the object case system in Finnish consists of two object cases: interpretable accusative case, and uninterpretable partitive case. Accusative case on an object entails the existence of a bound, while partitive case on an object implicates that an event is unbounded but is semantically consistent with either bounded or unbounded event descriptions. Instances of partitive under negation and DP-internal partitive do not interfere with this analysis.

Having arrived at an understanding of the Finnish object case system on its own terms, we’re in a position to see how the properties of this system relate to properties of the Kʷakʷala object case system. Using the terminology developed in Chapter 4, we can say that Finnish accusative case signals an argument’s participation in a non-initiating subevent — in particular, accusative leads to an interpretation of the argument as defining the event’s final bound, in some way. Partitive case, on the other hand, is an uninterpretable default case. In terms of its semantics, this makes the Finnish system the mirror opposite of the Kʷakʷala system: while Kʷakʷala possesses an interpretable case tied to the initiating phase of an event, Finnish possesses an interpretable case tied to the non-initiating phase of an event. Given that the object case systems of Kʷakʷala and Finnish are mirrored in this way, we might expect Kʷakʷala to exhibit mirror-opposite properties relative to Finnish as far the interpretation of telicity is concerned. We’ll see in the next section that this prediction is borne out.
6.3 Object case and telicity in Kʷakʷala

We’ve just seen that in Finnish, accusative case is interpretable and entails telicity. In Kʷakʷala on the other hand, accusative case is uninterpretable. We might expect, then, for Kʷakʷala to differ significantly from Finnish in how it encodes telicity. In this section, I’ll demonstrate two ways that Kʷakʷala 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 Kʷakʷala (Section 6.3.1). Following this, I’ll show that the semantic properties of nominal objects have no effect on object case realization in Kʷakʷala (Section 6.3.2).

6.3.1 The independence of object case and telicity

Given the existence of an association in Kʷakʷala 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 Kʷakʷala. 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 qəpɨd ‘pour’ and ?oxʔal- ‘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. qəp?id waxi Mabelea məlk, kʔsta wel loʔco
   qəp-xʔid wax =i Mabel =s=a məlk
   spill-BEC try =3DIST Mabel =INST=DET milk
   kʔs=ta wel loλ-ʔu-a
   NEG=but ABIL obtain-inside-A
   ‘Mabel tried to pour the milk (INST), but it didn’t come out.’ (VF)

b. qəp?id waxi Mabelʔa məlk, kʔsta wel loʔco.
   qəp-xʔid wax =i Mabel =x=ʔa məlk
   spill-BEC try =3DIST Mabel =ACC=DET milk
   kʔs=ta wel loλ-ʔu-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. ?oʔʔaludənʃuʔda digilaʔi xaxida həmxʔamənil
   ?oʔʔ-al-xʔid =on =s=ʔuʔ=da di-gilaʔ,ʔaʔi=ʔ
   DO-on-BEC =l =INST=3MED=OST tea-make-container=VIS
   la =ʔ=i=da həmxʔamənil
   PREP =ACC=3DIST=OST table
   ‘I put the teapot (INST) down on the table.’ (JF)

b. ?oʔʔaludənxuʔda digilaʔi xaxida həmxʔamənil
   ?oʔʔ-al-xʔid =on =ʔuʔ=da di-gilaʔ,ʔaʔi=ʔ
   DO-on-BEC =l =ACC=3MED=OST tea-make-container=VIS
   la =ʔ=i=da həmxʔamənil
   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.

\[\text{tap-xʔid} =\text{i}=\text{da} \quad \text{c̓ədaq} \{\text{=s}=\text{a} , \text{=x}=\text{a}\} \]
\[\text{broken-BEC} =\text{3DIST}=\text{OST} \quad \text{woman} \{\text{=INST}=\text{DET} , \text{=ACC}=\text{DET}\} \]
\[\text{kʷəʔsta} \quad \text{la} =\tilde{x}=\text{is} \quad \text{dzik-əʔuyu} \]
\[\text{cup} \quad \text{PREP} =\text{ACC}=\text{3REFL.POSS} \quad \text{dig-INST.PASS} \]

The woman broke a cup \{\text{INST}, \text{ACC}\} on her digging stick.’ (VF, VF)

(229) KS: And how would we say, ‘Monica filled the balloon with water’…?

\[\text{ləmux quṭamas} \{\text{sida, xida}\} \quad \text{wap} \quad \text{la} \text{xı́ʔid} \text{puxʷə̓ns} \]
\[\text{Aux}=\text{VER} =\text{3MED} \quad \text{full-A-CAUS} \{\text{=INST}=\text{3DIST}=\text{OST} , \text{=ACC}=\text{3DIST}=\text{OST}\} \]
\[\text{wap} \quad \text{la} =\tilde{x}=\text{i}=\text{da} \quad \text{puxʷə̓ns} \]
\[\text{water} \quad \text{PREP} =\text{ACC}=\text{3DIST}=\text{OST} \quad \text{balloon} \]

‘Then she filled the balloons with water \{\text{INST}, \text{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) Kʷakʷalal Transitions (Greene 2013:97)

\[\text{co-} \quad \text{‘give’}\]
\[\text{dulo-} \quad \text{‘win’}\]
\[\text{bəw-} \quad \text{‘leave’}\]
\[\text{xəs-} \quad \text{‘become lost’}^{15}\]
\[\text{gax-} \quad \text{‘come’}\]
\[\text{lagəʔa-} \quad \text{‘arrive’}\]
\[\text{galəʔal-} \quad \text{‘start’}\]
\[\text{gʷəł-} \quad \text{‘finish’}\]
\[\text{qə-} \quad \text{‘find’}\]

If object case were associated with (a)telicity in Kʷakʷalal, we would expect all transitive transition verbs to be strict-accusative. However, this prediction is not borne out. From the

\[^{15}\text{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’}.

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verbs in (230), only *dulo- ‘win’* (231) and *q̓a- ‘find’* (232) consistently take accusative objects. On the other hand, the verb *gax- ‘come’* (233), *bəw- ‘leave’* (234) takes an object which speakers judge to be strict-instrumental, and *čo ‘give’* (235) takes an alternating object.

(231) dulowida gudanəx dza~dzəlxʷəp
\[\text{dulo} = \text{i-da} \quad \text{gudan} = \text{ʔ=x=a} \quad \text{dza~dzəlxʷ-a-p}\]
\[\text{win} = \text{3DIST=DET} \quad \text{horse} = \text{ACC=DET REDUP-run-try-RECIP}\]
‘The horse won the race (ACC).’ (VF)

(232) q̓a~ʔm Katiyəxus dalači
\[\text{q̓a=ʔm} = \text{i} \quad \text{Katie} = \text{ʔ=x=us} \quad \text{dala-či}\]
\[\text{find=VER} = \text{3DIST} \quad \text{Katie} = \text{ACC=3REFL.POSS money-container}\]
‘Katie did find her wallet (ACC).’ (VF)

(233) hedi sił̓əm ga̱xsa nan̓q̓uma
\[\text{he=d} = \text{i} \quad \text{sił̓əm} \quad \text{ga̱x} = \text{s=a} \quad \text{n~naq-uma}\]
\[\text{REDUP-drink-NMZ}\]
‘It’s the snake who brought the drinks (INST).’ (Littell 2016, p. 548)

(234) a. ləмуx Hannah̊luwuθ Katiyəx bolcu̱x ca̱xisəx
\[\text{lə?=ʔm} = \text{u̱x} \quad \text{Hannah=ʕx} \quad \text{λəw} = \text{u̱x} \quad \text{Katie=ʕx} \quad \text{AUX=VER} = \text{3MED} \quad \text{Hannah=VIS CONJ=3MED} \quad \text{Katie=VIS}\]
\[\text{bəw=x} \quad = \text{s=u̱x} \quad \text{ca̱xis=x} \quad \text{leave=FUT} = \text{INST=3MED} \quad \text{Fort.Rupert=VIS}\]
‘Hannah and Katie are gonna leave Fort Rupert (INST).’ (VF)

b. # bəwu̱xis la̱wanəm
\[\text{bəw} = \text{u̱x} \quad = \text{ʕ=x=is} \quad \text{la̱wanəm}\]
\[\text{leave=3MED} = \text{ACC=3REFL.POSS husband}\]
*Intended:* ‘She left her husband (ACC).’ (JF)

**Speaker:** “bəwu̱x is...? ʻi.” ['No.‘]

(235) čowu̱x Shelli{sis, ʔis} dzastu ʔʷəmdzu̱yu̱ la̱xuθ Vicki
\[\text{čo} = \text{u̱x} \quad \text{Shelly} \quad \text{=s=is} \quad = \text{ʕ=x=is}\]
\[\text{give} = \text{3MED} \quad \text{Shelly} \quad \{=\text{INST=3REFL.POSS}, =\text{ACC=3REFL.POSS}\}\]
\[\text{dzastu} \quad ʔʷəmdzu̱yu̱ \quad \text{la} = \text{ʕ=x=u̱x} \quad \text{Vicky}\]
\[\text{blue.colour} \quad \text{dress PREP} = \text{ACC=3MED} \quad \text{Vicky}\]
‘Shelly is giving/gave her blue dress {INST, ACC} to Vicki.’ (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 *ga̱x- ‘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 Kwa^ala, 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), Kwa^ala is a language with non-culminating accomplishments (NCA’s),17 thereby resembling languages like Hindi (Singh 1998), Thai (Koenig & Muansuwon 2000), Malagasy (Travis 2000), Mandarin Chinese (Smith 1997[1991]), Stát'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 hil-‘fix’ (236) and qʷómduýu-gila ‘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) hilʔidoxda baqʷaməx an kə kisəmox gʷəloxda baqʷaməx hilʔixən kə
hil-xʔid =ox=da baqʷamə =x=ən kə
fix-BEC =3MED=OST man =ACC=1POSS car
kiʔ=m =ox qʷəal =ox=da baqʷamə
NEG=VER =3MED finish =3MED=OST man
hil-xʔid =x=ən kə
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) sənbəndux Mabelə qʷəmdzuýu-gila xə qʷəmdzuúyə?= lənswuʔl kəstə qʷəlaməsəx
sənbənd =uʔ Mabel=ə qʷəmdzuúyə-gil =x=a qʷəmdzuúyə=a?
throughout =3MED Mabel=VIS dress-make =ACC=DET dress=INVIS
yesterday NEG=BUT finish-A-CAUS =ACC
lənswuʔl kəstə qʷəal-a-mas =x
Literally: ‘All yesterday Mabel made a dress (ACC), but she didn’t finish it (ACC).’ (VF)

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,

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17 The existence of NCAs are a major part of what motivates Greene (2013) to propose a three-way aspectual classification of verbs in Kwa^ala 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 Kʷakʷala translational equivalent for the English verb ‘kill’. 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 bəgʷənəməxə sadiqʷa laʔix ʔəʔəʔsu
    kilak-xʔid  =i=da  bəgʷənəm  =x=a  sadiqʷa
  beat.up-BEC  =3DIST=OST  man  =ACC=DET  horsefly
  la  =x=is  ʔəʔəʔsu
  PREP  =ACC=3REFL.POSS  hand/arm
  ‘The man killed the horsefly (ACC) on his arm.’ (VF)

b. kilaxʔidida bəgʷənəməx Scott.  kiʔsta ɬəʔli Scott.
    kilak-xʔid  =i=da  bəgʷənəm  =x  Scott
  beat.up-BEC  =3DIST=OST  man  =ACC  Scott
    kiʔs=tə  laʔi  =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 Kʷakʷala. At this juncture, the reader may be interested in knowing more about what mechanisms Kʷakʷala 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 Kʷakʷala 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. In Kʷakʷala, 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 ɬəʔəʔəndzis ‘oranges’) is shown appearing in either instrumental or accusative case; and in (240), a nominal interpreted as a mass term (=a ɬəʔəʔəndzəm ‘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.

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18 There is one other translational equivalent of ‘kill’ in Kʷakʷala, 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.

 Ted cićola {sa, xa} ḥiʔayənddzis laʔa liləłqʷələxə?

 Ted cićola {sa, xa} ḥiʔayənddzis laʔa liləłqʷələxə?

 Ted cićola {sa, xa} ḥiʔayənddzis laʔa liləłqʷələxə?

 Ted cićola {sa, xa} ḥiʔayənddzis laʔa liləłqʷələxə?

 Ted cićola {sa, xa} ḥiʔayənddzis laʔa liləłqʷələxə?

 Ted cićola {sa, xa} ḥiʔayənddzis laʔa liləłqʷələxə?

 Ted cićola {sa, xa} ḥiʔayənddzis laʔa liləłqʷələxə?

 ‘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

 badaʔdzudux Mabelx {sa, xa} čon׳casdzəm laʔa kʷən̓ikʷ

 badaʔdzudux Mabelx {sa, xa} čon׳casdzəm laʔa kʷən̓ikʷ

 ‘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 Kʷakʷala and Finnish object case

Having looked at Finnish and Kʷakʷala 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 Kʷakʷala 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 Kʷakʷala’s object case system is unique, it is far from anomalous. Finnish provides a powerful illustration of this precisely because the Kʷakʷala 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 Kʷakʷala, an interpretable instrumental case

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20 Since the context here is not constrained, it impossible to tell whether the speaker who volunteered (240) had a particular quantity of čon׳casdzəm ‘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 čon׳casdzəm had been established as a discourse referent in the common ground. At this point in the elicitation session, there was no particular quantity of čon׳casdzəm established.
interacting with the initiating or initial subevent. The sense in which these systems are mirrored is summarized in Figure 6.1.

<table>
<thead>
<tr>
<th>Initial bound/subevent</th>
<th>Interpretable case</th>
<th>Uninterpretable case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrumental (Kʷakʷala)</td>
<td>Partitive (Finnish)</td>
<td></td>
</tr>
<tr>
<td>Accusative (Finnish)</td>
<td>Accusative (Kʷakʷala)</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 6.1**: Kʷakʷala 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 Kʷakʷala and Finnish object case systems**

a. The presence of an accusative object entails telicity in Finnish, whereas in Kʷakʷala, an accusative object only implicates telicity (Greene 2013).

b. The presence of a partitive object implicates atelicity in Finnish, whereas in Kʷakʷala, 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 Kʷakʷala, nominal semantics has no apparent effect on which object case may be realized, or on telicity.

d. In both Finnish and Kʷakʷala, 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 Kʷakʷala, we saw in Chapter 5 that case alternation is licensed in contexts involving direct manipulation, caused motion, and semantic incorporation with -(g)iła ‘make’. These patterns illustrate the more general fact that in both Finnish and Kʷakʷala, object case is constrained by verb meaning but determined ultimately by event structure.

e. Both Finnish and Kʷakʷala have three broad classes of transitive verbs. Finnish has verbs which are strict-partitive, strict-accusative, and partitive-accusative alternating, while Kʷakʷala 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 Kʷakʷala case systems. Finding (241a), that Finnish accusative entails telicity, is due to this being an interpretable case; the corresponding

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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 Kʷakʷala 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 Kʷakʷala 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 Kʷakʷala, 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 Kʷakʷala.

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 Kʷakʷala 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 Kʷakʷala 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 Kʷakʷala’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 Kʷakʷala. The analysis I will adopt is schematized in (242).

(242) Syntactic analysis of interpretable structural case realization in Finnish and Kʷakʷala

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 $F_{[\text{acc}]}$ here. I propose that K̓äk̓ala 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 $F_{[\text{inst}]}$.

I’ll begin by describing Kratzer’s (2004) analysis of Finnish, in which the syntactic and semantic properties of $F_{[\text{acc}]}$ derive patterns of object case realization in Finnish. Following this, I’ll walkthrough how the syntactic and semantic properties of $F_{[\text{inst}]}$ function similarly in K̓äk̓ala 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 $F_{[\text{acc}]}$ is provided in (243).

\[(243) \quad [F_{[\text{acc}]isin}] = \lambda R_{\leq, vr}. \lambda x, \lambda e, R(x)(e) & \exists f [\text{measure}(f) \& \forall x' [x' \leq f(x) \rightarrow \exists e' [e' \leq e \& R(x')(e')]]]^{22} \]

(Kratzer 2004: p. 394)

Semantically, $F_{[\text{acc}]}$ 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 $F_{[\text{acc}]}$, an internal argument of the verb must move from its base position in VP to the specifier position of $F_{[\text{acc}]}$, thereby leaving a trace. In order to ensure movement to the specifier of $F_{[\text{acc}]}$, Kratzer proposes that there is an EPP feature on $F_{[\text{acc}]}$; this ensures that movement of the nearest VP-internal argument is guaranteed whenever $F_{[\text{acc}]}$ is present in the structure. With inherently telic verbs, $F_{[\text{acc}]}$ is obligatory in the structure, and movement to the specifier of $F_{[\text{acc}]}$ is redundant. On Kratzer’s (2004: p. 403) analysis, the obligatoriness of $F_{[\text{acc}]}$ 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 $F_{[\text{acc}]}$ 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 $F_{[\text{acc}]}$, 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 $F_{[\text{acc}]}$ is simply not present in the structure.\(^{23}\) When $F_{[\text{acc}]}$ 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 $v$ 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 $F_{[\text{acc}]}$ 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 $F_{[\text{inst}]}$ was provided in Chapter 4, Section 4.3, and is repeated in (155) below. The $\text{Co-initiator}$ predicate in (155) is also provided in (156).

(155) $\llbracket F_{[\text{inst}]} \rrbracket = \lambda x, x \cdot \lambda e, e \cdot R(x)(e) = 1 \land x$ is $\text{Co-initiator}$ of $e$

(156) $\lambda x, x \cdot \lambda e, e \cdot x$ is $\text{Co-initiator}$ of $e$

Semantically, $F_{[\text{inst}]}$ relates an individual to an event via a $\text{Co-initiator}$ 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 $F_{[\text{inst}]}$, an internal argument of the verb must undergo syntactic movement from its base position in VP to the specifier position of $F_{[\text{inst}]}$, thereby leaving a trace below $F_{[\text{inst}]}$. As on Kratzer’s (2004) analysis, movement to the specifier of $F_{[\text{inst}]}$ is guaranteed by the presence of an EPP feature on $F_{[\text{inst}]}$; this ensures that movement of the nearest VP-internal argument occurs whenever $F_{[\text{inst}]}$ is present in the structure. Recall that for verbs with strict-instrumental relations, $F_{[\text{inst}]}$ 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 $F_{[\text{inst}]}$ is semantically redundant. The specifier of $F_{[\text{inst}]}$ 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 kʷəʔsta and “break” for $tə̱p̥'id$). 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.

\begin{verbatim}
tə̱p̥idida čədaqesə kʰʷəʔsta la̱xis dzigayu
tə̱p̥id-x?id =i=da čədaq =s=a kʰʷəʔšta
broken-BEC =3DIST=OST woman =INST=DET cup
la =x=is dzik-,ayu
PREP =ACC=3REFL.POSS dig-INST.PASS
‘The woman broke a cup (INST) on her digging stick.’ (VF)
\end{verbatim}

---

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) 

\[
\begin{array}{c}
\text{FP} \\
\text{DP} \\
\text{‘a cup’} \\
\end{array}
\begin{array}{c}
\text{F’} \\
\text{F}_{\text{[inst]}} \\
1 \\
\end{array}
\begin{array}{c}
\text{VP} \\
\text{V} \\
\text{‘break’} \\
\end{array}
\]

(246) \[ \llbracket 1 \text{ break } t_1 \rrbracket = \lambda y_e. \lambda e. e \text{ is a breaking of } y \quad \text{Predicate Abstraction} \]

(247) \[ \llbracket F’ \rrbracket = \llbracket F_{\text{[inst]}} \rrbracket (\llbracket 1 \text{ break } t_1 \rrbracket) \quad \text{Function Application} \]

\[ = [\lambda R_{x,e}. \lambda x_{e}. R(x)(e) = 1 \& x \text{ is Co-initiator of } e](\lambda y_e. \lambda e. e \text{ is a breaking of } y) \]

\[ = \lambda x_e. \lambda e. (\lambda y_e. \lambda e. e \text{ is a breaking of } y)(x)(e) = 1 \& x \text{ is Co-initiator of } e \quad \text{by (155) and (246)} \]

\[ = \lambda x_e. \lambda e. e \text{ is a breaking of } x \& x \text{ is Co-initiator of } e \quad \text{\textit{β}-reduction} \]

(248) \[ \llbracket FP \rrbracket = \llbracket \text{a cup} \rrbracket (\llbracket F’ \rrbracket) \quad \text{Function Application} \]

\[ = [\lambda Q_{x,e,z}. \lambda e. \exists z[Q(z)(e) = 1 \& z \text{ is a cup}]](\lambda x_e. \lambda e. e \text{ is a breaking of } x \& x \text{ is Co-initiator of } e) \]

\[ = \lambda e. \exists z[(\lambda x_e. \lambda e. e \text{ is a breaking of } x \& x \text{ is Co-initiator of } e)(z)(e) = 1 \& z \text{ is a cup}] \quad \text{by (247) and the semantics of ‘a cup’} \]

\[ = \lambda e. \exists z[e \text{ is a breaking of } z \& z \text{ is Co-initiator of } e \& z \text{ is a cup}] \quad \text{\textit{β}-reduction} \]

\[ = \lambda e. \exists z[e \text{ is a breaking of } z \& z \text{ is Co-initiator of } e \& z \text{ is a cup}] \quad \text{\textit{β}-reduction x2} \]

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 \( F_{\text{[inst]} \rangle} \) 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 \textit{with}; in (250), the hat is both what Katie stowed, and what Katie stowed \textit{with}; and in (251), the hat is both what Katie took out of the drawer and what she used in doing so.
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 the specifier of $F_{\text{inst}}$. 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
the specifier of $F_{[\text{inst}]}$. Namely, strict-instrumental objects, such as semantic Instruments, could to be merged directly into the specifier of $F_{[\text{inst}]}$ instead of moving there from within the VP (in which case there would need to be a separate denotation for $F_{[\text{inst}]}$ 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 $F_{[\text{inst}]}$: either by movement or by external merge. I will leave open the question of whether external merge into $F_{[\text{inst}]}$ 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 $K^\text{ák}^\text{ala}$, 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.\textsuperscript{26} When $F_{[\text{inst}]}$ 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 $K^\text{ák}^\text{ala}$ 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 $K^\text{ák}^\text{ala}$ 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).\textsuperscript{27} If this is true of Finnish and the two systems have the same nature, then it should be true of $K^\text{ák}^\text{ala}$ as well. What is interesting about the Finnish accusative and the $K^\text{ák}^\text{ala}$ 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 $K^\text{ák}^\text{ala}$, nominals may either be merged in the specifier of $F_{[\text{inst}]}$ 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.

\section*{6.5 $K^\text{ák}^\text{ala}$ in typological perspective}

So far in this chapter, I’ve been comparing $K^\text{ák}^\text{ala}$’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, $K^\text{ák}^\text{ala}$’s object case system is not unexpected: $K^\text{ák}^\text{ala}$ 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 $K^\text{ák}^\text{ala}$ 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 $K^\text{ák}^\text{ala}$ fits into an even larger typological pattern.

\textsuperscript{26} Accusative case is also assigned by default to the nominal within prepositional \textit{la} phrases.

\textsuperscript{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 Kwaala’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 Kwaala fits squarely within the I-language/D-language division these authors propose. However, I will also explain why Kwaala 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. 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.

<table>
<thead>
<tr>
<th>D-languages</th>
<th>I-languages</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Accomplishments form a natural class with achievements</td>
<td>• Accomplishments form a natural class with activities</td>
</tr>
<tr>
<td>• Sensitive to semantic and syntactic properties of the object including specificity or definiteness, case marking, person</td>
<td>• Sensitive to semantic and syntactic properties of the subject including agentivity, animacy</td>
</tr>
<tr>
<td>• Accusative Case may be restricted to delimited objects</td>
<td>• Make a grammatical distinction between topic and subject</td>
</tr>
<tr>
<td>• Ergative splits on the basis of perfective aspect/past tense</td>
<td>• Ergative splits on the basis of properties of the subject</td>
</tr>
<tr>
<td>• Object agreement not specified for person features</td>
<td>• Subject and object agreement specified for person features</td>
</tr>
<tr>
<td>• Quirky Case subjects</td>
<td>• Animacy hierarchies</td>
</tr>
</tbody>
</table>

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 Kwak’ala 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 Kwak’ala’s instrumental case is semantically tied to the initial bound of an event, Kwak’ala 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 Kwak’ala 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, Kwak’ala’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 Kwak’ala also possesses several additional characteristics associated with I-languages. For instance, Kwak’ala resembles Irish and Japanese in disallowing Instruments as subjects. Whenever Instruments are put into subject position in Kwak’ala, they are consistently construed as volitional and agent-like (252)-(253) — hence, not as Instruments.


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. lōlinoxʷ [‘ghost’].”


Speaker:  [laughter] “All by itself?! [laughter] The knife cut the bread… all by itself. Nobody’s holding the knife. […] lōlinoxʷ [‘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, Kwak’ala
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). Kʷakʷala patterns just like these other I-languages in disallowing Instrument subjects, yet the underlying source of this pattern is different: namely, this restriction in Kʷakʷala results from how objects are grammaticalized, whereas in Irish and Japanese, it results from how subjects are. Thus while Kʷakʷala differs in the details, it clearly resembles these other languages at an abstract level of description.

Kʷakʷala 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 Kʷakʷala (Rosenblum 2013: pg. 256-259). Next off, there are no pronominal suffixes for first person objects in Kʷakʷala; 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 Kʷakʷala, 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 loƛ, a form constructed out of prepositional la plus the second person pronominal enclitic =uƛ, in environments where historically =uƛ was possible. The existence of these properties is consistent with Kʷakʷala being an I-language, even independently of its object case system.

In summary, Kʷakʷala 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 Kʷakʷala 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. Once this extension is made, we expect not only to see languages like Kʷakʷala, 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, its possible that one may turn up.

6.6 Conclusion

The purpose of this chapter has been to place Kʷakʷala’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 Kʷakʷala’s object case system is unique. In particular, Kʷakʷala 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 Kʷakʷala, 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. Kʷakʷala is such a language (as pointed out in Rosenblum 2013: p. 233).
way in which Kʷakʷala’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 Kʷakʷala’s object case system are unique, at a higher level of abstraction, the system fits into existing cross-linguistic patterns. To make this point, I focused on showing how Kʷakʷala’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 Kʷakʷala 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 difference between Kʷakʷala and Finnish gives rise to a predictable association between object case and telicity in Finnish which is entirely absent in Kʷakʷala. Otherwise, Finnish and Kʷakʷala’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 Kʷakʷala’s with only minimal modifications needed. In this way, the uniqueness of Kʷakʷala’s object case system turns out, on closer analysis, to be quite superficial.

Zooming out once more to see Kʷakʷala in even wider cross-linguistic perspective, I argued that Ritter & Rosen’s (2000) event-structural typology provides a useful framework for conceptualizing Kʷakʷala’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 Kʷakʷala grammaticalizes event initiation in its object case system, thereby qualifying it as an I-language. By validating Ritter & Rosen’s (2000) typology, the Kʷakʷala 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 Kʷakʷala. In Finnish, object case distinctions are standardly assumed to reflect distinctions in viewpoint aspect (Travis 2010: p. 133). The fact that Kʷakʷala’s object case system semantically mirrors the one in Finnish, then, compels us to consider that object case distinctions in Kʷakʷala may also reflect distinctions in viewpoint aspect. If so, then viewpoint aspectual categories in Kʷak⁴ala 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 Kʷakʷala, 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 Kʷakʷala’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 Kʷakʷala 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 Kwak’ala 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 Kwak’ala between particular verbs, particular internal arguments, and particular object cases. These included strict-instrumental (=s) relations, strict-accusative (=x̌) relations, and alternating instrumental-accusative {=s, =x̌} 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 Kwak’ala 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 monoditransitive 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 Kʷakʷala findings presented in Chapter 3.

In Chapter 5, I presented three new kinds of empirical evidence in support of the claim that Kʷakʷala 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 Kʷakʷala’s object case system in cross-linguistic perspective. I showed that Kʷakʷala 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 Kʷakʷala’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 Kʷakʷala 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 Kʷakʷala which is modelled directly off of Kratzer’s (2004) analysis of accusative case in Finnish. Finally, I discussed how Kʷakʷala 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 Kʷakʷala 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: “haŋakʷili Mabel ʔəxʔalilaʔə kak̴adəʔsiladzuʔ. [(a)]”
KS: “[…] I’m gonna change it a little bit, and you can tell me if it’s…”
Speaker: “wiga [‘Go ahead.’]”
KS: “haŋakʷili Mabel ʔəxʔalilaS A kak̴adəʔsiladzuʔ. [(b)]”
Speaker: “Mhm. It’s, it’s just as legal as the first one.”
KS: “Kay. And do you notice any difference?”

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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.”

KS: “And is there any difference… in meaning between ćəx?idaga?su̱xda [(a)] and ćəx?idaga?sxu̱xda [(b)]…?”
Speaker: “Uh, no. You’re just referring to the food.”
KS: “Mhm ['Yes'].”
Speaker: “Whether it’s sxu̱ or su̱x.”
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. Mkay.”
Speaker: “I would just know it the second I spoke it.”

a. hanakʷi li Mabel ?əx?alila xa kakakʷ siladzu?
hanakʷil =i Mabel ?əx-?alil-a =x=a
quickly =3DIST Mabel do-on.floor.in.house-A =ACC=DET
ka~kat-ʷksi-la-dzu
REDUP~write-PART-occupy-CONT-flat
‘Mabel quickly put the book (ACC) down.’ (VF)

b. hanakʷi li Mabel ?əx?alilasa kakakʷ siladzu?
hanakʷil =i Mabel ?əx-?alil-a =s=a
quickly =3DIST Mabel do-on.floor.in.house-A =INST=DET
ka~kat-ʷksi-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.]
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 ʔəx-‘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 Kʷakʷala, 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. 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

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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 Kwakala 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 (=x) case. I will refer to this empirical pattern in what follows as **subevent highlighting**.

Subevent highlighting is exemplified in (256) with the verb hənxənd- ‘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. ləmux Katiya=k hənxəndsa sup la=s=x a laʔ=ilaći=x
   lə=ʔm =ux Katie=x hən-xə-x?id
   AUX=VER =3MED Katie=VIS hollow.container.upright-on.fire-BEC
   =s=a sup la =x=w=a laʔ=ilaći=x
   =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 Kwakala. It began in the first few years I worked on Kwakala, 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. ləmúx hənxmlənduxda supiḵ la̱xʷa ləḵʷilači
lə=ʔ m =u̱x hən-x̱λ-xʔid =u̱x=da
AUX=VER =3MED hollow.container.upright-on.fire-BEC =3MED=OST
sup=ʔ x̱ la =x̱=w=a ləḵʷilači
soup=VIS PREP =ACC=3MED=DET stove=VIS

‘The (pot of) soup is sitting on the stove.’ (VF)

c. ləmúx hənxmlənduḵ Katiyə̱xʷa supiḵ la̱xʷa ləḵʷilačiʔ
lə=ʔ m =u̱x hən-x̱λ-xʔid =u̱x
AUX=VER =3MED hollow.container.upright-on.fire-BEC =3MED
Katie =x̱=w=a sup=ʔ x̱ la =x̱=w=a
Katie =ACC=3MED=DET soup=VIS PREP =ACC=3MED=DET
ləḵʷilači=ʔ
stove=VIS

Speaker: “Katie has put the (pot of) soup (ACC) on the stove.” (VF)

The verb ｈənxmlənd- 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 are 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 is 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 in given in (257).

(257)  Case frame of *nəp-* ‘throw’

<table>
<thead>
<tr>
<th>Theme:</th>
<th>{INST, ACC}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal:</td>
<td>ACC</td>
</tr>
</tbody>
</table>

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) *nap-* ‘throw’ with an expressed Theme, no expressed Goal

```
napidida bag*anəme{sa, ṹa} siwayu
nap-xʔid =i=da bag*anəm {=s=a, =ṹ=a}
throw-BEC =3DIST=OST man {=INST=DET, =ACC=DET}
sixʷ-ayu
paddle-INST.PASS
‘The man threw a paddle {INST, ACC} (at someone).’
```

**Speaker:** “Means the same [with =sa or =ṹa].” (VF, JF)

(259) *nap-* ‘throw’ with an expressed Goal, no Theme

```
napidanxα bag*anəm
nap-xʔid =αn =ṹ=a bag*anəm
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 *nap-* 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. ??hinumamu̲x Eddiyax nap'i̲xis λatəml
    hinumaʔm =ux Eddiy=ũx nap-xʔid =ũ=is
    on.purpose=VER =3MED Eddiy=VIS throw-BEC =ACC=3REFL.POSS
    λatəml
    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.”

187
b. hinumánúx Eddiyəx əpísis ətəmł
hinuma=ʔm  =ux  Eddie=ʕ  əp-xʔid  =is  ətəmł
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 əp- 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 (əp- ‘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 əp- 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. hinumánúx Eddiyəx əpísis ətəmł la̱xa gukʷ
hinuma=ʔm  =ux  Eddie=ʕ  əp-xʔid  =is  ətəmł
on.purpose=VER  =3MED  Eddie=VIS  throw-BEC  =INST=3REFL.POSS
hat  la  =x=a  gukʷ
‘Eddie threw his hat (INST) at a house on purpose.’ (VF)

b. hinumánúx Eddiyəx əpíxis ətəmł la̱xa gukʷ
hinuma=ʔm  =ux  Eddie=ʕ  əp-xʔid  =is  ətəmł
on.purpose=VER  =3MED  Eddie=VIS  throw-BEC  =ACC=3REFL.POSS
hat  la  =x=a  gukʷ
‘Eddie threw his hat (ACC) at a house on purpose.’ (JF)

Speaker: “əpíxis ətəmł. Uh, I guess you could. əpíxis ətəmł... la̱xa gukʷ. əpíxis ətəmł la̱xa gukʷ. [b] 1... don’t think anybody’s gonna argue about it, but anyway. Uh, hinumánúx Eddie əpíxis ətəmł la̱xa gukʷ. Yeah, you could — you could use it that way.”

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 kuqʷ- ‘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) kuqʷə̱n{sada, ʔada} ma̱ma

kuqʷ =ə̱n {=s=a̱da , =x=a̱da} ma̱ma
fold =1 {=INST=DET=OST, =ACC=DET=OST} blanket
‘I’m folding blankets {INST, ACC}.’ (JF, VF)

(264) ?? kuqʷu̱x Shelliqʷa mə̱nasis ᵁʔ̱ə̱su

kuqʷ =u̱x Shelly =x=s=a̱ ma̱ma
fold =3MED Shelly =ACC=3MED=DET blanket
=si̱=i̱ =MEANS=3REFL.POSS hand/arm

Literally: ‘Shelly’s folding blankets with her hands (INST).’ (JF)

Speaker: “Mm. heʔəm. [‘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 tə̱p̓id ‘break’ (from tə̱p̓- ‘be broken’) and yaxʔid ‘melt’ (from yax- ‘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 kuqʷ- ‘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 *qʷəcəm-* ‘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 *qʷəcəm-* ‘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. *qʷəcəmdalux Abbiyəxʷa ?ayəndzisix*

\[
\begin{align*}
qʷəs-(g)əm-xʔid-a-la & =uʔx & Abby & =x=w=a \\
peel-face-BEC-A-CONT & =3MED & Abby & =ACC=3MED=DET \\
?ayəndzisix & =x \\
orange & =VIS \\
\end{align*}
\]

‘Abby’s peeling an orange (ACC).’ (VF)

b. # *qʷəcəmdalux Abbisux ?ayəndzisix*

\[
\begin{align*}
qʷəs-(g)əm-xʔid-a-la & =uʔx & Abby & =s=uʔx \\
peel-face-BEC-A-CONT & =3MED & Abby & =INST=3MED \\
?ayəndzisix & =x \\
orange & =VIS \\
\end{align*}
\]

**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. *qʷəcəmdalux Abbyxʷa ?ayəndzisixsa ŋənayu*

\[
\begin{align*}
qʷəs-(g)əm-xʔid-la & =uʔx & Abby & =x=w=a \\
peel-face-BEC-CONT & =3MED & Abby & =ACC=3MED=DET \\
?ayəndzisix & =x \\
orange & =VIS \\
=MEANS=DET & eat=INST.PASS \\
\end{align*}
\]

‘Abby’s peeling an orange (ACC) with a fork.’ (JF)
A plausible explanation for why (266b) is rejected is that whenever the verb qʷəcəm- 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 (qʷəcəm- ‘peel round object’) in a direct manipulation context

Patient: =s/=x (= expressed) 
Instrument: =s (= null)

Optimal case choice for Patient: =x

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.
References


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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, =x\} 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 (=x̕) 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, =x\} 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 (=x̕) case.”

**canonical object position**

[Section 1.2]
The position in clausal syntax where instrumental (=s) objects and accusative (=x̕) 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, =x̕\} 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, =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 Kʷakʷala, 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 (=x) objects in active transitive clauses, and as subjects in clauses formed with the accusative voice suffix -səw̓. 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).

**perspectivally-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 *laḵ- ‘sell’* versus *kəlxʷ- ‘buy’* is a perspectivally-opposed verb pair. In Kʷakʷala, 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 *gicu- ‘put inside’* and *ʔəxwəlcu- ‘take out from inside’* is a reverse-action verb pair. In Kʷakʷala, verb pairs of this sort pattern asymmetrically with respect to object case. Compare with *perspectivally-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 (=x) 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 (=x) 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 Kʷakʼwala 
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 Kʷakʼwala 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 Kʷakʼwakw 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 Kʷakʼwala examples presented below consist of five lines of text which are arranged in layers, like in (i).

(i)  
a. Kʷakʼwala sentence in U'mista orthography  
b. Kʷakʼwala sentence in NAPA (UVic variety) orthography  
c. Kʷakʼwala 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), Kʷakʼwala 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 “Kʷakʼwala’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 Kʷakʼwala’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). In (1)-(3), the object is indicated in **bold**.

(1) Objects can follow the subject:

a. bəwux Mabelə̱sa gukwdzi
   bəwux Mabelə̱sa gukwdzi
   bew =u̯x Mabel=ʃ =s=a gukʷdzi
   leave =3MED Mabel=VIS =INST=DET bighouse
   ‘Mabel is leaving/left the Bighouse (INST).’

b. təsu̯x Mabelə̱wa kwənิกw
   təsu̯x Mabelə̱xʷa kʷənิกw
   tus =u̯x Mabel =x=w=a kʷənิกw
   cut =3MED Mabel =ACC=3MED=DET bread
   ‘Mabel is cutting/cut bread (ACC).’

(2) Objects can directly follow the verb:

a. la’misən kələləsə la̱lino̱x
   la̱misən kələləsə la̱lino̱x
   lə=?m=is =ən kəl-la =s=a la̱lino̱x
   AUX=VER=and =1 afraid-CONT =INST=DET ghost
   ‘I’m afraid of ghosts (INST).’
b.  la'imi Mabel duƙwalaxa iki
ləmi Mabel duqʷəlaʃa ?iki
la=?m =i Mabel duqʷ-la =x=a ?iki
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. kitłansa walas kiłəm ke'ida mâlik
kîlənsa walas kîləm qə?ida mâlik
kił  =ən =s=a walas kîləm qe =i=da mâlik
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 t’saƙwanaxa dala laʃa kâlwilas
gəlul?idida Çaƙʷana dala laʃa kâlwilas
galul-x?id =i=da Çaƙʷana =x=a dala
steal-BEC =3DIST=OST bird =ACC=DET money
la =x=a kâlwilas
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 =x. Some objects can only be introduced by =s, as in the ‘a’ examples in (1)-(3), and some can only be introduced by =x, as in the ‘b’ examples in (1)-(3). Otherwise, the same object can be introduced by either =s or =x with no obvious difference in meaning, as in the examples in (4).

(4) a. napidida bâɡwanâm {sa, xa} siwayu
napidida bâɡʷanâm {sa, xa} siwayu
nap-x?id =i=da bâɡʷanâm {=s=a , =x=a}
throw-BEC =3DIST=OST man {=INST=DET, =ACC=DET}

paddle-INST.PASS
‘The man is throwing/threw a paddle {INST, ACC}.’

**Speaker’s comment:** “It’s the same [with either =s or =x].”

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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. tłumuľ Shelliľ babə’la {suł, xuľ} Hopiš
łumuľ Shelliľ babəłə {suł, xuľ} Hopiš
łum =u̅x̅ Shelly==x̅ babəłə {=s=u̅x̅ , =x̅=u̅x̅}
really =3MED Shelly=vis jealous {=INST=3MED , =ACC=3MED}
    Hope=Ӿ̆
    Hope=vis
‘Shelly is really jealous of Hope {INST, ACC}.’

c. gi’stənduľ Mabela{sa, xa} damxəsəgam laxa ʰap
giʔstənduľ Mabela{sa, xa} damxəsəgam laixa ʰap
giʔst-xʔid =u̅x̅ Mabel {=s=a , =x̅=a}
loc-water-bec =3MED Mabel {=INST=DET , =ACC=DET}
    dəmxəsəgam la =x̅=a ʰap
    jar Prep =ACC=DET water
‘Mabel is putting/put the jars {INST, ACC} into the water.’

The markers =s and =x̅ 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 =x̅ 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 =x̅, we say that it is ‘in’ accusative case, or is ‘marked’ accusative. When either =s or =x̅ can appear in a sentence marking the same object, as in (4), we call this case alternation. I’ll use curly brackets ‘{=s, =x̅}’ 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, =u̅x̅, =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 =x̅ 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 =x̅ marks some time adverbials, as in (6).

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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:

həlalux bagwans ʔəbəmpə’sux Mabelx
holalux bagw’ans ʔəbəmpə’sux Mabelx
holal =uə bagw’ans ʔəbəmp=ə?  =s=uə Mabel=ə
hesitant  =3MED visit mother=INVIS  =3POSS=3MED Mabel=VIS
‘Mabel’s mother is hesitant to visit.’

(6)  =x introduces a temporal adverbial phrase:

palxaluthx xa lənstle’
ployalux la xə lənsə=ə?
plx-la=ə  =uə  =x=a lənsə=ə?
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 =x that marks accusative objects — that is, with the use of these forms as object case markers. Two criteria are useful for identifying =s and =x in their object case marking function. First, the object case forms =s and =x consistently show up in the sentence positions that were shown in (1)-(4), while the =s and =x 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 =x in (5)-(6) because =s marked possessors and =x 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 (=x) 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 (=x) — 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) kən̂i Mabel
    qəni Mabel
    qon̂ =i Mabel
    sew =3DIST Mabel

‘Mabel is sewing/sewed.’
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. 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).

<table>
<thead>
<tr>
<th>Role</th>
<th>Event role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mabel</td>
<td>Initiator</td>
</tr>
<tr>
<td>canoe</td>
<td>Location</td>
</tr>
<tr>
<td>Monica</td>
<td>Reason</td>
</tr>
<tr>
<td>big needle</td>
<td>Co-initiator</td>
</tr>
<tr>
<td>green dress</td>
<td>Non-initiator</td>
</tr>
</tbody>
</table>

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 Kwak’ala, Initiators appear in subject position. 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 Kwak’ala, Locations are introduced by the preposition la immediately followed by =x̌, or by one of the forms ga=x̌on ‘me’, ga=x̌on=x̌ ‘us (including you)’ or ga=x̌on=x̌ ‘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 Kwak’ala, 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

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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 tāpidüxda kʷəsta ‘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).  

(14) a. **initiating subevents**  
   i. Beginning  
   ii. Cause  

b. **non-initiating subevents**  
   i. End  
   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 yola xa xwakwəna  
wəns?idi yola xa xʷaḵəna  
wəns-x?id =i yu-la =x=a xʷaḵəna  
sunken-BEC =3DIST wind-CONT =ACC=DET canoe  
‘The wind is sinking/sunk the canoe (ACC).’

(16) hil’idi Eddi xa kələs’la  
hil?idi Eddi xa kələs?səla  
hil-x?id =i Eddie =x=a kələs?səla  
fix-BEC =3DIST Eddie =ACC=DET car  
‘Eddie is fixing/fixed the car (ACC).’

(17) dzəlxwəli Norman la xa kələwila  
dzəlxʷəli Norman la xa kələwila  
dzəlxʷ-la =i Norman la =x=a kələwila  
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**.  

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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) ḏän₁xali Mabel
    ḏänx₁ali Mabel
    ḏänx-la =i Mabel
    sing-CONT =3DIST Mabel
    ‘Mabel is singing/sang.’

(19) dzal₁xwali Norman
dzə₁lxʷali Norman
dzə₁lxʷ-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) ḵaʼi Monica xaʼlaʼsi
    ḵaʼi Monica xaʼlaʼci
    ḵa =i Monica =x=a xaʼlaʼci
    find =3DIST Monica =ACC=DET wallet
    ‘Monica found a wallet (ACC).’

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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.
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 Kwak’ala is a way of saying that someone has wisdom or wholeness. In (23), Bill is described as being a teacher.

(22) nogadi Betti
nogadi Betti
noq-,-ad =i Betty
heart.mind-have =3DIST Betty
‘Betty is wise.’

(23) Ḹakuṭləmasi Bill
qaqu̓lamasi Bill
qaqu̓lamas =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 Kwak’ala sentences with objects.

We’re now ready to see how this works.

The principles for determining which object case to use in a Kwak’ala 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

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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 (=\(x\)) objects. In terms of event roles, instrumental (=\(s\)) objects have the event role Co-initiator, while accusative (=\(x\)) 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 (=\(x\)) objects are associated with the non-initiating subevent (Non-initiators)

Correspondences between subevental structure, event roles, and object cases are summarized in (25).

(25) | a. **initiating subevent** | b. **non-initiating subevent** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Beginning</td>
<td>i. End</td>
</tr>
<tr>
<td>ii. Cause</td>
<td>ii. Result / Effect / Target</td>
</tr>
<tr>
<td>iii. Possessed</td>
<td>iii. Obtained(^{10})</td>
</tr>
</tbody>
</table>

\[\begin{array}{c|c}
\text{Co-initiators} & \text{Non-initiators} \\
\hline
=\(s\) objects & =\(x\) objects \\
\end{array}\]

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 (=\(x\)).

(27) **Question 2:**
Is the event participant associated with the **cause** of the event, or the **result** or **effect** of the event?

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\(^{10}\) 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 (=x).

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 (=x).

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) bəwux Mabelaŋxa gukwdzi
bəwuḫ Mabəlaŋxə gukʷdzi
bew =uʁ Mabel=ʁ =s=a gukʷdzi
leave =3MED Mabel=VIS =INST=DET bighouse
‘Mabel left the Bighouse (INST).’
(30) i’kilakwux Monicasa cancer
ʔiʔkilakʷuš Monicasa cancer
ʔiʔkil-akʷ =uš 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 (=x). 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) kənx’idənxwa ʔuwx̱tsə’q̕i̱x
qənxʔidənxʷə q̕ux̱’q̕i̱x
qən-xʔid =n =xʷ=a q̕ux̱’q̕i̱x=x
sew-bec =1 =ACC=3MED=DET attire=vis
‘I’m sewing/sewed a dress (ACC).’

(32) ʔalsida t̕aadəxa ʔlisəla laχa gukw
Ɂelsida ʔaadəq ʔlisəla laχa gukwʷ
gəls =i=da ʔaadəq =x=a ʔlisəla la =x=a
paint =3DIST=OST woman =ACC=DET sun PREP =ACC=DET
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) hə’məpox Tobi axələsis i’ʔa’yəsux
həməpox Tobi ?əx̱ələsis ?iʔəyəsux
həmap =oχ Toby ?əx̱-la =s=is ?iʔəyəsux=x
eat =3MED Toby DO-CONT =INST=3REFL.Poss RED~hand/arm=vis
‘Toby’s eating using his hands (INST).’

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In contrast, event participants that are associated with the result or effects of an event are Non-initiators and are marked accusative (=x). 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) tapi Monicaxa pilaga

\[\text{tapi Monicaxa pilaga}\]

\[\text{ta}-x?id =i \text{ Monica } =x=a \text{ pilaga}\]

\[\text{broken-bec } =3\text{DIST } \text{ Monica } =\text{ACC-DET plate}\]

‘Monica broke a plate (ACC).’

(36) gals’idida bagwanamexa gukw

\[\text{gals’idida bagwanamexa gukw}\]

\[\text{gals-x?id } =i=da \text{ bagwanam } =x=a \text{ gukw}\]

\[\text{paint-BEC } =3\text{DIST=OST man } =\text{ACC=DET house}\]

‘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 ?aʔəxnug^ad- ‘own’ is marked this way (37).

(37) aʔəxnugwadida gananamesa katsanak

\[\text{aʔəxnug^adida gananamesa katsanak}\]

\[\text{ʔəx-nuk^s-.ad } =i=da \text{ gananom } =s=a \text{ katsanak}\]

\[\text{do-have-have } =3\text{DIST=OST child } =\text{INST=DET spoon}\]

‘The child has a spoon (INST).’12

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11 It’s worth taking a moment to think about how the way the gukw ‘house’ is interpreted here differs from how the ḥisla ‘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 ḥisla in (32) actually comes into existence in the course of the event. The ḥisla ‘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 aʔəxnug^ad- can also be compared to the English phrase ‘be endowed with’. Some modern K^ak^ala speakers allow case alternation \{=s, =x\} with aʔəxnug^ad ‘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 (=x). For instance, event participants that are obtained (38) or bought (39) are expressed as accusative objects.

(38) lotloš Katiyaxa kə̃sane’ lo-loš Katiye̱xə ḍə̱sə̱ne?
  lə-u-x =ux Kati =x=a ḍə̱sə̱ne?
AUX-obtain =3MED Katie =ACC=DET shirt
‘Katie got the shirt (ACC).’

(39) kə̱lxwoxda babagwame̱xə tlatə̱ml kə̱lxʷoxďa babagʷa̱mə̱xə lə̱tə̱ml
  kalxʷ=o̱xďa babagʷə̱m =x=a lə̱tə̱ml
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 (=x) 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 ḋə̱xʷu̱d- ‘to put something inside something’. The event participant that is ‘put inside’ the fridge — here, mə̱lîk ‘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 {\textit{qu}xʷ {\textit{cu}d}}- ‘to put clothes on, dress’, shown in (42). The event participant that is put on — here, {\textit{q}ʷi\textit{g}ʷ\textit{el}a} ‘nice clothes’ — starts out with the \textit{Initiator} at the start of the event, making it a \textit{Co-initiator}, and then undergoes a change of location when it’s put on, making it a \textit{Non-initiator}. The verb {\textit{gi}ʔ\textit{stand}} ‘to put into water, submerge’ from example (4c) above is another example of this sort.

(41) \textit{a}x\textit{ṣ}ud\textit{ux} {\textit{Hope}}{\textit{sida}}, \textit{ṣid}a \textit{malik} \textit{la}x\textit{a} ‘\textit{wâdâ}’at\textit{si}
\textit{?əx}čud\textit{ux} {\textit{Hope}}{\textit{sida}}, \textit{ṣid}a \textit{malik} \textit{la}x\textit{a} \textit{wodə?a}či
\textit{?əx}–\textit{cu}–\textit{x}id =\textit{u}x \textit{Hope} \{=s=i=da} , =\textit{x}=i=da\}
\textit{DO}–\textit{inside}-\textit{BEC} =3\textit{MED} \textit{Hope} \{=\textit{INST}=3\textit{DIST}=\textit{OST} , =\textit{ACC}=3\textit{DIST}=\textit{OST}\}
\textit{la} =\textit{x}=a \textit{wodə?a}či
\textit{PREP} =\textit{ACC}=\textit{DET} \textit{fridge}
‘Hope put \textit{the sockeye} \{\textit{INST}, \textit{ACC}\} into the fridge.’

(42) \textit{lə}’\textit{mu}x \textit{Simon} \textit{ki}x\textit{w}us\textit{ux}\{}{\textit{sис}}, \textit{xis}\} {\textit{ik}} \textit{gw}il\textit{gw}ela
\textit{λə}’\textit{μ}u\textit{x} \textit{Simon} \textit{qu}xʷ\textit{cu}d\{}{\textit{sис}}, \textit{xis}\} {\textit{ʔik}} \textit{gʷilə} \textit{ela}
\textit{lə}’\textit{m} =\textit{u}x \textit{Simon} \textit{qu}xʷ\textit{cu}–\textit{x}id \{=s=ι\}
\textit{AUX}=\textit{VER} =3\textit{MED} \textit{Simon} \textit{dress}–\textit{inside}-\textit{BEC} \{=\textit{INST}=3\textit{REFL.POSS},
\textit{=x}=\textit{i}\}
\textit{=x}=\textit{i}\}
\textit{=\textit{ACC}=3\textit{REFL.POSS}} \textit{good clothes}
‘Simon put \textit{on his nice clothes} \{\textit{INST}, \textit{ACC}\}.’

In fact, any event participant which starts out with the \textit{Initiator} and undergoes a change of location can appear in either object case. The object of \textit{kʷis}- ‘spit’ (43) is an example of this sort, as is the object of \textit{nəp}- ‘throw’ in (4a) above. Even though these \textit{Kʷa}kʷ\textit{ala} verbs aren’t translated using the English verb ‘put’, their meaning is quite similar. When you \textit{kʷis}- ‘spit’ something out, your spit starts off with you, making it a \textit{Co-initiator}, and then gets spat somewhere else, making it a \textit{Non-initiator}. Similarly, when you \textit{nəp}- ‘throw’ something, what you throw starts off with you, making it a \textit{Co-initiator}, and then gets thrown to some other location, making it a \textit{Non-initiator}.

(43) \textit{kwi}s’id\textit{ida} \textit{bagwan}\textit{ame}\{}{\textit{sис}}, \textit{xis}\} \textit{g\textit{w}alik} \textit{la}x\textit{a} \textit{b\textit{a}}s
\textit{kʷis}’\textit{id}a \textit{bagwan}\textit{ame}\{}{\textit{sис}}, \textit{xis}\} \textit{g\textit{w}alik} \textit{la}x\textit{a} \textit{b\textit{a}}s
\textit{kʷis}–\textit{x}id =\textit{i}=\textit{da} \textit{bagwan}\textit{ame} \{=\textit{s}=\textit{is}, \textit{=x}=\textit{i}\}
\textit{spit-BEC} =3\textit{DIST}=\textit{OST} \textit{man} \{=\textit{INST}=3\textit{REFL.POSS}, =\textit{ACC}=3\textit{REFL.POSS}\}
\textit{gʷ\textit{alik}} \textit{la} =\textit{x}=a \textit{b\textit{a}}s
\textit{gum} \textit{PREP} =\textit{ACC}=\textit{DET} \textit{bus}
‘The man spit out \textit{his gum} \{\textit{INST}, \textit{ACC}\} on the bus.’
Next, consider a verb like mukʷ- ‘tie’ in (44). The event participant that is ‘tied’ — here, danəm ‘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 danəm ‘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, xa} danəm
    mukʷu̱x Simon{sa, xa} danəm
    mukʷ =u̱x Simon {=s=a , =x=a} danəm
    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 (=x̌). 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 (=x̌) object, an instrumental (=s) object, or an alternating {=s, =x̌} 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 təp̣id- ‘break’ typically takes an accusative (=x̌) 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.

The woman broke a cup 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 (=x) 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 ʔəyak- ‘kick’. This verb usually takes a Non-initiator object that is marked accusative (=x) — 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) ʔəyaksudi Simon {sa, xa} luxywsam ʔəyakasu’ laxa hanxso’las

‘Simon kicked the ball through a window.’

Notice how in this context, the verb ʔəyak- 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.
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 (=x̌). 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 =x objects is in terms of the following English-based heuristic: =s objects are things you do something ‘with’, while =x 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 its 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 Kwak’ala 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 Kwak’ala 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 Kwak’ala.

(47) Instructions for determining object case possibilities in Kwak’ala

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).

I. 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 (=x̌).

I. If an event participant is both a Co-initiator and a Non-initiator, use either instrumental (=s) or accusative (=x̌).

These instructions are intended to enable anyone to build Kwak’ala sentences with instrumental (=s) and accusative (=x̌) objects and communicate like a native speaker.
A.2 Choosing between object cases

Turning now to situations where both instrumental (=s) and accusative (=x̌) case are possible, we’re faced with another question: when the Alternation Condition in (40) is met, how do we choose between =s and =x̌ for expressing an object?

In one sense, when the Alternation Condition is met, whether instrumental (=s) or accusative (=x̌) case is chosen really is optional. In fact, Kʷakʷala 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, Kʷakʷala 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 Kʷakʷala 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 (=x̌), 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) napidi Eddie xa ṭətəm
    napidi Eddi xa ṭətəm
    nap-xʔid =i Eddie =x=a ṭətəm
    throw-BEC =3DIST Eddie =ACC=DET hat
    i. ‘Eddie is throwing/threw a hat (ACC) (at someone/something).16’ (窣ətəm = Co-initiator & Non-initiator)
    ii. ‘Eddie is throwing/threw (something) at a hat (ACC).’ (窣ətəm = Non-initiator)

If a Kʷakʷala 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 Kʷakʷala learners.

16 The verb nap- ‘throw’ describes events that involve three event participants: a thrower, something that’s thrown, and something that is thrown at. When a Kʷakʷala 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 Klakala 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 =x to communicate this meaning, the speaker has avoided the potential ambiguity in (48).

(49) na'pidi Eddiea ta.ta ml
na'pidi Eddiea la.ta ml
nap-x?id =i Eddie =s=a la.ta ml
throw-BEC =3DIST Eddie =INST=DET hat
‘Eddie is throwing/threw a hat (INST).’ (la.ta ml = 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 =x 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 (=x), thereby ‘highlighting’ the fact that the event had been completed.
(50)  **Context:** The speaker is watching Katie putting a pot onto the stove.

a.  lə’mux Katiyə̓x hənxtɬə̓nsa sup laɬwa ləgwilətsɬə̓x
ləɨnuɬ Katiyə̓x hənɬə̓nsa sup laɬʷə ləgʷilaɬɬə̓x
lə=ʔm  =uɬx  Katie=ɬ  hən-xɬ-xʔid
AUX=VER  =3MED  Katie=VIS  hollow.container.upright-on.fire-BEC
=s=a  sup  la  =ɬ=ʷ=a  ləgʷilaɬɬ=ɬ
=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.  lə’mux hənxtɬə̓nsɬ Katiyə̓xwa supix laɬwa ləgwilətsɬə̓x
ləɨnuɬ hənɬə̓nsɬ Katiyə̓xʷa supix laɬʷə ləgʷilaɬɬə̓x
lə=ʔm  =uɬx  hən-xɬ-xʔid  =uɬx  Katie
AUX=VER  =3MED  hollow.container.upright-on.fire-BEC  =3MED  Katie
=ɬ=ʷ=a  sup=ɬ  la  =ɬ=ʷ=a  ləgʷilaɬɬ=ɬ
=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 (=x) 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 =x 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, Kʷakʷala 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 (=x) 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 =x).

**A.3 Variation between speakers**

An important question that remains at this point is whether all Kʷakʷala 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 Kʷak̓ala speakers, it’s important to acknowledge that all of them speak either the central Kʷak̓ala dialect (Kingcome Inlet, Fort Rupert, Hopetown, and Alert Bay) or the northern ’Namak̓ala dialect (C’al̓g̱wadi). It could be that other Kʷak̓ala speakers from other areas have different rules for object case than what I’ve described above.

Several of the Kʷak̓ala speakers I have worked with have told me that there does seem to be variation within the Kʷak̓ala-speaking community in how =s and =x̌ are used to mark objects. One particular way that Kʷak̓ala 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 =x̌. Now imagine that you are a Kʷak̓ala speaker, and you hear another Kʷak̓ala 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 =x̌, combined with the fact that there are multiple possible strategies for making this choice, may explain why the use of =s and =x̌ appears to vary amongst Kʷak̓ala 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 Kʷak̓ala, 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 Kʷak̓ala-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 Kʷak̓ala language.

A.4 What Kʷak̓ala’s object case system tells us about language in general

With a basic story of how object case works in Kʷak̓ala in place, we are in a good position to reflect on what this case system tells us about language in general.

What makes Kʷak̓ala’s object case system particularly interesting from a cross-linguistic perspective is that out of Kʷak̓ala’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 (=\(\tilde{x}\)) 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 Kwakwa’ala as compared with other languages has to do specifically with the fact that Kwakwa’ala 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 (=\(\tilde{x}\)), is uninterpretable. This makes Kwakwa’ala’s object case system interesting for two reasons. First, Kwakwa’ala’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, Kwakwa’ala’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 Kwakwa’ala 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)\begin{align*}
a. & \quad \text{Terttu luki kirjaa} \\
& \quad \text{Terttu read book.PART} \\
& \quad \text{‘Terttu was reading a book (PART).’ } \\

b. & \quad \text{Terttu luki kirjan} \\
& \quad \text{Terttu read book.ACC} \\
& \quad \text{‘Terttu read (all) the book (ACC).’ (Heinämäki 1994: p. 213)}
\end{align*}\]

In Kwakwa’ala, in contrast, sentences with accusative (=\(\tilde{x}\)) 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

\[^{17}\text{Another way of stating this contrast is to say that instrumental case is the \textit{marked} category, while accusative case is the \textit{unmarked} category. I’ve used the terms \textit{semantically interpretable} versus \textit{semantically uninterpretable} here instead, however, in order to be consistent with the terminology I use in the dissertation. The evidence for this}\]
sentence. In fact, (53a) can also be translated as ‘The man is fixing my car’, where the event is ongoing.  

(53)  

a. hil’idoxda bagwanamaxan ka  
   hil?idoxda bag*anomaxan ka  
   hil-x?id =ox=da bag*anom =x=an 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. k’is’mox gwaloxda bagwanam hil’ixan ka  
   k’ismox galoxda bag*anom hil?ixan ka  
   k?is=ʔm =ox  g*al =ox=da bag*anom hil-x?id =x=an 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’ak’ala can does not guarantee this meaning. This difference arises specifically because accusative case is interpretable in Finnish, but uninterpretable in K’ak’ala.

A fascinating consequence of the way that K’ak’ala’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’ak’ala, 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’ak’ala fits into this typology because its object case system is oriented towards the initiating subevent, making it an I-language. K’ak’ala 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’ak’ala 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’ak’ala 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, Kʷakʷala examples are provided in the NAPA (University of Victoria) orthography, with the exception that in place of the symbol ‘d’, I’ve used the digraph ‘dz’. Kʷakʷala 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 Kʷakʷala, 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

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### Table B.2: Orthographic correspondences: fricatives

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### Table B.3: Orthographic correspondences: resonants

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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 (=x) 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 (Æ =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 ǧəls- ‘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. \( {\text{la}}=\lambda \quad \text{go}=\text{FUT} \quad \text{go}=\text{FUT} \)
   \( \text{go}=\text{FUT} \quad =1 \quad \text{paint}=\text{BE}=\text{FUT} \)
   ‘I’m gonna go paint.’ (VF)

b.  \( \text{go}=\text{FUT} \quad =1 \quad \text{paint}=\text{BE}=\text{FUT} \)
   \( \text{go}=\text{FUT} \quad =1 \quad \text{paint}=\text{BE}=\text{FUT} \)
   ‘The lady is painting *eulachon grease* (INST) on her face.’ (VF)

c. \( \text{go}=\text{FUT} \quad =1 \quad \text{paint}=\text{BE}=\text{FUT} \)
   \( \text{go}=\text{FUT} \quad =1 \quad \text{paint}=\text{BE}=\text{FUT} \)
   ‘The lady is painting her face with *eulachon grease*.’ (VF)

d. \( \text{go}=\text{FUT} \quad =1 \quad \text{paint}=\text{BE}=\text{FUT} \)
   \( \text{go}=\text{FUT} \quad =1 \quad \text{paint}=\text{BE}=\text{FUT} \)
   ‘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 *Kʷakʷala* allows at most one direct object per clause, realized in

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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. On this analysis, the 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 kuxʷsʔənd ‘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 kəlxʷ-'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. kuxʷsʔəndida Ɂaq̓uɬamasx̣a laqʷə
   kuxʷ-(x)sʔ-xʔid =i=da Ɂaq̓uɬamas =x=a laqʷə
   split-across-BEC =3DIST=OST teacher =ACC=DET firewood
   ‘The teacher split a piece of firewood (ACC).’ (JF)

b. kuxʷsʔəndida Ɂaq̓uɬamasasis ʔəʔəʔsu laxə laqʷə
   kuxʷ-(x)sʔ-xʔid =i=da Ɂaq̓uɬamas =s=is
   split-across-BEC =3DIST=OST teacher =INST=3REFL.POSS
   ʔəʔəʔsu la =x=a laqʷə
   hand/arm PREP =ACC=DET firewood
   ‘The teacher split a piece of firewood with his hand (INST).’ (JF)

c. * kuxʷsʔəndida Ɂaq̓uɬamasasis ʔəʔəʔsuʃxə laqʷə
   kuxʷ-(x)sʔ-xʔid =i=da Ɂaq̓uɬamas =s=is
   split-across-BEC =3DIST=OST teacher =INST=3REFL.POSS
   ʔəʔəʔsu =x=a laqʷə
   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. kəlxʷox Shelliʔa kəlkəlsəla
   kəlxʷ =ox Shelly =x=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 Kʷakʷala, 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.
Data like (4)-(5) suggest the existence of a clausal constraint on object expression in Kʷakʷala, 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 Kʷakʷala, 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 *kuxʷs?əndida 'snap in half' and (7) with kəlxʷ-‘buy’ would be Means-PPs, headed by a covert preposition inserted to carry the additional argument in these clauses.

(6) [Same context as (4)]

kuxʷs?əndida qaquamasaʕəx ɬəqʷəsis ʔəqəʔəsu
kuxʷ-(x)s?-xʔəd =i=da qaquamasa =x=a ɬəqʷə
split-across-BEC =3DIST=OST teacher =ACC=DET firewood
=s=is ʔəqəʔəsu =MEANS=3REFL.POSS hand/arm
‘The teacher split a piece of firewood (ACC) with his hand.’ (VF)

(7) [Same context as (5)]

kəlxʷoə Sheelliə kəlkəsəloasa hishəmeʔ?
kəlxʷ=oə Shelly =x=a kəlkəsəla
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 $\equiv x$ 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 $\equiv s$ 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 Kwak’ala

In Chapter 6, Section 6.3.1, I provided evidence showing that object case realization and telicity are determined independently in Kwak’ala. The purpose of this section is to describe five sources of telic interpretation in Kwak’ala. 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 Kwak’ala.

D.1 Context

An important source of telic interpretation in Kwak’ala 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...

\[
\begin{align*}
\text{gu}{\text{x}}\text{ʷ}{\text{a}}\text{l}{\text{a}}\text{ⁿ}\text{ə}\text{n} \& \{\text{sa, ťa}\} & \text{qəšəne}\text{ʔ}. \text{k}\text{i}{\text{s}}\text{n} \text{gu}{\text{x}}\text{ʷ}{\text{a}}\text{l}{\text{a}}\{\text{sa, ťa}\} \text{qəšəsi}\text{s} \\
\text{gu}{\text{x}}\text{ʷ}{\text{a}}\text{l}\text{a} \text{ⁿ} \& \{\text{s}=\text{a}, \text{=}=\text{a}\} & \text{qəšəne}\text{ʔ} \\
\text{hang-}\text{on-}\text{CONT} & =1 \text{ CONN} \{\text{INST}=\text{DET}, \text{=ACC}=\text{DET}\} \text{ shirt} \\
\text{k}\text{i}{\text{s}} \text{=n} & \text{dish} \{\text{s}=\text{a}, \text{=}=\text{a}\} \text{qəš-x(s)sis} \\
\text{neg} & =1 \text{ hang-}\text{on.} \text{surface-}\text{CONT} \{\text{INST}=\text{DET}, \text{=ACC}=\text{DET}\} \text{ ring-foot/leg} \\
\text{‘I hung up the shirts }\{\text{INST, ACC}\}. \text{ I didn’t hang up the pants }\{\text{INST, ACC}\}.\text{’} (\text{JF, VF})
\end{align*}
\]

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 Kwak’ala comes from the use of modifiers that are used to assert that an event has culminated. Kwak’ala 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 ġʷal- ‘finish, stop, quit’ (2) and labənd ‘go to the end’ (3).

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D.3 Lexical aspect

Another source of telicity in Kʷak̓ala is lexical aspect. Greene (2013) proposes three lexical aspect classes in Kʷak̓: 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, -xʔid (6) (Greene 2013: p. 39-41, 96-101).

(4) Bare transitions have a past interpretation

\[ \text{'qida gudanxə ətəm} \]
\[q(a) =i=da gudan =x=a ətəm\]
\[\text{find =3DIST=OST horse =ACC=DET carrot}\]

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’

\[
\text{'ləmox galabandox Catherine qəxis wayas}\]
\[lə=ʔm =o= x galabənd =o= x Catherine\]
\[\text{find =ACC=3REFL.POSS honey}\]

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. * gaʔidida dagʷadaʔa ʔala
gax-xʔid =i=da dagʷada =x=a ʔala
come-BEC =3DIST=OST doctor =ACC=3MED=DET day

Intended: ‘A doctor came today.’ (Greene 2013, p. 97)

b. gaʔida dagʷadaʔa ʔala
gax =i=da dagʷada =x=a ʔala
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

\[ [xʔid] = \lambda P_{v,s,t}, \lambda w, \exists e. (\text{BECOME}(P))(e)(w) \land \text{time}(e) \subseteq t \]  

(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 tap- ‘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) naqox Katie laʔa tapa kʷəʔsta
naq =oʔx Katie la =x=a tap-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.
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 təpida ‘get broken’ event cannot be felicitously cancelled. In (12), which corresponds with (10), we see that culmination of the causative təpida ‘break’ event also cannot be felicitously cancelled.

(11) təpida təp-xʔid  kʷəʔsta  kʔsta
broken-BEC =i=da  kʷəʔsta
lit.: ‘The cup broke,’ (VF)

(10) təpida Pateša təp-xʔid  kʷəʔsta  Pat  təp-xʔid-a
broken-BEC =3DIST Pat =i=da  kʷəʔsta
lit.: ‘Pat broke the cup (ACC),’ (VF)

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 qəyak- ‘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 Kʷakʷala 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 Kʷakʷala 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) ḷə̀yaxʔidi Simonaʔa luʔsom ḷə̀yakasu?
    ḷə̀yak-xʔid =i Simon =x=a luʔsom ḷə̀yak-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. ḷiqʷi Simon lʔi ḷə̀yaxʔidxa luqʷsom ḷə̀yakasu?
    ḷiqʷ =i Simon =a luqʷsom ḷə̀yak-xʔid
    mess.up =3DIST Simon AUX=EMBED=3DIST kick-BEC
    =x=a luʔsom ḷə̀yak-a-səw
    =ACC=DET spherical kick-A-ACC.PASS
    ‘Simon messed up when he kicked at the ball (ACC).’ (VF)

b. ḷə̀yaxʔidi Simonaʔa luʔsom ḷə̀yakasu?.  kʔstuux ḷoləkala ḷə̀yaxʔidi Simonaʔa
    luʔsom ḷə̀yakasu?
    ḷə̀yak-xʔid =i Simon =x=a luʔsom ḷə̀yak-a-səw
    kick-BEC =3DIST Simon =ACC=DET spherical kick-A-ACC.PASS
    kiʔs=ta =ux ḷwa-la-kal-a ḷə̀yak-xʔid =i
    NEG=but =3MED so-CONT-very-A kick-BEC =3DIST
    Simon =x=a luʔsom ḷə̀yak-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 ḷə̀akʷala 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 its 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. Its 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 Kʷakʷala, 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 Kʷakʷala 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 Kʷakʷala, we’ve seen that accusative case is assigned independently of telicity (Section 6.3.1). This suggests that in Kʷakʷala, 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. \( DO(\alpha, \phi) \leftrightarrow \phi \land u.t.u.c.o.a.(\phi) \)

b. “…the abbreviation [u.t.u.c.o.a.] stands for ‘is under the unmediated control of the agent (individual denoted by \( \alpha \))’ 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. \( [BECOME \phi] \) is true at \( I \) iff there is an interval \( J \) containing the initial bound of \( I \) such that \( \neg \phi \) is true at \( J \) and there is an interval \( K \) containing the final bound of \( I \) such that \( \phi \) is true at \( K \).

b. Interval: Let \( T \) be the set of real numbers. Let \( \prec \) be the standard dense linear ordering of \( T \). \( I \) is an interval iff \( I \subseteq T \) 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 \( \text{bəw}- \) ‘leave’, which takes an instrumental object (5); the verb \( \text{qa}- \) ‘find’, which takes an accusative object (6); and the verb \( \text{cə-} \) ‘give’, which takes an alternating object (7).

(5) Transitions can take an instrumental object

\[ \text{ləmuux } \text{Hannahx } \lambda \text{wux Katiyəx } \text{gʷəlała } qa \text{ bəwe?suux } \text{caxišwx} \]
\[ \text{la=ʔm } =\text{uwx } \text{Hannah=}\hat{x} \text{ } \lambda \text{əw } =\text{uwx } \text{Katie=}\hat{\chi} \]
\[ \text{AUX=VER } =\text{3MED } \text{Hannah=VIS } \text{CONJ =3MED } \text{Katie=VIS} \]
\[ \text{gʷəla-la } \text{qa } =\text{is } \text{bəw=}e? \text{ } =s=\text{uχ} \]
\[ \text{finish-STAT } \text{PREP =3REFL.POSS } \text{leave=NMZ } =\text{3POSS}=\text{3MED} \]
\[ \text{cašíš=χ} \]
\[ \text{Fort.Rupert=VIS} \]

‘Hannah and Katie are getting ready to leave Fort Rupert (inst).’ (VF)

(6) Transitions can take an accusative object

\[ \text{qəmi Katiyəxus dalači} \]
\[ \text{q(a)=ʔm } =\text{i } \text{Katie } =\hat{x}=\text{us } \text{dala-}=\hat{\chi}i \]
\[ \text{find=VER } =\text{3DIST } \text{Katie } =\text{ACC}=\text{3REFL.POSS } \text{money-container} \]

‘Katie did find her wallet (acc).’ (VF)
Transitions can take an alternating object

\[ \text{cowon } \{ \text{sa, } \text{xa} \} \lambda \text{əəm} \]
\[ \text{co } =\text{ən } \{ =\text{s=a} , =\text{x=a} \} \lambda \text{əəm} \]
\[ \text{give } =\text{1} \text{ CONN } \{ =\text{INST=DET} , =\text{ACC=DET} \} \text{ hat} \]

‘I gave the hat \{ \text{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: \( \lambda e. (\text{DO}(P))(e) \)

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).

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(9) Activity-like processes: *qas-‘walk’*

   lə=ʔm=ʔs ʔa=ʔm ʔik q(a) =is  la=ʔ?
   AUX=VER=and so=VER say PREP =3REFL.POSS go=NMZ
   qas-xʔid-a q(a) =is  ?iwe? =ʔ=x  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. qasuʔ Norman sa sik ʔaǧ ʔawe 
   qas =ux Norman =s=a  sikağawe?
   walk =3MED Norman =INST=DET cane
   ‘Norman’s walking with a cane (INST).’ (VF)

(10) Accomplishment-like processes: *qas-‘walk’*

a. qasəndi Vickiyəš qaʔs qaʔs le? la xaʔəpsud
   qas-ʔi=ʔa Vicky =ʔ=x a  qaʔs qa =is
   walk-ʔi=BEC=3DIST Vicky =ACC=DET tree PREP =3REFL.POSS
   la=ʔ? la =ʔ=x a  qaʔs
   go=NMZ PREP =ACC=DET other.side
   ‘Vicky walked across the tree (ACC) to get to the other side.’ (VF)

b. ?əxʔexsdən qən qasʔide? la xa kəwlilas
   qasʔ-xʔexfd =1 qa =ʔ=ʔn qas-xʔid=ʔa?  la =ʔ=x a
   DO-desire =1 PREP =1POSS walk-BEC=NMZ PREP =ACC=DET
   kəwlilas store
   ‘I want to walk to the store (la).’ (VF)

c. luʔ Shellix qaʔ{sida, xiʔa} wacı la xa ʔəmaʔis
   lə =uʔ Shelly=ʔ=x qas-a {=s=i=da,
   AUX =3MED Shelly=VIS walk-A {=INST=3DIST=OST,
   =ʔ=x=da} wacı la =ʔ=x 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 Kʷakʷala 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 *goltə̂xst* ‘tall’ (13).

(12) *pisa* =da 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.*
    *goltə̂xst*
    ‘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), *kʷə̂nq*–‘wet’ (15), and *lawis*–‘angry’ (16).
(14) **Context: There is a bowl on the table, and it’s half-full of apples.**

\[\text{ʔomux qaqtuxda lu?xʷəge?xsa ?abəls} \]
\[\text{ʔwa=ʔm =ux qa-quit =ux=da lu?xʷəge?=x} \]
\[\text{so=VER =3MED REDUP~full =3MED=OST bowl=VIS} \]
\[\text{=s=a ?abəls} \]
\[\text{=INST=DET apple} \]

‘The bowl is somewhat full of apples (INST).’ (VF)

(15) **Kʷaquxda hə̓məxwəmiliḵsa ᵉap**

\[\text{kʷənq =ux=da hə̓məxwəmili=x =s=a ᵉap} \]
\[\text{wet =3MED=OST table=VIS =INST=DET water} \]

‘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.**

\[\text{lawisox Katiy̕ʷə a ḽəs} \]
\[\text{lawis =o̕x Katie =x=ə=ə ḽəs} \]
\[\text{angry =3MED Katie =ACC=3MED=DET bus} \]

**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 Kʷakʷala 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) **Kʷakʷala aspektual verb classes** (Greene 2013: p. 30-33)

<table>
<thead>
<tr>
<th>Type</th>
<th>Template</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. States</td>
<td>(\lambda e. P(e))</td>
</tr>
<tr>
<td>b. Processes</td>
<td>(\lambda e. (DO(P))(e))</td>
</tr>
<tr>
<td>c. Transitions</td>
<td>(\lambda e. (BECOME(P))(e))</td>
</tr>
</tbody>
</table>
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 Kwak'wala is in alignment with the predictions of the Initiating Subevent Theory.