Interpreting Derived Stative Predicates: Evidence from ʔayʔajuθəm

by

Bruno Luis de Oliveira Andreotti

B.Sc., University of Canterbury, 2016

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in

The Faculty of Graduate and Postdoctoral Studies

(Linguistics)

THE UNIVERSITY OF BRITISH COLUMBIA
(Vancouver)

September 2018

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The following individuals certify that they have read, and recommend to the Faculty of Graduate and Postdoctoral Studies for acceptance, a thesis/dissertation entitled:

Interpreting Derived Stative Predicates: Evidence from ŋayʔajúθam

submitted by Bruno L. O. Andreotti in partial fulfillment of the requirements for
the degree of Master of Arts
in Linguistics

Examine Committeee:

Henry Davis, Linguistics
Co-supervisor

Hotze Rullmann, Linguistics
Co-supervisor

Lisa Matthewson, Linguistics
Supervisory Committee Member

Additional Examiner

Additional Supervisory Committee Members:

Supervisory Committee Member

Supervisory Committee Member
Abstract

This thesis explores the semantic properties of a verb affix analyzed by Watanabe (2003) as marking stative aspect in ?ayʔajuθəm. Also known as Comox-Sliammon, ?ayʔajuθəm is a critically endangered Central Salish language spoken on the central west coast of British Columbia, Canada.

As Nedjalkov and Jaxontov define them, (1988, p. 6), pure stative readings express "a state without any implication of its origin" (e.g. the village is surrounded by mountains), while resultative readings express "both a state and the preceding action it has resulted from" (e.g. the village is surrounded by soldiers).

Predicates derived by the ?ayʔajuθəm stativizer were tested in elicitation with native speakers which was targeted to clarify what kinds of context these predicates can occur in and what readings are possible. It was found that despite being derived from eventive roots, these predicates may be interpreted as pure stative rather than resultative.

A new representation of the affect of stative morphology on an eventive predicate is provided based on this evidence from ?ayʔajuθəm to address the analytical paradox that arises from stative predicates, derived from eventive roots, being interpreted as pure states. It is proposed that the different possible readings of a stativized predicate in ?ayʔajuθəm arise out of pragmatics, requiring no semantic or syntactic ambiguity and not violating monotonicity. Essentially, the analysis states that derived stative predicates denote the contextually most informative and least superfluous of the states associated with the predicate, evaluated against a set of Questions Under Discussion (Roberts, 1996).
Lay Summary

This research investigates how adjective-like words built on verbs (derived stative predicates) are interpreted in ?ayʔajʔəm, a critically endangered Central Salish language spoken on the west coast of British Columbia. Though semantic fieldwork elicitation methods, this thesis investigates the different possible ways these words can be understood in different contexts, contributing to the theoretical understanding of derived stative predicates as well as to the documentation of a critically endangered language.
Preface

This thesis is an original and independent work by the author Bruno L. O. Andreotti. Parts of chapters 3 and 4 were presented in Andreotti, B. (2018, May) *Interpreting derived stative predicates in Comox-Sliammon*. Paper presented at the 10th conference on Semantics of Underrepresented Languages of the Americas. Toronto, ON.

The fieldwork reported herein was conducted under the ethical clearance certificate number H15-01026 of the Behavioural Research Ethical Review Board at UBC to H. Davis.
# Table of Contents

Abstract............................................................................................................................................. iii

Lay Summary......................................................................................................................................... iv

Preface.................................................................................................................................................. v

Table of Contents .................................................................................................................................. vi

List of Figures........................................................................................................................................ viii

List of Symbols and Notations........................................................................................................... ix

List of Abbreviations .......................................................................................................................... x

Acknowledgements............................................................................................................................. xi

Chapter 1      Introduction.................................................................................................................. 1
  1.1 Language Family Background........................................................................................................ 1
  1.2 Language Vitality.............................................................................................................................. 3
  1.3 Glossing Convention and Other Notations.................................................................................... 3
  1.4 Methodology.................................................................................................................................. 5
  1.5 Formal Program.............................................................................................................................. 9

Chapter 2      Stativity .......................................................................................................................... 11
  2.1 Stative Predicates are Durative and Lack Processes .................................................................. 11
  2.2 Pure vs. Resultative Stativity, and Monotonicity....................................................................... 15
  2.3 Post-Stative Predicates.................................................................................................................. 19
  2.4 Existing Monotonicity-Preserving Analyses .............................................................................. 20
    2.4.1 Lexically Specified Target States ......................................................................................... 20
    2.4.2 Building Statives from Aspectually Neutral Roots............................................................ 23

Chapter 3      ayʔajuʔam Grammar ....................................................................................................... 25
  3.1 Syntactic Categories of Roots ...................................................................................................... 25
  3.2 Lexical Aspect of Verb Roots ...................................................................................................... 30
    3.2.1 Eventive Verb Roots ............................................................................................................. 30
List of Figures

Figure 1: Testing (2) for a post-stative reading.................................................................7
Figure 2: Lexical stativizer merging directly to the root in the lexicon.............................57
Figure 3: Phrasal stativizer merging above the VP in IAspP ..............................................58
Figure 4: Structure and computation of example (140) .......................................................62
Figure 5: Structure and computation of example (149b) ....................................................66
Figure 6: Two prompts to test stativized/pluractionalized control transitive stem..............84
List of Symbols and Notations

Symbols Used in Glosses

- (hyphen) Morpheme boundary = (equals sign) Clitic boundary

~ (tilde) Reduplication . (period) One-to-many correspondence

\ (backslash) Suprasegmental alternation [\] (square brackets) Covert element

<-> (angled brackets) Infix √ (square root) Noun or verb root

# (hash) Rejected form ? (question mark) Judgement uncertain

Symbols Used Outside Glosses

[\] (square brackets) Narrow phonetic transcription

/\ (slash brackets) Broad phonemic transcription

//\ (double slash bracket) Morphological breakdown (outside of a gloss)

<-> (angled brackets) Orthographic representation (outside of a gloss)

C (as part of a morphophonological form) obstruent

R (as part of a morphophonological form) resonant

V (as part of a morphophonological form) vowel
### List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJ</td>
<td>Adjective</td>
</tr>
<tr>
<td>AUT</td>
<td>Autonomous</td>
</tr>
<tr>
<td>CAU</td>
<td>Causative</td>
</tr>
<tr>
<td>CLT</td>
<td>Unglossed clitic</td>
</tr>
<tr>
<td>CTR</td>
<td>Control transitivizer</td>
</tr>
<tr>
<td>DEM</td>
<td>Demonstrative</td>
</tr>
<tr>
<td>ERG</td>
<td>Ergative subject suffix</td>
</tr>
<tr>
<td>INCH</td>
<td>Inchoativizer</td>
</tr>
<tr>
<td>INTR</td>
<td>Unglossed intransitivizer</td>
</tr>
<tr>
<td>MD</td>
<td>Middle-voice</td>
</tr>
<tr>
<td>NEG</td>
<td>Negative</td>
</tr>
<tr>
<td>NMZ</td>
<td>Nominalizer</td>
</tr>
<tr>
<td>OBL</td>
<td>Oblique</td>
</tr>
<tr>
<td>PCP</td>
<td>Participle</td>
</tr>
<tr>
<td>PST</td>
<td>Past tense</td>
</tr>
<tr>
<td>RCP</td>
<td>Reciprocal</td>
</tr>
<tr>
<td>S</td>
<td>Singular</td>
</tr>
<tr>
<td>TR</td>
<td>Unglossed transitivizer</td>
</tr>
<tr>
<td>AI</td>
<td>Active-intransitive</td>
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<tr>
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<td>Unglossed auxiliary</td>
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<td>Characteristic</td>
</tr>
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</tr>
<tr>
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<td>Unglossed determiner</td>
</tr>
<tr>
<td>DIR</td>
<td>Directive transitivizer</td>
</tr>
<tr>
<td>EXI</td>
<td>Existential</td>
</tr>
<tr>
<td>IND</td>
<td>Indicative subject clitic</td>
</tr>
<tr>
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<td>Limited control transitivizer</td>
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<td>MOD</td>
<td>Unglossed modal</td>
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<tr>
<td>OBJ</td>
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<td>Possessive</td>
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<tr>
<td>PROG</td>
<td>Progressive</td>
</tr>
<tr>
<td>RFL</td>
<td>Reflexive</td>
</tr>
<tr>
<td>STV</td>
<td>Stativizer</td>
</tr>
</tbody>
</table>
Acknowledgements

The amount of support I received for this dissertation is truly humbling. There are so many people that this simply could not have happened without. First and foremost, I extend my deepest gratitude to the speakers of ʔayʔajuʔəm we have worked with, and their respective communities, for sharing their language; it has truly been an honor to be allowed to study it.

I thank our consultants who live in Vancouver, the most frequent consultants for our cohort of linguists, for having the patience, strength, and resilience to have held on to the language in the face of adversity. Also, for putting up with hours of linguists presenting weird contexts that are unlikely to ever actually happen, to test grammatical constructions which will likely never be used. I also thank our consultants in Sliammon and Homalco; it was amazing to work with every one of them, to joke and to hear stories, and to learn so much in what was usually so little time in each visit.

I am grateful for the support I received from my committee: Dr. Henry Davis, whose unparalleled knowledge of the Salish language family and experience with linguistic field work in syntax and semantics was indispensable in this investigation; Dr. Hotze Rullmann, whose sheer experience with semantics and challenging but encouraging guidance kept me inspired; and Dr. Lisa Matthewson, whose expertise with semantics fieldwork in Salish brought it all together. I would also be amiss to not express my gratitude to the fellow students working on ʔayʔajuʔəm, conversing with whom often sparked ideas and inspiration: Daniel Reisinger, Roger Lo, and Kaining Xu. Thanks especially to Gloria Mellesmoen – thanks for being an amazing friend and colleague, and for the hours we spent talking about ʔayʔajuʔəm and other pertinent things in life.

Lastly but definitely not leastly, I would like to thank my mother Vanessa Andreotti for the psychological, financial, and often academic support, as well as my partner Harikoa Bronsdaughter-George for staying strong and patient by my side despite having had to follow me down the emotional rabbit hole that is a Masters’ program.

čečehatanapč; muito obrigado.
Chapter 1  Introduction

This thesis presents the results of an investigation into the interpretation of derived stative predicates in ?ayʔaǰuθəm (also known as Comox-Sliammon). Derived stative predicates (or stativized predicates) are adjective-like linguistic objects which denote states (temporary properties, qualities, or characteristics of an entity) which are built up from atomic linguistic units which denote events (verb roots). Though the investigation focuses on ?ayʔaǰuθəm, the data, discussion, and analysis shed light on the interpretation of derived stative predicates in more widely studied languages like English. Thus, the research question in this thesis is: how are derived stative predicates interpreted in Comox-Sliammon?

The thesis is structured into six chapters, this introduction being the first. Chapter 2 explores the notion of stativity from a formal and empirical perspective cross-linguistically; chapter 3 outlines some of the crucial background about the grammar of ?ayʔaǰuθəm; chapter 4 presents data from elicitation targeted at various properties of predicates derived by the ?ayʔaǰuθəm stativizer; chapter 5 proposes an analysis of this data, and chapter 6 concludes the thesis.

1.1  Language Family Background

The ?ayʔaǰuθəm language is a member of the Central branch of the Salish family of languages spoken on the coast of British Columbia. The language is traditionally spoken by the Comox, Sliammon, Homalco, and Klahoose First Nations.

The Salish languages, also known as Salishian languages, are a family of languages spoken along the northwest coast of the United States and the southwest coast of Canada, as far inland as Montana. The traditional territories of the Salish peoples form a geographically connected area, with the exception of the Tillamook and the Nuxalk (Bella Coola), which form exclaves as the southernmost and northernmost Salish territories respectively. All extant languages in the Salish family are acutely endangered.

The family divides into five branches: Tillamook, Bella Coola, Tsamosan, Interior Salish, and Central Salish. The non-indigenous names of these languages are given below, each branch
organised from northernmost to southernmost (for traditional names see Czaykowska-Higgins & Kinkade, 1998):

- The Bella Coola branch consists of only the Bella Coola language;
- None of the languages in the Tsamosan branch are still spoken, but the family consisted of four members:
  - Quinault
  - Lower Chehalis
  - Upper Chehalis
  - Cowlitz
- The Interior Salish branch is the second biggest branch of the Salish family by number of languages, and the biggest by number of remaining speakers. It consists of:
  - Shuswap
  - Lillooet
  - Thompson
  - Colville-Okanagan
  - Columbian
  - Spokane-Kalispel-Flathead
  - Coeur d’Alene
- The Central Salish branch is the biggest branch of the Salish family by number of languages. It consists of:
  - Comox-Sliammon (ʔayʔajúʔəm)
  - Sechelt
  - Pentlatch
  - Squamish
  - Halkomelem
  - Nooksack
  - Northern Straits
  - Klallam
  - Lushootseed (a.k.a. Pudget Sound Salish)

---

1 Several difficulties arise with presenting traditional names of these languages, as it is often the case that autonomous names exist only for dialects, and/or orthographic representations of the name(s) vary. The name “ʔayʔajúʔəm” is used here for the language named Comox-Sliammon by researchers due to it being a fairly widely accepted name among the communities.
- Twana

- The Tillamook branch contains only the Tillamook language, which is no longer spoken.

### 1.2 Language Vitality

As per the UNESCO (2003) language vitality classification, ?ayʔajuʔəm is severely endangered – as of 2014, there were 36 reported fluent speakers and 705 semi-speakers (FPCC, 2014, p. 25). These represent 1.9% and 37.2% of the reported population (p. 45). Every known native speaker is a member of the grandparent generation, indicating severely disrupted intergenerational transmission, which is a direct result of residential schools and other colonial practices.

Though ?ayʔajuʔəm is still used by some native speakers as a primary means of communication in day-to-day conversation, its domains of use are otherwise limited. Several younger community members are known to understand the language better than they are able to speak it, though it is unclear if or how well the domains of use of the language are expanding. Various efforts are underway to protect ?ayʔajuʔəm and it has been taught in nearby public schools since the early 1990s (FPCC, 2014, p. 45).

The language is fairly well documented relative to other languages with similar vitality, though several disagreements remain about how the language should be written. Nevertheless, the orthography has stabilized to the point where written materials exist, and children are exposed to them in school.

Attitudes towards the language are generally positive both within the communities and outside; preservation and revitalization of ?ayʔajuʔəm is supported legally, strategically, and financially by provincial legislation in British Columbia. However, no federal legislation exists for Canada as a whole, and the language does not share equal official status with English and French.

### 1.3 Glossing Convention and Other Notations

The format of the data presented in this thesis follows a modified version of the Leipzig Glossing Rules (Comrie, Haspelmath, & Bickel, 2008), using the abbreviations listed in the introductory section. Each example takes the following form:
(i) **Limited control with progressive aspect**

\[
\begin{align*}
\text{Limited control with progressive aspect} & \quad \text{← Title (if needed)} \\
\text{čićoxʷ-an} & \text{ta ŭenxʷ} & \quad \text{← Orthography} \\
\text{čə-} & \text{vč-əxʷ-an} & \text{tə=} & \text{véjánxʷ} & \quad \text{← Morphemic breakdown} \\
\text{PROG-} & \text{get.cooked-LCTR[3OBJ]-1SG.ERG} & \text{DET=} & \text{fish} & \quad \text{← Gloss} \\
\text{“I have been cooking (frying) fish.”} & \quad \text{← English translation} \\
\text{Context: frying many pieces of fish, with some already fried.} & \quad \text{← Context (if available)} \\
\text{(Watanabe, 2003, pp. 208-9; glossing adapted)} & \quad \text{← Citation (if needed)}
\end{align*}
\]

Alternatively, some examples are formatted so as to illustrate patterns in word-formation operations, containing multiple morphemic breakdowns and translations:

(ii) **Possessive infix rejected in roots with verb translations**

(Watanabe, 2003, p. 73; glossing adapted, emphasis added)  

<table>
<thead>
<tr>
<th>Unmarked Root</th>
<th>Root&lt;POS&gt;</th>
<th>← Gloss for pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>√ʔím-aš</td>
<td># √ʔím-a&lt;ha&gt;š</td>
<td>← Morphemic breakdown</td>
</tr>
<tr>
<td>“walk”</td>
<td></td>
<td>← English translation</td>
</tr>
<tr>
<td>√ʔjóλ</td>
<td># √ʔjí&lt;hl&gt;λ</td>
<td>← Morphemic breakdown</td>
</tr>
<tr>
<td>“run”</td>
<td></td>
<td>← English translation</td>
</tr>
<tr>
<td>√hás-əm</td>
<td># √hás-a&lt;ha&gt;m</td>
<td>← Morphemic breakdown</td>
</tr>
<tr>
<td>“to sneeze”</td>
<td></td>
<td>← English translation</td>
</tr>
</tbody>
</table>

The title may contain information about what the example illustrates, what language it is in, etc. In examples of type (i), it is omitted when this information is given by the surrounding prose, in which case the orthographic representation occupies the same line as the example number. It is always given with examples of type (ii).

The orthographic representation of the example and its morphemic breakdown are given separately, as the latter is not as accessible to speakers of the language as the former. Many speakers of the language have adopted an orthography derived from the Americanist Phonetic Alphabet (APA), though this differs from the APA used in the morphemic breakdown (as it is used by Salish linguists) mainly in that the vowels are represented phonetically rather than phonemically. The orthography represents vowels narrowly using a broad range of symbols, despite the fact that ?ayʔajuθom has only four phonemic vowels: /a/, /i/, /u/, and /ə/.
The APA and the IPA more familiar to most linguists differ in some symbols:

<table>
<thead>
<tr>
<th>APA</th>
<th>IPA</th>
<th>Phonetic description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ƛ</td>
<td>tʃ</td>
<td>Voiceless alveolar lateral affricate</td>
</tr>
<tr>
<td>š</td>
<td>ʃ</td>
<td>Voiceless post-alveolar fricative</td>
</tr>
<tr>
<td>č</td>
<td>ʧ</td>
<td>Voiceless post-alveolar affricate</td>
</tr>
<tr>
<td>ķ</td>
<td>dʒ</td>
<td>Voiced post-alveolar affricate</td>
</tr>
<tr>
<td>y</td>
<td>j</td>
<td>Voiced palatal approximant</td>
</tr>
</tbody>
</table>

Additionally, stress and associated suprasegmental phenomena are marked with an acute accent on a vowel, e.g. á. The symbol ’ on consonants (e.g. w̓, q̓) represents glottalization rather than ejective airflow.

The morphemic breakdown explicates the morphological structure of a word, making explicit where morpheme boundaries lie and what kinds of concatenation are used. It follows the Salish literature in using APA to represent only the four phonemic vowels. Morphophonological processes (such as ephenthesis and deletion) are not reversed.

Translations are only given for grammatical examples. Citations are given for all examples, except those obtained in original elicitation. For these original examples, speaker initials are given instead, as in (iii).

(iii) panet to ƛajuys, peyot neʔol teʔε
    √pán·it  tə=√ƛajəys,  páya=ʔut  √nɨʔ-uɬ  táʔa
get.buried-STV DET=rock,  always=CLT be.there-PST DEM

“The rock is buried / underground, it has always been there.”

Context: Describing a picture of a rock underground, explained to have always been there.

(JF; MW; MH)

1.4 Methodology

All data presented in this thesis that is not attributed to another work was obtained in regular one- or two-hour interview sessions with 2 fluent speakers of ʔayʔajuʔam who have been
working with language research for two years, or in one of several less frequent interviews with elders from the four communities. The research process involved three recurring stages:

1. Design targeted elicitation materials to test generalizations made about stative and resultative aspect in the literature and in prior observations, as well as to test predictions about meaning which follow from syntactic composition. These materials include storyboards and cartoons (using the online tool Pixton) which the consultant can describe using natural language (Burton & Matthewson, 2015), constructed sentences in ?ayʔajuʔəm for consultants to accept or reject, and sentences in English for consultants to translate (Matthewson, 2004b).

2. Present these materials to consultants in the form of recorded semi-structured interviews (Brinkmann, 2014), documenting language produced throughout, acceptability judgements of given sentences in ?ayʔajuʔəm, and translations of given sentences in English.

3. Review hypotheses and generalizations considering newly obtained data.

The materials constructed before an interview varied between elaborate contexts with associated pictures and sentences in both English and ?ayʔajuʔəm, to simple word lists and paradigms. An example of the former would be that used for example (1) (this example is discussed further in §4.2.2).

(1) ʃotət lamaye, xʷukʷ̣̣̣t tamʔajems, xʷaʔ yəpas

\[
\sqrt{\text{tú̇ṭ-}} \quad \sqrt{lámə́yə} \quad xʷúkʷ̣̣̣ t \quad \text{tám} \quad \sqrt{ʔaj̣-im=s} \quad xʷaʔ
\]

\text{get.shot-STV} \quad \text{bottle} \quad \text{none} \quad \text{what} \quad \text{get.changed-MD=3POS NEG}

\[
\sqrt{yə́p̣̣̣=\text{as}}
\]

\text{get.broken-STV}

“(Though) the bottle is shot, nothing changed about it, it did not break.”

Context: The bottle was shot, but the bullet just bounced off without even leaving a scratch because it is made of really strong glass.

(JF)

Before the interview where a grammaticality judgement was to be obtained for example (1), figure 2 was prepared as part of a context to be presented. The picture illustrates a bottle being shot but having the bullet bounce off, not being broken by it. Alongside the picture, a “guess” sentence was prepared based on existing knowledge of the language, to be tested for
acceptability in the context presented. This is given in (2), where differences from the final example are bolded (the ◊ symbol indicates that this is not an example of language produced by the speakers, but a prompt produced by the investigator).

(2) Preliminary “guessed” example

◊ tọ̀tọ́ọ́tọ́ọ́ọ́ta ləməyə, xʷaʔ yṗẹt
√tútú-it ta=vlámaya, xʷaʔ vy ş y-p-it
get.shot-STV DET=bottle, NEG get.broken-STV

“The bottle is shot, it did not break.”

Context: The bottle was shot, but the bullet just bounced off without even leaving a scratch because it is made of really strong glass.

Figure 1: Testing (2) for a post-stative reading

The way the interview proceeds illustrates one of the difficulties testing judgements around specific constructions using this method; consultants often change the sentence, occasionally responding to their modified sentence rather than the one being tested, making it unclear if the judgement of the targeted form is positive or negative. Below is a snippet of the interview, with the spontaneous change bolded.

Interviewer: What if Gloria had shot the bottle and hit it, but the glass was so strong that the bullet just bounced off and didn’t even scratch it? Can we still say that tọ̀tọ́ọ́tọ́ọ́ta ləməyə, even though xʷaʔ yṗẹt?
Consultant: *hew ḥoq “not lemeye. [“the bottle is very hard”], tóʔuxʷas, xʷ“ukʷt tam ḥajems [“she shot it and nothing changed about it”]*

Interviewer: Yeah, must be made out of really good glass. But is it tóʔet here even though xʷ“aʔyup”et [“it is not broken”]?

Consultant: Yeah, she hit it, even though xʷ“ukʷt tam ḥajems, xʷ“aʔyújék. Yeah I’d say it’s tóʔet. It’s just another way to say it.

Because the consultant repeated the stativized form, this was recorded as a clear positive judgement in the given context, even though the example was not repeated back as a whole continuous unit. The example was also modified to include xʷ“ukʷt tam ḥajems “nothing changed about it” as it was given in the same context.

This method of elicitation allows a large amount of contextual information to be conveyed to the consultants in a short amount of time, allowing investigators to test judgements of specific constructions in rare and elaborately structured situations. However, there is a great potential for information to be misinterpreted, but this is a problem for most methods of presenting large amounts of information. Furthermore, preparation for this method of elicitation requires more time than other methods, potentially making it impractical depending on the context and time available for field work. Another possible point of contention is the use of English to present these contexts; see Matthewson (2004b, pp. 394-9) for a discussion and defense of the use of metalanguage in presenting contexts.

On the opposite end of the spectrum of complexity, paradigmatic data such as that presented in (3) was obtained in a much less nuanced manner; each word was presented without a context, and the consultant was asked whether it is a “real word”.

(3) *Inchoativizer rejected on eventive roots*

<table>
<thead>
<tr>
<th>Unmarked Root</th>
<th>Root~inch</th>
<th>Prog~Root</th>
</tr>
</thead>
<tbody>
<tr>
<td>√qatxʷ</td>
<td># √qat&lt;~at&gt;xʷ</td>
<td>q̓á~√qatxʷ</td>
</tr>
<tr>
<td>“get burnt”</td>
<td></td>
<td>“be getting burnt”</td>
</tr>
</tbody>
</table>
√ƛəpxʷ
"get broken (in two)"

# √ƛəp<~əp>ₓʷ

ƛə~√ƛəpxʷ
"be getting broken (in two)"

Interviewer: Do you recognize ʔətxʷ? 

Consultant: Yeah, like ʔətxʷ ƛə qʷɛyχ, the wood got burnt up. 

Interviewer: Yeah! What about ʔəʔətxʷ? Is that a similar word? 

Consultant: [frowns] No. That’s not a word. 

Interviewer: OK. What about ʔəʔətxʷ? 

Consultant: Yeah, that’s when something’s burning. 

Interviewer: What about ƛəpxʷ, do you recognize it? 

... 

This method of elicitation is much less informative than more nuanced alternatives, but it yields a large amount of data in a short amount of time and it suffices to show patterns of grammaticality and composition among subsets of the lexicon. However, it may mistakenly yield misjudgements for forms that require an elaborate context to be acceptable and may cause consultants to be primed and misjudge examples which are lexical exceptions the pattern being investigated. 

Most of the elicitation conducted in this investigation falls somewhere between these two extreme examples in terms of complexity, depending on the kind of data needed. For instance, sometimes larger sentences were presented without an elaborately constructed context, other times pictures and contexts were presented to the consultant without a sentence. The specific method employed to obtain data is discussed further wherever pertinent. 

1.5 Formal Program 

A Neo-Davidsonian model-theoretic framework of intensional event semantics (Davidson, 1967; Parsons, 1990) is employed throughout this thesis. For the sake of clarity and consistency, certain assumptions about it are explicated in this section. Formalisms from the
literature which are not constructed in this framework are adapted into this system with the greatest fidelity possible.

As is standard for a (Neo-)Davidsonian theory, the model is a quadruple $M = \langle E, V, I, \llbracket \cdot \rrbracket \rangle$, where $E$ is the domain of entities (structured as a Boolean lattice as in Link, 1983), $V$ is the domain of events, and $I$ is the domain of times (both structured as join semilattices, formulated and related as in Krifka, 1998). The interpretation function $\llbracket \cdot \rrbracket$ maps segments of natural language to their extensions in the model, expressed as formulas in a simply typed lambda calculus (Church, 1940; see also Heim & Kratzer, 1998) with five base types $B = \{e, v, i, s, t\}$ – (e)ntities, e(v)entualities, and t(i)mes corresponding to each domain of the model, as well as po(s)sible worlds and (t)ruth values corresponding to $\{0,1\}$. The type constructor is $\langle \cdot, \cdot \rangle$, such that $\langle \alpha, \beta \rangle$ refers to functions from type $\alpha$ to type $\beta$. Natural language segments are interpreted against a context $c$ (Kaplan, 1999), an index $g$ (Heim, 1988), a world $w$ (von Fintel & Heim, 2011), such that $\llbracket \cdot \rrbracket^{c,g,w}$ returns the extension of a language segment given a context-index-world triple $\langle c, g, w \rangle$.

Typically, the variables $x, y, z$ are reserved for entities $\in E$, the variable $e$ (to various prime levels) represents an eventuality in $V$, $t$ represents a time in $I$, and $w$ represents a possible world. Predicates are represented by $P, Q, R$ and their function type is given as a subscript as they are introduced.

Following Kratzer (1996; 2005), a closer relationship between a root and its internal argument is assumed, requiring external arguments such as agents to be introduced in the syntax. This obsolesces the thematic role of “patient/theme”.

The ontological nature of events remains somewhat vague in this approach, but the practice of assuming a distinction between states and events as different kinds of eventualities is not adopted, as stativity and eventivity are here treated as properties of predicates (see §3.1 for a formal definition of both properties).

To avoid the theoretical and philosophical pitfalls of the Problem of Perception and Naïve Realism (see Crane & French, 2017 and references therein), the model is to be understood as a representation of psychological ontology; a way “to capture certain properties of the way how we see the world, not as attempts to describe the world how it is” (Krifka, 1998, p. 2).
Chapter 2  Stativity

Stativity is a broad property of predicates which can be intuitively characterized as referring to eventualities which are unchanging, typically requiring no expenditure of energy to maintain. Holisky (1978) notes two ways to define aspectual properties such as stativity: the first is to define them language-specifically using morphosyntactic tests, and the second is to define them as universal notions which the grammar of a language must account for and consequently reflect. This thesis operates within the latter approach, using the formal logic of model theory to represent the universal notion of stativity.

Most languages have adjectives (or adjective-like) words which inherently refer to unchanging eventualities in this way; words like cold or happy, which describe things that are stable and consistent, at least given an interval of time. Many languages also have verbs which exhibit stativity, or derived forms which exhibit stativity. In this chapter, some of the literature on stativity in formal semantics is explored, and the properties typically associated with stativity are illustrated using examples from English.

Following Holisky (1978), Kroeber (1988), and Watanabe (2003), the diagnostic for stativity in ?ayʔajuʔom consists of the three semantic criteria: compatibility with auxiliaries of duration and incompatibility with auxiliaries of rate. These criteria are justified in section 2.1.

Additionally, a contrast is presented between pure stative predicates and resultative predicates, which are formally stative but entail the event of their inception. This contrast is presented in section 2.2, alongside the analytical paradox that arises from it.

Finally, section 2.3 discusses a third possible but very marginal reading of post-stative predicates, which express the state of some event having culminated in the past.

2.1  Stative Predicates are Durative and Lack Processes

Stativity is here defined as a property of predicates which are durative and possess a subinterval property. As it is difficult to test a subinterval property in elicitation, a lack of a process is used as an effective proxy. These properties are defined model-theoretically in this section.

Durativity, in short, is a property of predicates over eventualities that can be true of more than a moment of time. This property contrasts with that of punctuality, which is true of predicates...
which may only take place momentarily (Comrie, 1976, p. 42). In Vendler’s (1957) classification, durativity is a property of states, activity, and accomplishment predicates. These predicates have a duration that can be modified by adverbial terms; accomplishments can be modified by in-adverbial phrases, while activities and states are modified by for-adverbial phrases.

(4) accomplishment: He drew a circle in twenty seconds.
? He drew a circle for twenty seconds.

Activities: He pushed a cart for twenty seconds.
# He pushed a cart in twenty seconds.

States: I loved her for three years.
# I loved her in three years.

Achievements: I discovered the answer in three minutes.
# I discovered the answer for three minutes/hours/years.

Durativity can be operatively defined here as follows: a predicate is *durative* if and only if all eventualities in its extension either have a proper temporal part or are themselves a proper temporal part of a larger eventuality which is also in the extension of the predicate. A “temporal part” here means a subeventuality that occurs for a subset of the runtime of the parent eventuality, but takes up the same space as the parent eventuality for its entire duration.

\[
\forall P_{(v,t)} \left[ \text{Durative}(P) \leftrightarrow \forall e \left[ P(e) \rightarrow \exists e' \left[ e' \sqsubseteq e \lor [e \sqsubseteq e' \land P(e')] \right] \right] \right]
\]

A predicate \( P \) over Davidsonian eventualities is *durative* if and if for every eventuality \( e \) in the extension of \( P \), there exists an \( e' \) that is either a proper temporal part of \( e \), or a proper temporal superpart of \( e \) which is itself in the extension of \( P \).

Among durative predicates, there are some which possess *processes* and some which do not. Vendler (1957) defines a process as “successive phases following one another in time” (p. 144), which are associated with the extension of a predicate. A lack of a process distinguishes states (=stative predicates) from the similarly durative activities and accomplishments; in the schema

\[\text{2 This sentence requires coercion into an accomplishment reading of discover the answer, interpreting the preparatory phase of searching for the answer as part of the process of discovering it.}\]

\[\text{3 Note that the bracketing in (5) requires } e' \text{ to be in the extension of } P \text{ only in the case that it is a proper temporal superpart of } P; \text{ this is because some durative predicates (namely accomplishments in languages like English) are both durative and telic, being thus quantized, having proper temporal parts which do not instantiate the predicate (Krifka, 1992; 1998).}\]
of Pustejovsky (1991), a state possesses only a single phase $P$, while a process possesses a sequence of phases $\langle P_n \rangle$.

(6)  *Adapted event schemata presented in Pustejovsky (1991)*

**State:** a single predicate over eventualities that is not evaluated against any other eventualities sequentially identifying phases of the same collective expression

```
State

P
```

**Process:** a sequence of predicates over eventualities

```
Process

\[ P_1, P_2, \ldots P_n \]
```

If an eventuality falls under the extension of a stative predicate, all of its subeventualities instantiate the same phase. The subeventualities of an instantiation of a process predicate, on the other hand, distribute themselves between the various phases of its process. For example, the eventive predicate *run* entails a sequential structure among the subeventualities of a running eventuality which involves alternating movements of a runner’s legs, which are not themselves complete *run* events. Process predicates are thus *granular*; sufficiently small temporal parts of the eventualities in the extensions of process predicates do not fall into their extensions (Dowty, 1986).

Stative predicates such as *be happy*, on the other hand, entail no such structure; all subeventualities satisfy the same phase indistinguishably (Comrie, 1976). Stative predicates thus obey a *subinterval property* (Dowty, 1986; Smith, 1997; Jackson, 2005); a stative predicate must be true of every temporal part of every eventuality in its extension.

However, it is not easy to test a subinterval property directly in elicitation. As a proxy, the presence of a process can be tested, as processes and states are complementary subsets of durative predicates. Holisky (1978) provides a diagnostic for a process (which she calls “on-goingness”) which has been employed to great effect by Kroeger (1988) and Watanabe (2003) in *ʔayʔajuθom*. Holisky demonstrates a difference in the distribution of adverbials that modify the process of a predicate, such as adverbials modifying rate, between durative predicates which are “on-going” (processes) and predicates which are “not on-going” (states) in Georgian

---

4 Note that Pustejovsky (1991) uses event variables to represent full predicates in his schemata. This practice is not followed here; the schemata in (53) are adapted into the Neo-Davidsonian framework.
(and English). She shows that adverbials modifying the process of a predicate are rejected with stative predicates, as illustrated in Holisky's English examples in (7).

(7)  
**Adverbial restrictions with process and stative predicates**

(Holisky, 1978, pp. 145-6)

<table>
<thead>
<tr>
<th>Process predicates</th>
<th>Stative predicates</th>
</tr>
</thead>
<tbody>
<tr>
<td>He got cold suddenly.</td>
<td>? He’s cold suddenly.</td>
</tr>
<tr>
<td>I’ll hang the picture slowly.</td>
<td># The picture hangs slowly.</td>
</tr>
</tbody>
</table>

The operative formal definition of stativity, then, is as follows: a predicate is *stative* if and only if it is durative and every part of every eventuality which falls under its extension also falls under its extension (stative predicates possess the subinterval property; Dowty, 1986). This is stated formally in (8).

(8)  
\[ \forall P \left[ \text{STATIVE}(P) \leftrightarrow \text{DURATIVE}(P) \land \forall e.P(e) \rightarrow \forall e'.[e' \subseteq e \rightarrow P(e')] \right] \]

A predicate \( P \) over Davidsonian eventualities is *stative* if and only if it is durative, and for every eventuality \( e \) in the extension of \( P \), every \( e' \) which is a temporal part of \( e \) is also in the extension of \( P \).

The tests for durativity (given by the compatibility with adverbials of duration) and lack of a process (given by the incompatibility with adverbials of rate) thus form a robust diagnostic for stativity.

Eventivity can be operatively defined similarly as follows: a predicate is *eventive* if and only if each eventuality in its extension either contains a proper part which does not fall under the extension of the predicate (eventive predicates are granular because they have processes) or has no proper parts at all (achievements are also eventive). This is stated in the model-theoretic language in (9).

---

This is acceptable if the predicate is coerced into an inchoative reading, synonymous with its process-denoting counterpart. This coercion is not available in Georgian, nor does it seem to be available in ʔayʔajuʔam. However, see §3.2.2 for a discussion on inchoative states in Squamish (Bar-el, 2005).
(9) \( \forall P \left[ \text{EVENTIVE}(P) \leftrightarrow \forall e[P(e) \rightarrow \exists e'[e' \sqsubseteq e \land \neg P(e')] \lor \not\exists e'[e' \sqsubseteq e]] \right] \)

A predicate \( P \) over Davidsonian eventualities is \textit{eventive} if and only if for every eventuality \( e \) in the extension of \( P \), there exists an \( e' \) that is a proper temporal part of \( e \) which does not instantiate \( P \), or \( e \) has no proper temporal parts.

Although stativity and eventitvity are mutually exclusive properties of predicates, certain predicates such as \textit{surround the village} are ambiguous (they have both stative and eventive readings; e.g. \textit{the woods surround the village} vs. \textit{the soldiers surround the village}).\(^6\) As a result, these predicates are neither stative nor eventive (at least by default), as they do not satisfy the conditions specified for either property. These predicates are discussed further in \S2.2.

\subsection{2.2 Pure vs. Resultative Stativity, and Monotonicity}

In exploring the typology of stative predicates, Nedjalkov and Jaxontov (1988) draw a distinction between two kinds of stativity: \textit{pure stative} predicates express "a state without any implication of its origin" (e.g. the village is surrounded by woods), while \textit{resultative} predicates express "both a state and the preceding action it has resulted from" (p. 6). This section illustrates this distinction using examples from English.

The distinction is illustrated in the examples in (10), where the adjectival participles in the resultative column entail the predicates in the pure stative column while additionally entailing the existence of an event of their origin.

(10) \textit{Two kinds of stativity: pure stativity and resultativity}

<table>
<thead>
<tr>
<th>Pure stative predicates</th>
<th>Resultative predicates</th>
</tr>
</thead>
<tbody>
<tr>
<td>be standing</td>
<td>be built</td>
</tr>
<tr>
<td>be unconscious</td>
<td>be passed out</td>
</tr>
<tr>
<td>be in love</td>
<td>be enamoured</td>
</tr>
<tr>
<td>be molten</td>
<td>be melted</td>
</tr>
</tbody>
</table>

\(^6\) It could be the case that such predicates have different underlying derivational structures (this analysis is not pursued here). E.g.

\begin{align*}
\text{[vp the woods [v surroundstate [the village]]]} & \quad \text{vs.} \quad \text{[vp the soldiers [v CAUSE [vp the soldiers [v surroundstate [the village]]]]]} \\
\end{align*}
This contrast occurs predictably between certain adjectives and the adjectival participles of their (inchoativized) deadjectival verbs.

(11) Adjectives and the participles of their deadjectival verbs

<table>
<thead>
<tr>
<th>Pure static adjectives</th>
<th>Resultative participles</th>
</tr>
</thead>
<tbody>
<tr>
<td>be red</td>
<td>be reddened</td>
</tr>
<tr>
<td>be dark</td>
<td>be darkened</td>
</tr>
<tr>
<td>be awake</td>
<td>be awoken</td>
</tr>
<tr>
<td>be fat</td>
<td>be fattened</td>
</tr>
</tbody>
</table>

Relatedly, this distinction is also easy to see in the English roots which are ambiguous between verbs and adjectives. A small subset of these roots is given in (59), where the contrast between the adjectival participle and the adjective illustrates the difference between resultative predicates (participles) and pure static predicates (adjectives).

(12) Verb-adjective ambiguous roots in English

<table>
<thead>
<tr>
<th>Verbs</th>
<th>Pure static adjective</th>
<th>Resultative participle</th>
</tr>
</thead>
<tbody>
<tr>
<td>(to) open</td>
<td>be open</td>
<td>be opened</td>
</tr>
<tr>
<td>(to) free</td>
<td>be free</td>
<td>be freed</td>
</tr>
<tr>
<td>(to) empty</td>
<td>be empty</td>
<td>be emptied</td>
</tr>
<tr>
<td>(to) complete</td>
<td>be complete</td>
<td>be completed</td>
</tr>
</tbody>
</table>

Strikingly, the adjectival participles derived from many eventive verbs are lexically ambiguous between pure static or resultative readings given appropriate contexts. This is not entirely surprising for the participles of verbs which exhibit a static-eventive ambiguity, such as spatial-relational verbs like surround, obstruct, tether, hide, etc.

(13) Verbs with static-eventive ambiguity forming pure static participles

<table>
<thead>
<tr>
<th>Eventive uses</th>
<th>Pure static uses</th>
<th>Resultative pcps.</th>
<th>Pure static pcps.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) The soldiers surrounded the village.</td>
<td>The woods surround the village.</td>
<td>The village is surrounded by soldiers.</td>
<td>The village is surrounded by woods.</td>
</tr>
</tbody>
</table>
However, stative-resultative ambiguity is not restricted to the participles of these spatial verbs. They are systematically available with unambiguously eventive verbs in appropriate contexts; counterexamples are exceptions rather than the rule. Some examples of such verbs with clearly pure stative participles are given in (14).

(14) **Unambiguously eventive verbs forming pure stative participles**

<table>
<thead>
<tr>
<th>Eventive uses</th>
<th>No pure stative uses</th>
<th>Resultative pcps.</th>
<th>Pure stative pcps.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) The lake froze in the winter.</td>
<td># The cold freezes the lake.</td>
<td>The lake is frozen again.</td>
<td>Siberia is a frozen wasteland.</td>
</tr>
<tr>
<td>(b) I broke the radio when I tried to move it.</td>
<td># The faulty diode breaks the radio.</td>
<td>The radio is broken, it stopped working when I moved it.</td>
<td>The radio was already broken when I bought it.</td>
</tr>
<tr>
<td>(c) I organised my room yesterday.</td>
<td>?? The shelves organise my room.</td>
<td>The files are organised alphabetically.</td>
<td>The carbon atoms are organised into lattices.</td>
</tr>
<tr>
<td>(d) He tore his jeans yesterday.</td>
<td># The hole tears his jeans.</td>
<td>My jeans are torn from crawling around.</td>
<td>Those jeans are made already torn.</td>
</tr>
</tbody>
</table>

These examples are difficult to analyze because they go against the wisdom that syntactic composition obeys **monotonicity**. Koontz-Garboden (2007) made explicit a hypothesis that had been implicit in compositional semantics since its inception, namely that *word formation operations do not remove operators from lexical-semantic representations (=conceptual...*
This is the \textit{monotonicity hypothesis}. It can be stated equivalently in Pustejovsky’s (1991) framework of lexical verb semantics as “word formation operations do not remove \textit{phases} from lexical-semantic representations”.

Koontz-Garboden (2007) illustrates this with an example from Quechua, which he supplements by illustrating the decomposed structure of the predicates using the aspectual operators from Dowty (1979), given in example (15).

\begin{example}
(15) \textit{Monotonicity in Quechua}

\begin{tabular}{lll}
  hatun & hatun-ya: & hatun-ya:-chi \\
  big & become big & cause to become big \\
  [big] & [BECOME[big]] & [CAUSE[BECOME[big]]] \\
\end{tabular}
\end{example}

Each derivational morpheme adds an operator to the conceptual structure. What is impossible given the hypothesis, then, is the existence of derivational operations as in the hypothetical language Anti-Quechua in example (16), which remove aspectual operators.

\begin{example}
(16) \textit{Hypothetically non-monotonic “Anti-Quechua”}

\begin{tabular}{lll}
  hatun & hatun-bung & hatun-bung-bang \\
  cause to become big & become big & big \\
  [CAUSE[BECOME[big]]] & [BECOME[big]] & [big] \\
\end{tabular}
\end{example}

The problem that the pure stative readings of stativized eventive roots raise in any language where they occur is that they seem to involve precisely the kind of composition that the monotonicity hypothesis deems impossible. \textbf{Pure stative readings of derived stative predicates built from eventive roots require information to be removed from the lexical-semantic representation} at a level of the derivation where it should not be accessible.

Within this event schema, eventive verb roots would have an implicit \texttt{BECOME} operator in their conceptual structure; e.g. \textit{the door closed} means something along the lines of \textit{the door became closed}, as in example (17).

\begin{example}
(17) \textit{the door closed} \approx \textit{the door became closed}

\begin{tabular}{ll}
  [close_{event} \texttt{[the door]}] & = \texttt{[BECOME[closedstate [the door]]]} \\
\end{tabular}
\end{example}
If the stativizer is a word formation operation, it must *remove* the *become* operator to obtain a pure stative reading of the predicate, thereby *violating monotonicity*. This is illustrated in (18).

\[(18) \text{the door closed } + \text{STV} = \text{the door is closed}\]
\[\text{[become[closed}_\text{state [the door]]} + \text{STV} = \text{[closed}_\text{state [the door]]}\]

### 2.3 Post-Stative Predicates

A related third possible reading of a stativized predicate is as a post-state.\(^7\) A post-state is the state of some event having culminated: “For every event \(e\) that culminates, there is a corresponding state that holds forever after. This is the state of \(e\)’s having culminated” (Parsons, 1990, p. 209). All stativized predicates can receive post-stative readings, but this usually only obtains as a last resort, since it is rarely (if ever) more informative than a simple past tense or present perfect aspect. Post-stative readings are possible even when the state typically described by the stativized predicate no longer holds. In English, for instance, a sentence like “the building is evacuated” typically entails that the building in question is empty. However, a possible marginal reading of it does not: a police officer could say it to their supervisor to report a successful fire drill even after the residents have moved back in (Kratzer, 2001, p. 11).\(^8\)

Post-stative readings usually require a kind of pragmatic licensing which is not entirely understood, but seems to relate to recency, such as in job-done contexts (Kratzer, 2001). Even in these cases, the perfect aspect is often used instead of a direct predication on the adjectival participle; this is shown in the synonymy of the direct predication on the stativized predicate in (19) and corresponding perfect aspect forms in (20).

\[(19) \text{The fence is painted, the lawn is mowed, the hedges are trimmed; time to relax.}\]
\[(20) \text{The fence has been painted, the lawn has been mowed, and the hedges have been trimmed. Time to relax.}\]

\(^7\) Some authors call the post-state a *resultant state*, but this term is not used here as it is easy to confuse with the very different notion of a resultative state.

\(^8\) Native speakers of several varieties of English found this example unacceptable or extremely marginal as a post-stative predicate. This is not entirely unexpected given that they are extremely rare, and their pragmatics are not well understood.
2.4 Existing Monotonicity-Preserving Analyses

In this section, two existing analyses of the pure stative-resultative alternation of stativized predicates which preserve monotonicity are explored. Analyses which do not preserve monotonicity (e.g. Dubinsky & Simango, 1996) are not considered, as they are not compatible with the present program.

2.4.1 Lexically Specified Target States

One approach involves lexically specifying target states in the lexical entry of an eventive verb root. Kratzer (2001) posits that the target state of a lexical verb root is accessible to the compositional semantics by constructing verb roots to contain a separate argument for a target state. The formula in (21) shows the denotation of a verb root, where pump is the eventive part of the predicate, inflated is its lexically associated target state, such that they are related by a CAUSE relation.\footnote{This relation is left deliberately vague here, as an exploration of the conceptual nature of causality is far beyond the scope of this thesis}

(21) Lexical specification of the target state of eventive verb pump (Kratzer, 2001)\footnote{Note that Kratzer (2001) treats stativity as a property of eventualities rather than predicates and uses a CAUSE relation between events; these practices are not followed here, but her analysis is adapted into the present program with no apparent ill effect.}

\[ \lambda x \lambda e \lambda e' [\text{pump}(x, e') \land \text{inflated}(x, e) \land \text{CAUSE}(e, e')] \]

It is possible to simply existentially close the originating event of a predicate and assert a result state, yielding the originating event entailment of resultative stative predicates. The formula in (22) gives Kratzer’s analysis of an adjectival passive constructed at the phrasal level, and (24) gives her analysis of an adjectival passive constructed lexically (adapted into the framework employed here). She gives the phrasal and lexical constructions as two possible ways to construct the predicate rather than to account for some empirical difference.

(22) Adapted phrasal stativization of pump up the boat in Kratzer (2001)

\[ \begin{align*}
\text{Stem+obj:} & \quad \lambda e \lambda e' [\text{pump}([\text{the boat}], e') \land \text{inflated}([\text{the boat}], e) \land \text{CAUSE}(e', e)] \\
\text{Stativizer:} & \quad \lambda P_{(v, x, t)} \lambda e \lambda e' [P(e, e')] \\
\text{Output:} & \quad \lambda e \lambda e' [\text{pump}([\text{the boat}], e') \land \text{inflated}([\text{the boat}], e) \land \text{CAUSE}(e', e)]
\end{align*} \]
For the lexical case, Kratzer assumes an operation called *Function Composition*, which basically lets Function Application (FA) “skip” a term by abstracting it over the resulting expression.

(23) *Function Composition (FC)*

\[
\lambda a \lambda b [f(a,b)] \cdot \lambda P \lambda b[P(b)] = \lambda a (\lambda b [f(a,b)] \cdot \lambda P \lambda b[P(b)])
\]

Adapted lexical stativization of *pump* in Kratzer (2001)

Stem: \(\lambda x \lambda e \lambda e' [\text{pump}(x,e') \land \text{inflated}(x,e) \land \text{CAUSE}(e',e)]\)

Stativizer: \(\lambda P (\lambda x (\lambda e \lambda e' [P(e,e')])) (\lambda x (\lambda e \lambda e' [\text{pump}(x,e') \land \text{inflated}(x,e) \land \text{CAUSE}(e',e)]))\)

Output: \(\lambda x \lambda e \lambda e' [\text{pump}(x,e') \land \text{inflated}(x,e) \land \text{CAUSE}(e',e)]\)

Pure stative participles, on the other hand, are more difficult to analyse. Kratzer addresses the case of pure stative participles built from verbs exhibiting stative-eventive ambiguity like those in (13) by positing that their “Davidsonian argument has to be able to range over events (proper) as well as states” (p. 9). In the present framework, this is equivalent to saying that these verbs are neither eventive nor stative. Kratzer does not explicate the computation of these predicates, but an ambiguous verb like *surround* might be constructed as in (25), with the same conceptual predicate applying to both the arguments associated with the event and the state. When stativized, the existential closure in the stativizer would then be satisfied by the existence of a pure state.

(25) *Lexical stativization of surround*

Root: \(\lambda x \lambda e \lambda e' [\text{surround}(x,e') \land \text{surround}(x,e) \land \text{CAUSE}(e',e)]\)

Stativizer: \(\lambda P \lambda e \lambda e' [P(e,e')]\)

Output: \(\lambda x \lambda e \lambda e' [\text{surround}(x,e') \land \text{surround}(x,e) \land \text{CAUSE}(e',e)]\)

However, this proposal requires every verb root that can produce a pure stative participle to range over both states and events for the ambiguity to exist: if a verb root consists of two conceptual predicates \(\phi\) and \(\psi\) associated with the eventualities \(e\) and \(e'\), the only way that the stativized root can be ambiguous between existentially asserting \(\phi\) and \(\psi\) is if \(\phi = \psi\).
To prove this, consider the contrapositive: if \( \phi \neq \psi \), then a stativized root cannot be ambiguous between existentially asserting \( \phi \) and \( \psi \). Take an arbitrary root \( \lambda e \lambda e'[\phi(e') \land \psi(e) \land \text{CAUSE}(e', e)] \) such that such that \( \phi \neq \psi \). The stativizer existentially binds \( e' \). As \( e' \) is associated with \( \phi \) and not \( \psi \), only \( \phi \) is existentially asserted, and not \( \psi \). Thus, there is no ambiguity in the existential assertion, as was to be shown.

Because the distinction lies in the semantic structure of the root, this analysis predicts that stativized predicates with pure stative readings are all built on verb roots that already show a stative-eventive ambiguity like *surround*. However, as shown in the example (14), some roots like *break* do not have a stative-eventive ambiguity but form pure stative participles anyway, showing that this prediction is incorrect. There may be ways to adapt the analysis to these cases, but these are not pursued here.

For post-stative predicates, Kratzer (2001) posits that a viewpoint stativizer which maps events to times is responsible for the post-state readings in these cases, complementing the perfective and imperfective morphemes she describes in Kratzer (1998).

(26) **Viewpoint stativization of prove the theorem in Kratzer (2001)**

\[
\begin{align*}
\text{Stem+obj:} & \quad \lambda e[\text{prove}([\text{the theorem}], e)]
\text{Stativizer:} & \quad \lambda P(v,t) \lambda t \exists e[P(e) \land t(e) \ll t]
\text{Output:} & \quad \lambda t \exists e[\text{prove}([\text{the theorem}], e) \land t(e) \ll t]
\end{align*}
\]

In cases where the root *does* possess a lexically specified target state, Function Composition allows the viewpoint stativizer to combine with the argument associated with the eventive predicate. This creates post-stative readings of predicates like *the boat is pumped up*, which may be true even when the boat is already deflated if, for instance, pumping up the boat to check for leaks was part of a safety checklist before using it in the water.\(^{11}\)

To avoid a "dangling" argument associated with the target state, Kratzer proposes "an operator that existentially quantifies the target state argument – if there is one" (p. 12) as part of the label of the syntactic category "V". The viewpoint stativization of *pump the boat* is constructed in (27).

\(^{11}\) This example was also rejected or judged extremely marginal by several native speakers of English.
(27) Viewpoint stativization of *pump up the boat*

Stem+obj:  \( \lambda e \lambda e'[\text{pump}(\text{the boat}, e') \land \text{inflated}(\text{the boat}, e) \land \text{CAUSE}(e', e)] \)

"V":  \( \lambda e \exists e'[\text{pump}(\text{the boat}, e) \land \text{inflated}(\text{the boat}, e') \land \text{CAUSE}(e, e')] \)

Stativizer:  \( \lambda P(\nu, t) \lambda t \exists e [P(e) \land \tau(e) \ll t] \)

Output:  \( = \lambda t \exists e \exists e'[\text{pump}(\text{the boat}, e) \land \text{inflated}(\text{the boat}, e') \land \text{CAUSE}(e, e') \land \tau(e) \ll t] \)

2.4.2 Building Statives from Aspectually Neutral Roots

The second approach involves building up predicates from roots which contain both processes and target states in their extension. Jackson (2005) notes that “if the eventive verbs and the resultatives with a derived [pure] stative interpretation are derivationally related semantically as well as morphologically ... then the meaning that is shared by the derived [pure] statives and the eventive forms is all that can be contributed by a hypothetical common derivational source” (p. 152). Both stative and eventive predicates must then be derived by (possibly null) morphology. This approach draws heavily on the work of Embick (2004).

Jackson (2005) posits several different kinds of morphemes which can occur in the head of vP to restrict the readings of the roots to certain aspectual subsets. These are sometimes realized overtly in the form of light verbs such as *be, go, get*, etc., other times as overt morphemes on the verb stem, but a lot of the time these are phonologically null. For instance, the English adjectival *be* is an overt form of the stativizer which must attach to roots to derive stative predicates: adjectives or pure stative participles depending on morphological properties of the root. In contrast, an inchoativizer\(^{12}\) merges at the head of vP to derive eventive predicates.

The stativizer as it is portrayed by Jackson (2005) is adapted into the present framework as a morpheme which asserts durativity and a subinterval property, formalized in (28). Its output is thus stative by definition, containing result states and possibly pure states if the root contains them.

---

\(^{12}\) Jackson (2005) and Embick (2004) both associate this inchoativizer with agentivity, which is problematic in ʔayʔajuʔam where inchoativizing and transitivizing morphology are distinct. This association is problematic in several languages, and itself requires further investigation.
(28) \[\text{STV} = [be] = \lambda P_{(v,t)} \lambda e [P(e) \land \exists e'[e' \sqsubseteq e \lor [e \sqsubseteq e' \land P(e')]] \land \forall e''[e'' \sqsubseteq e \rightarrow P(e'')]]\]

The stativizer takes a predicate \(P\) over eventualities, an eventuality \(e\), asserts that \(e\) is in the extension of \(P\) and that the output is durative and possesses a subinterval property:

a. There is an \(e'\) which is either a proper temporal part of \(e\), or a proper superpart of \(e\) which is in the extension of \(P\).

b. All temporal parts of \(e\) are in the extension of \(P\).

Jackson’s inchoativizer is adapted as a morpheme which asserts *quantization*, formalized in (29). Quantization requires that an eventuality under the extension of a predicate has no proper temporal parts which are themselves in the extension of that predicate. This ensures the output is always telic (Krifka, 1992; 1998) and eventive.

(29) \[\text{INCH} = \lambda P_{(v,t)} \lambda e [P(e) \land \forall e'[e' \sqsubseteq e \rightarrow \neg P(e')]]\]

The inchoativizer takes a predicate \(P\) over eventualities, an eventuality \(e\), and asserts that \(e\) is in the extension of \(P\) and that the output is quantized: that all proper temporal subparts of \(e\) are not in the extension of \(P\).

Like the previous analysis, post-stative predicates require a different stativizer, and possess a different syntactic structure. A viewpoint stativizer similar to that of Kratzer (2001) merges above the inchoative morphology.
Chapter 3  ?ayʔajʔəm Grammar

This chapter outlines the aspects of ?ayʔajʔəm grammar that are relevant to the investigation of stativity. Section 3.1 discusses syntactic categories, and outlines the difference between stative and eventive verb roots. Section 3.2 briefly explores the lexical semantics of these verb roots. Section 3.3 outlines how stems with various properties can be derived from ?ayʔajʔəm roots. Section 3.4 briefly covers word order in ?ayʔajʔəm sentences.

3.1  Syntactic Categories of Roots

This subsection briefly outlines the assumptions made about syntactic classes in this thesis. As is now generally assumed in the Salish literature, and following the evidence presented in Watanabe (2003, pp. 66-76), it is assumed that there is a formal syntactic distinction between noun and verb roots in ?ayʔajʔəm.

There may also be a distinction between verbs and adjectives, but its is not as clear, and tests to determine it (e.g. H. Davis, 2011) were not carried out during this investigation. However, there is a subset of non-nominal roots which forms stative bare predicates,13 and a subset which form eventive bare predicates.

Kroeber (1988), following Holisky (1978), shows that some roots form stative bare predicates which are acceptable with auxiliaries of duration, such as √χʷúχʷ “long time” or qáj “still” but not auxiliaries of rate, such as √háhays “slowly” or √ƛ̓ “fast”.14 Some of his examples are given in (30) and (31), alongside some examples from original elicitation to complete the minimal parities.

(30)  Roots with stative bare predicates accepted with auxiliaries of duration

(a)  χʷoχʷmot kʷas
    √χʷúχʷ-mut √kʷás
    long.time-very hot
    “It was hot for a long time.”
    (JF; PD)

(b)  χʷoχʷmot məƛ̓
    √χʷúχʷ-mut √məƛ̓
    long.time-very calm.water
    “[The water] was calm for a long time.”
    (JF; PD)

13 Bare predicate = a predicate consisting of a root without any overt derivational morphology.
14 Kroeber (1988) and Watanabe (2003) also employ √ʔawʔ “suddenly” as an auxiliary of rate, but most of my consultants did not recognize this word, preferring to indicate unexpectedness using limited control or autonomous morphology.
“My hand is still bruised.”
(Kroeder, 1988, p. 149)

“He’s still tough.”
(Kroeder, 1988, p. 149)

Roots with stative bare predicates rejected with auxiliaries of rate

(a) #ƛɛ kʷas tə tihayɛ

(b) #hahays maƛ

(c) #ƛɛ qəχ tə tʰ čəyiš

(d) #hahays ƛɬwqʷ

Other roots display the opposite pattern, forming eventive bare predicates which are accepted with auxiliaries of rate but not of duration.

Roots with eventive bare predicates accepted with auxiliaries of rate

(a) hɛheys təŋ təŋmen

(b) ƛɛmot qətxʷ šə qʷaỳχ

(c) ƛɛmot ɬaŋ wə tə tʰ čəyiš

(d) hahays kip pipa

(31) Roots with stative bare predicates rejected with auxiliaries of rate

(32) Roots with eventive bare predicates accepted with auxiliaries of rate
(33) **Roots with eventive bare predicates rejected with auxiliaries of duration**

(a) # qajέʔot tαq
qajiʔut tάq
still=CLT close

(Watanabe, 2003, p. 413)

(b) # qajέʔot qətxʷ
qajiʔut qətxʷ //
still=CLT burn

(Watanabe, 2003, p. 413)

(c) # χʷoxʷmot ɬk̓ʷ
χʷúχʷ-μut ɬtákʷ
long.time-very swell

(JF; PD)

(d) # χʷoxʷmot ɬk̓ʷ pipa
χʷúχʷ-μut ɬk̓ə́ p
“pipa”

“long.time-very get.cut paper”

(JF; PD)

Eventive stems can be derived from roots which otherwise form stative bare predicates via inchoative reduplication. Building on Kroeber (1988), Watanabe (2003) describes this process as “inceptive”. Like eventive roots, derived inchoative stems can co-occur with auxiliaries of rate but not auxiliaries of duration, as shown in examples (34) and (35).

(34) **Derived inchoative predicates accepted with auxiliaries of rate**

(a) ƛə̱mot tihih
\[\sqrt{ƛ̓i}ˈ-\mu t \ \sqrt{t̓íh}ˈ-\ḥ\]
fast-very big～INCH
“It got bigger fast.”

(Kroeber, 1988, p. 152)

(b) ƛə̱ kʷasas tə tihayə
\[\sqrt{ƛ̓i} \ \sqrt{k̓ʷá̱s}ˈ-\ḥ as \ tə=\sqrt{t̓íh}ə \]
fast hot～INCH DET=tea
“The tea got hot fast.”

(adapted from Kroeber, 1988, p. 152)

(c) hahays tɛcɛčəm
\[\sqrt{háhaya}ˈ \ \sqrt{táč}ˈ-\ḥ ač-əm \]
slowly visible～INCH-MD
“It slowly became visible.”

(JF; PD)

(d) hahays təsos tə čuy
\[\sqrt{háhaya}ˈ \ \sqrt{t̓ús}ˈ-\ḥ us \ tə=\sqrt{čuy} \]
slowly quiet～INCH DET=child
“The child slowly got quiet.”

(adapted from Kroeber, 1988, p. 151)

(35) **Derived inchoative predicates rejected with auxiliaries of duration**

(a) # qajέʔot tihih
qajiʔut tήh～i̱h
still-CLT big～INCH

(Kroeber, 1988, p. 151)

(b) # qajέʔot kʷasas tə tihayə
qajiʔut kʷá̱s~as \ tə=\sqrt{t̓íh}ə
still-CLT hot～INCH DET=tea

(JF; PD)
As pointed out by Kroeber (1988), inchoative derivation is systematically rejected with roots which form eventive bare predicates, as shown in the originally elicited example (36).

(36) *Inchoativizer rejected on roots which form eventive bare predicates*

(JF; MW; EP)

<table>
<thead>
<tr>
<th>Unmarked Root</th>
<th>Root~INCH</th>
</tr>
</thead>
<tbody>
<tr>
<td>√q̓ətxʷ</td>
<td># √q̓ət&lt;~at&gt;xʷ</td>
</tr>
<tr>
<td>“get burnt”</td>
<td></td>
</tr>
<tr>
<td>√ƛ̓əpxʷ</td>
<td># √ƛ̓əp&lt;~ap&gt;xʷ</td>
</tr>
<tr>
<td>“get broken (in two)”</td>
<td></td>
</tr>
<tr>
<td>√k̓əp</td>
<td># √k̓əp~ap</td>
</tr>
<tr>
<td>“get cut”</td>
<td></td>
</tr>
<tr>
<td>√t̓əq</td>
<td># √t̓əq~aq</td>
</tr>
<tr>
<td>“get closed”</td>
<td></td>
</tr>
<tr>
<td>√ǰíχ-im</td>
<td># √ǰíχ&lt;~iχ&gt;-im</td>
</tr>
<tr>
<td>“get destroyed / fall apart”</td>
<td></td>
</tr>
</tbody>
</table>

Similarly, stative stems can be derived from roots which otherwise would form eventive bare predicates by affixation with the stativizer. Stativized stems are accepted with auxiliaries of duration, but not auxiliaries of rate, as shown in (37) and (38). The stativizer is the focus of this thesis, and its properties are explored further in §5.
(37) **Derived stative predicates accepted with auxiliaries of duration**

(a) qaʔεʔot paχet to t₀ ʔasney

\[ \sqrt{pax}\text{-it} \]

still=CLT get.torn-STV
t₀=t₀=ʔásnay
DET=1S.POS=shirt

"My shirt is still torn."

(Kroeber, 1988, p. 148)

(b) qaʔεʔot təqet

\[ \sqrt{təq}\text{-it} \]

still=CLT close-STV

"It is still closed."

(Watanabe, 2003, p. 413)

(c) \[ χ^{w}o^{w}χ^{w}\text{-mot }\lambda^{k}^{w}\text{et }t_{0} \text{ čeyiš} \]

\[ \sqrt{χ^{w}ux^{w}}\text{-mut }\sqrt{\lambda^{k}^{w}}\text{-it} \]

long.time-very well-STV
t₀=t₀=ćáyiš
DET=1S.POS=hand

"My hand was swollen for a long time."

(JF; PD)

(d) \[ χ^{w}o^{w}χ^{w}\text{-mot }\lambda^{y}č \]

\[ \sqrt{χ^{w}ux^{w}}\text{-mut}=ć \text{ } \lambda^{y}č \]

long.time-very=1S.IND sleep[STV]

"I slept for a long time."

(JF; PD)

(38) **Derived stative predicates rejected with auxiliaries of rate**

(a) #haheys paχet to t₀ ʔasney

\[ \sqrt{hahay}s \text{ } \sqrt{pax}\text{-it} \]

slowly get.torn-STV
t₀=t₀=ʔásnay
DET=1S.POS=shirt

(JF; PD)

(b) #haheys təqet to ʔeμen

\[ \sqrt{hahay}s \text{ } \sqrt{təq}\text{-it} \]

slowly close-STV

t₀=ʔilmın
DET=1S.POS=door

(Watanabe, 2003, p. 414)

(c) #ʔεmot ϱak^{w}et to t₀ ʔeμiš

\[ \sqrt{ʔiʔ}\text{-mut }\sqrt{\lambda^{k}^{w}}\text{-it} \]

fast-very well-STV
t₀=t₀=ćáyiš
DET=1S.POS=hand

(Kroeber, 1988, p. 148)

(d) #ʔεmotč \lambda^{y}č

\[ \sqrt{ʔiʔ}\text{-mut}=č \text{ } \lambda^{y}č \]

fast-very=1S.IND sleep[STV]

(JF; PD)

It is difficult to tell if there are demonstrable constraints which distinguish between state-denoting roots and event-denoting roots as formally distinct syntactic categories beyond simply a semantic distinction between two kinds of verb root. H. Davis (2011) concludes that such
constraints exist in Lillooet Salish (Northern Interior Salish), where a class of root similar to those denoting states in ?ay?aj̓uʔəm demonstrates distinctly adjectival syntactic behaviour. The full battery of tests he employs were not applied to ?ay?aj̓uʔəm in this investigation.

However, the distinction between verbs and adjectives is not consequential for the approach followed in this thesis. Thus, roots which form stative bare predicates are called *stative roots* and roots which form eventive bare predicates are called *eventive roots*.

### 3.2 Lexical Aspect of Verb Roots

Verb roots in ?ay?aj̓uʔəm cannot be partitioned in the same way as their English counterparts. The diagnostics for lexical aspect class in English proposed by Vendler (1957) does not partition ?ay?aj̓uʔəm verb roots in the same way. As far as verb roots (as opposed to derived stems) are concerned, it is sufficient to subdivide them by only eventivity and stativity.

#### 3.2.1 Eventive Verb Roots

Following observations made by Bar-el (2005, p. 130) and Kiyota (2008, pp. 57-66) for bare root predicates in Squamish and Northern Straits respectively (both members of the Central Salish branch), and Bar-el, H. Davis, and Matthewson (2004a) for bare root predicates in Lillooet Salish (Interior Salish branch), eventive verb roots in ?ay?aj̓uʔəm are assumed to be *telic achievements* denoting *transitions*. A full exploration of the lexical semantics of eventive verb roots in ?ay?aj̓uʔəm is left for future work.

Eventive roots are not compatible with auxiliaries of duration, as discussed in §3.1. Furthermore, they are demonstrably telic, as denying the result of a bare eventive root induces a contradiction, shown in examples (39-41).

(39) čeq sapl̓ in # ?iy χʷaʔ čəməs hoy

<table>
<thead>
<tr>
<th>get.fried</th>
<th>bread</th>
<th>and</th>
<th>NEG</th>
<th>AUX=3CNJ</th>
<th>finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Čeq sapl̓ in</td>
<td>#</td>
<td>?iy χʷaʔ</td>
<td>čəməs hoy</td>
<td>√čiyq</td>
<td>√sápl̓ in</td>
</tr>
</tbody>
</table>

“The bread *got fried* # but it never finished.”

Consultant (PD) comment: “You can only say čeq sapl̓ in at the end, when it’s done.”

(JF; PD)
(40) taq to ?emen # ?iy qaʔeʔot goqet
   √táo ṭ=√ʔimín ?iy qáʔi=ʔut √goq-it
close DET=door and still=CLT open-stv
   “The door closed # but it is still open.”
   (JF; PD)

(41) qayot čeño # ?iy qaʔeʔot kʷukʷtəm
   √qáy-uł √čənu ?iy qáʔi=ʔut kʷə~√kʷt-əm
die-PST dog and still=CLT PROG~get.sick-MD
   “The dog died # but it is still sick.”
   (JF; PD)

Note that eventive roots being called *achievements* is a result of them being *telic* but having their duration be *inaccessible*; it is not necessarily the case that ?ayʔajuθəm eventive verb roots never encode processes, but rather that the duration of their process (if it exists) is somehow invisible to the syntactic-semantic computation. As far as the lexical aspectual behaviour of bare eventive roots is concerned, durativity does not seem to matter in Salish (H. Davis, p.c.); even predicates encoding events that take time to unfold in any reasonable circumstance are incompatible with durativity tests.

Stems corresponding to accomplishments and activities must be derived by additional morphology, and these classes also differ from their counterparts in English in various ways. Fully exploring these derivations is beyond the scope of this thesis; see H. Davis and Demirdache (2000), Matthewson (2004a), Bar-el (2005), Kiyota (2008), H. Davis and Matthewson (2009), Turner (2011), and Jacobs (2011) for an exploration of derived aspectual classes in other Salish languages, and Andreotti (2017) for an investigation of the non-culminating accomplishment predicates that result from the control transitivizer in ?ayʔajuθəm.

### 3.2.2 Stative Verb Roots

The lexical aspectual structure of stative verb roots in ?ayʔajuθəm is much simpler than that of eventive roots, in that they straightforwardly denote states in the sense of Pustejovsky (1991) as discussed in §2.1.

Unlike the apparently analogous class of roots in Squamish which Bar-el (2005, pp. 94-6) calls *inchoative states*, stative verb roots in ?ayʔajuθəm were not observed being interpreted as
transitions without inchoative morphology during the course of this investigation. However, this observation was not specifically targeted during this investigation, so negative data was not obtained. Example (42) illustrates the two possible readings of an inchoative state in Squamish.

(42)  *Inchoative states in Squamish*  
(Bar-el, 2005, p. 126)  
(a) chen t'ayák’  
1S.IND angry  
“I got angry/upset.”  
“I am angry.”  
(b) chen kw’ay’  
1S.IND hungry  
“I got hungry”  
“I am hungry.”  
(c) chen lhchiws  
1S.IND tired  
“I got tired.”  
“I am tired.”

However, Bar-el also reports that inchoative states receive stative readings from the marker of progressive aspect, as shown in (43); this contrast starkly with what was found for ṭayʔajuθəm stative roots, which are systematically rejected with the progressive, as shown in (44). Note, however, that the examples reported by Bar-el were not specifically elicited.

(43)  *The Squamish progressive on inchoative states interpreted as stative*  
(Bar-el, 2005, p. 273)  
(a) chen t’a~t’ayák’  
1S.IND PROG~angry  
“I am angry.”  
(b) chen kw’a~kw’ay’  
1S.IND PROG~hungry  
“I am hungry.”  
(c) chen ts’a~ts’ayakw  
1S.IND PROG~worry  
“I am worried.”

(44)  *The ṭayʔajuθəm progressive does not extend to states*  
(JF; PD)  
(a) ṭəp 0εŷ̊ɛɬ  
√ṭəp  √0áyəɬ  
deep  lake  
“The lake is deep.”  
(b) # ṭəp 0εŷ̊ɛɬ  
√ṭə~√ṭəp  √0áyəɬ//  
PROG~deep  lake

(c) tih tə ṭayə  
√tih  tə=√ʔáya  
big  DET=house  
“The house is big”  
(d) # tih tə ṭayə  
√tih  tə=√ʔáya  
PROG~big  DET=house
3.3 Predicates Derived from Verb Roots

H. Davis (1997) argues that verb roots in Salish languages are lexically intransitive and unaccusative – that all Salish verb roots have no external argument lexically, which then has to be introduced by derivational transitivizing morphology (see Gerdts & Hukari, 2006 for an alternative analysis of transitivizing morphology as inflectional).

(45) Bare unaccusative verb root rejected with an agent (Lillooet Salish)

 qa̓nt̓ (l=)ta=šqáyxʷ=a ta=twó:w̱w̱t=a
get.hit (OBL=)DET=man=EXI DET=boy=EXI
“The boy was hit with the man.” (Instrumental reading)
# “The boy was hit by the man.” (Agentive reading)
(H. Davis, 1997, p. 63)

(46) Derived transitive stem required for agent to be permitted

 qa̓nt̓-š-túm  l=ta=šqáyxʷ=a ta=twó:w̱w̱t=a
get.hit-CAU-3OBJ+PASS OBL=DET=man=EXI DET=boy=EXI
“The boy was hit by the man.”
(H. Davis, 1997, p. 64)
Andreotti (2018) shows that many of the observations in Davis (1997) also hold for ʔayʔajuθəm. Bare roots do not admit agents, requiring overt morphology to exhibit transitivity. The hypothesis that ʔayʔajuθəm verb roots are underlingly unaccusative is thus presupposed in this thesis.

(47) *Bare predicate of an eventive root is unaccusative (ʔayʔajuθəm)*

\[
\text{taqʔemən} \\
\sqrt{taq} \quad \sqrt{ʔimin} \\
\text{get.closed} \quad \text{door} \\
\text{“The door closed (by itself).”} \\
\text{(JF; PD)}
\]

(48) Bare unaccusative verb root rejected with an agent

\[
\# \text{taq Brunoʔemən} \\
\sqrt{taq} \quad \text{Bruno} \quad \sqrt{ʔimin} \\
\text{get.closed} \quad \text{Bruno} \quad \text{door} \\
\text{(JF; PD)}
\]

(49) Derived transitive stem required for agent to be permitted

\[
\text{taqtəm Brunoʔemən} \\
\sqrt{taq-t-əm} \quad \text{Bruno} \quad \sqrt{ʔimin} \\
\text{get.closed-CTR[3OBJ]-PASS} \quad \text{Bruno} \quad \text{door} \\
\text{“Bruno closed the door.”} \\
\text{(JF; PD)}
\]

Note that the use of passive morphology such as in example (16) is required when the argument introduced by the transitivizer is an overt DP (H. Davis & Huijsmans, 2017).

Examples (50) and (51) demonstrate how the valence and argument structure of an unaccusative root can be modified by derivational suffixes such as the active intransitive (glossed Al) which demotes the patient and introduces an agent, or the directive/control
transitivizer (glossed DIR in Lilooet Salish and CTR in ñayʔajuθəm due to related but diverging semantics).

(50) *Deriving unaccusative roots in Lilooet*

(H. Davis, 1997)

<table>
<thead>
<tr>
<th>Root</th>
<th>Stem</th>
<th>Voice</th>
</tr>
</thead>
<tbody>
<tr>
<td>qʷəl</td>
<td>qʷəł-xál</td>
<td>qʷəł-ən</td>
</tr>
<tr>
<td>get.cooked</td>
<td>get.cooked-AI</td>
<td>get.cooked-DIR</td>
</tr>
<tr>
<td>&quot;to get cooked&quot;</td>
<td>&quot;to cook/roast&quot; (intr.)</td>
<td>&quot;to cook it&quot;</td>
</tr>
</tbody>
</table>

(51) *Deriving unaccusative roots in ñayʔajuθəm*

(Andreotti, 2018)

<table>
<thead>
<tr>
<th>Root</th>
<th>Stem</th>
<th>Voice</th>
</tr>
</thead>
<tbody>
<tr>
<td>yip̓</td>
<td>yip̓ʔəm</td>
<td>yip̓t</td>
</tr>
<tr>
<td>√yip̓</td>
<td>√yip̓ʔəm</td>
<td>√yip̓t</td>
</tr>
<tr>
<td>get.broken</td>
<td>get.broken-AI</td>
<td>get.broken-CTR</td>
</tr>
<tr>
<td>&quot;to get broken&quot;</td>
<td>&quot;to break something&quot;</td>
<td>&quot;to break it&quot;</td>
</tr>
</tbody>
</table>

While they may consist of only a root, predicates often consist of heavily derived stems which employ various morphological processes that modify or convey valence, voice, argument agreement, and aspect. The general schema of a predicate in ñayʔajuθəm, given in (52), is divided into 4 domains. It differs from other Salish languages starkly in that due to influence from neighbouring Wakashan languages (J. Davis, 1970; Blake, 1999), the language has lost all non-reduplicative prefixes.

(52) *General schema of a predicate in ñayʔajuθəm*

\[
[A_{Clt}=[A_{2} \text{ Asp2-}[A_{1} \text{ √ROOT }] \text{-Asp1-} LS-\text{Appl-Tr/Intr}_2 \text{-} \text{Obj-Voice}_3]=\text{Sbj=Clt}_x]
\]

(adapted from Watanabe, 2003, p. 167)

1. The root, being the only obligatory part of the predicate, constitutes the most central root-level domain;

---

15 These suffixes do more than modify the argument structure of their parent predicate. They affect the predicate's aspectual structure too, creating non-culminating accomplishments; predicates which have a culminature implicature, but may have this implicature overtly denied (see Bar-el, Davis, & Matthewson, 2004a; Bar-el, 2005, pp. 325-7; Kiyota, 2008, pp. 80-4; Andreotti, 2017).
2. The stem-level domain consists of an inner aspectual position (Asp1), an outer-aspectual position restricted to reduplicative morphemes\(^{16}\) (Asp2), a position for lexical suffixes (LS), a position for applicatives (Appl), and a position for stem-internal (in)transitivizers (Tr/Intr);

3. The morphological word domain consists of a position for object suffixes (Obj), and a position for ergative/voice suffixes (Voice);

4. The phonological word domain hosts a plethora of clitics, including pronominal subject clitics (Sbj), as well as other clitics encoding evidentiality, modality, mood, and other properties (Clt). The functions of many of these clitics are not well understood.

The only domains that are relevant to this investigation are the root and the stem, and the latter only as far as the first aspectual position. These are bolded in the schema.

### 3.4 Word Order

Like other Salish languages, ʔayʔajuθəm is predicate-initial, and exhibits a default Predicate-Subject-Object word order in the clausal spine of transitive sentences.

(53) ʔaʔaʔəm Henry Bruno

\[ \text{ʔá ~ ʔaʔ-əm} \quad :\text{Henry Bruno} \]

\[ \text{PROG ~ ʔaʔ-at-əm} \quad :\text{Henry Bruno} \]

\[ \text{“Henry is chasing Bruno.”} \]

(JF)

Auxiliaries and clitics are the only elements that syntactically precede the main predicate in the body of a clause.

(54) qaʔeʔot ʔaʔaʔəm Henry Bruno

\[ \text{ʔá ~ ʔaʔ-əm} \quad :\text{Henry Bruno} \]

\[ \text{PROG ~ ʔaʔ-at-əm} \quad :\text{Henry Bruno} \]

\[ \text{“Henry is still chasing Bruno.”} \]

(JF)

---

\(^{16}\) I am assuming all forms of pluractional reduplication merge at this outer aspect position and nowhere else, leaving a more precise map of their possible scope positions for future study. This assumption is not crucial to the investigation.
Clitic strings occur either in the second position of a clause or, more rarely, clause-initially. Why clitic strings occur clause-initially is not well understood. Some clitics have corresponding auxiliaries which often have different but related meanings.

Several forms of extraction exist in ʔayʔaǰuθom which may distort this word order; these are not explored here. See Watanabe (2003, pp. 146-66) for more information.
Chapter 4  The ʔayʔajuθəm Stativizer

In ʔayʔajuθəm, eventive roots can form derived stative predicates by means of a morpheme which is here called the stativizer. This chapter outlines the phonology and morphosyntax of the stativizer, and presents an exploration of the semantic properties of the stativizer resulting from original elicitation conducted during this project.

To this end, this chapter is organised into four sections. Section 4.1 demonstrates the different shapes the stativizer takes in various environments. Section 4.2 examines the morphosyntactic properties of sativized predicates, and Section 4.3 explores their semantics properties.

4.1 Shape of the Stativizer

The shape of the stativizer is highly variable, depending on the shape of the stem. Watanabe (2003, p. 410-11) describes four shapes of the stativizer depending on the shape of the root:

a. //it//: With CəC stems, the stative morpheme surfaces as a suffix CəC-it. This shape of the morpheme is found exclusively when it is attached directly to roots containing only a schwa vowel. Examples: təqet “be closed”//vəq·it// (vəq “get closed”); kəpet “be cut”//vək·it// (vək “get cut”); jəkʷet “be painted”//vəjəkʷ·it// (vəjəkʷ “get painted”).

b. //it//: With CVC stems, the stative morpheme surfaces as a suffix CVC-it; the same suffix as found with CəC roots, but with an additional suprasegmental feature marked with an acute accent ‘ which is called stress throughout this thesis.17 However, Mellesmoen & Andreotti (2017) argue that this may not be an acoustically accurate description; this feature correlates predominantly with pitch, and while raised pitch is the main acoustic correlate of contrastive stress, it may occur independently of it. Examples of this allomorph of the stativizer: jəχət “be collapsed/destroyed”//vəjəkʷ·it// (vəjəkʷ “fall apart”); ʃənɛt “be buried”//vəpən·it// (vəpən – “get buried”); jəq̓ɛt “be fallen”//vəjəq̓·it// (vəjəq̓ “fall”).

c. //<i>//: With CəCC, CəCaC, CVCC, or CVCaC stems, the stative morpheme surfaces as an infix, CəC<i>C or CVC<i>C. Examples: qətxʷ “be burnt”//vəqət<i>xʷ// (vəqətxʷ “get burnt”); qətʰeqʷ “be boiled”//vəqətʰ<i>qʷ// (vəqətʰeqʷ “get boiled”); ɬək̓em “be salted”

17 Note that this is used both for the primary stress, which in ʔayʔajuθəm falls predictably on the word-initial syllable (Watanabe, 2003, p. 21), and secondary stress as a suprasegmental piece of morphology.
With the relatively rare stems larger than five segments, which are usually formed as the result of affixation with lexical suffixes, the shape of the transitivizer is often unpredictable. In many such stems, the stativizer takes the infixal or suprasegmental shape in alignment with the right edge of the stem, but in others it seems to take a lexically-specified form, often involving changes in resonant glottalization. The phonological processes at work are a question for future research. See Watanabe (2003, pp. 328-31) for examples; stems with lexical suffixes are not investigated in this thesis.

### 4.2 Morphosyntactic Properties of the Stativizer

Not much work was done on the syntax of the stativizer during this investigation due to the focus on its semantics. Only matrix predicates were considered in this investigation, though stativized predicates may also be used in relative clauses modifying NPs; it is not known if there are any differences in interpretation between matrix and subordinate stativized predicates in ṭayʔajuʔom.

Stem-level morphology, such as lexical suffixes and (in)transitivizers, co-occur with the stativizer differently from word-level morphology such as object and ergative/voice suffixes. With an intransitivizer like the active-intransitive morpheme, for instance, the stativizer is realized as an infix; with the causative transitivizer, on the other hand, it is realized as a full suffix on the stem. This is shown in (55) and (56). See Appendix 1 for more examples.

(55) **Stative realized as an infix with active-intransitive**

| ṭuʔemč | ṭuʔemč |
|√ṭúʔ-?m=č | √ṭúʔ-ʔ[1]m=č |
| get.pushed-AI=1SG.IND | get.pushed-AI[STV]=1SG.IND |
| “I am pushing something.” | “I am pushing something (to keep it in place)” |
Stative realized as a suffix on the root with causative

\[
\begin{aligned}
&\text{taqet \text{ʔem}n} & & \text{taqetst\text{ʔ}m ne\text{ʔ}t\text{en} ta \text{ʔem}n} \\
&\sqrt{\text{t}q-\text{it}} & & \sqrt{\text{t}q-\text{it-}\text{st-}\text{əm}} & & \sqrt{\text{ʔ}u\text{k}'\text{na\text{ʔ}t}\text{en}} \\
&\text{get.closed-STV door} & & \text{get.closed-STV-CAU[OBJ]-PASS chair} \\
&\text{‘The door is closed.’} & & \text{ta=\sqrt{\text{ʔim}\text{in}}} \\
& & & \text{DET=door} \\
& & & \text{‘The chair is keeping the door closed.’}
\end{aligned}
\]

This shows that the stativizer is lower than at least the causativizer, the innermost position in the morphological word domain. Due to its phonological right-alignment to the stem edge, however, it is difficult to determine the order of morphemes within the stem. One possible clue to its position in the stem relates to the fact that it cannot co-occur with the inchoativizer, which is always adjacent to the root, being one of few morphemes that precedes lexical suffixes (Watanabe, 2003, p. 307).

### (57) ḡaqʔajuthəm inchoativizer and stativizer do not co-occur

(MW; EP)

<table>
<thead>
<tr>
<th>Bare Stative Root</th>
<th>Root~INCH</th>
<th>Root~INCH&lt;STV&gt;</th>
<th>Root-INCH-STV</th>
</tr>
</thead>
<tbody>
<tr>
<td>√ƛ̓ə́qʷ</td>
<td>√ƛ̓ə́qʷ~aʔqʷ</td>
<td># √ƛ̓ə́qʷ~&lt;i&gt;qʷ</td>
<td># √ƛ̓ə́qʷ~aʔqʷ-it</td>
</tr>
<tr>
<td>“hard”</td>
<td>“to harden”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>√tīh</td>
<td>√tīh~ih</td>
<td># √tīh~&lt;i&gt;h</td>
<td># √tīh~ih-it</td>
</tr>
<tr>
<td>“big”</td>
<td>“to grow”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>√p̄oq</td>
<td>√p̄oq~əq</td>
<td># √p̄oq~&lt;i&gt;q</td>
<td># √p̄oq~əq-it</td>
</tr>
<tr>
<td>“white”</td>
<td>“to whiten”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>√q̓Əχ</td>
<td>√q̓Əχ~əχ</td>
<td># √q̓Əχ~&lt;i&gt;χ</td>
<td># √q̓Əχ~əχ-it</td>
</tr>
<tr>
<td>“bruised”</td>
<td>“get bruised”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>√p̄as</td>
<td>√p̄as~əs</td>
<td># √p̄as~&lt;i&gt;s</td>
<td># √p̄as~əs-it</td>
</tr>
<tr>
<td>“numb”</td>
<td>“get numb”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>√ɛ̂p̄χ</td>
<td>√ɛ̂p̄χ~ə&gt;χ</td>
<td># √ɛ̂p̄χ~&lt;i&gt;p&gt;χ</td>
<td># √ɛ̂p̄χ~ə&gt;χ-it</td>
</tr>
<tr>
<td>“dirty”</td>
<td>“get dirty”</td>
<td># √ɛ̂p̄<del>ə&gt;χ</del>&lt;i&gt;χ</td>
<td></td>
</tr>
</tbody>
</table>
This data is somewhat unexpected as inchoativizers and stativizers co-occur frequently in other languages (including English; e.g. *reddened*, *flattened*, *emboldened*, etc.), though it is observed in other Salish languages (H. Davis, p.c.). One way to explain this gap is to suggest that the inchoativizer and the stativizer share the same syntactic position, which would place the stativizer immediately adjacent to the root.

### 4.3 Semantic Properties of the Stativizer

The function of the stativizer is to *derive a stative stem from an eventive verb root*. Stativized stems exhibit the same behaviour with the diagnostic for stativity as stative roots; they are accepted with auxiliaries of duration, rejected with auxiliaries of rate, and rejected with progressive reduplication.

Watanabe (2003) states that the semantic function of the stativizer is to express “a durative (and possibly imperfective) situation that is not ongoing” (p. 413); in the present terminology, a durative predicate that does not possess a process. His analysis is based on Holisky’s (1978) and Kroeber’s (1988) use of diagnostics involving auxiliaries of rate and manner.

As discussed in §3.1, Kroeber (1988) and Watanabe (2003) give several examples which show that like bare stative roots, stativized stems are compatible with auxiliaries of duration but rejected with auxiliaries of rate.

(58) Derived stative predicates accepted with auxiliaries of duration

(a)  qajɛʔut  pəχɛt  tə  tʰ  qəsneʔ

qəjʔi=ʔut  √pəχ-it

still=CLT  gettorn-STV

tə=tʰ=√qəasnay

DET=1S.POS=shirt

“My shirt is still torn.”

(Kroeber, 1988, p. 148)

(b)  qajɛʔut  təqεt

qəjʔi=ʔut  √tʔq-it

still=CLT  close-STV

“It is still closed.”

(Watanabe, 2003, p. 413)
Kroeber (1988) and Watanabe (2003) label the morpheme as a marker of pure stativity, but posit that “it may be possible that it is more precisely a marker of ‘resultative’” stativity (Watanabe, 2003, p. 414), denoting “such and such a state as the result of some event” (Kroeber, 1988, p. 154, fn. 15). Watanabe cites Nedjalkov and Jaxontov’s (1988) distinction outlined in §2.2, though he does not commit to a resultative analysis.

As preliminary evidence for a resultative analysis of the stativizer, Watanabe shows that there are rare cases of stativized stems built on stative roots. These are frequently translated with already, and the stativizer would otherwise be redundant on these roots, so he suggests a resultative analysis might better capture the semantic contribution of the stativizer, though he does not commit to this analysis. His examples, alongside their stativity diagnostics, are given in (60).
(60) *Stative root (and diagnostics) with stativizer*

(all examples adapted from Watanabe, 2003, pp. 415-6)

<table>
<thead>
<tr>
<th>Aux. of duration</th>
<th>Aux. of rate</th>
<th>Inchoativizer</th>
<th>Stativizer</th>
</tr>
</thead>
<tbody>
<tr>
<td>qəjeʔot pas</td>
<td># ʔəwʔ pas</td>
<td>pasas</td>
<td>pəzet</td>
</tr>
<tr>
<td>qəjīʔut ʔəs</td>
<td>ʔəwʔ ʔəs</td>
<td>ʔəs~as</td>
<td>ʔəs-it</td>
</tr>
<tr>
<td>still=CLT numb</td>
<td>suddenly numb</td>
<td>numb~INCH</td>
<td>numb-STV</td>
</tr>
</tbody>
</table>

“It is still numb.”

| qəjeʔot yic       | # hahays yic  | yeʔčet       | yeʔčet    |
| qəjīʔut ʔəs       | ʔəwʔ ʔəs     | ʔəs~aʔc      | ʔəs-it     |
| still=CLT full     | slowly full   | full~INCH     | full-STV   |

“It is still full.”

The examples of these cases encountered during the present investigation are given in (61). These examples were each offered by one consultant and rejected by all others. Kroeber (1988, p. 154, fn. 15) also reports several more examples of these roots, though these were rejected by consultants in this investigation. As Watanabe (2003, p. 415, fn. 323) observes, this is probably not due to invalid findings but because these examples represent “an area in [ʔəʔəʒjəʔəm] grammar that is not straightforward,” with judgements being highly variable between speakers (and possibly between contexts; these examples were obtained in isolation, so it is difficult to tell).

(61) *Stativized stems built on stative roots often translated with “already”*

| % ʔəχɛt          | % pəset       | % ʔəʔəmɛt     |
| √ʔəχ-it           | √pəs-it       | √ʔəʔəm-it     |
| bruised-STV       | numb-STV      | wet-STV       |
| “be already bruised” | “be already numb” | “be already wet” |

(KG) (PD) (EP)

Interestingly, each consultant who offered one of these forms would then reject its unstativized counterparts if immediately juxtaposed, though the same consultant may have offered the unstativized form at another time.
Despite these observations, however, elicitation targeted on the distinction between pure stativity and resultative stativity shows that the hypothesis that the ʔayʔajuθəm stativizer always derives a resultative predicate is incorrect; many predicates in ʔayʔajuθəm derived by the stativizer can receive pure stative readings.

Twenty eventive roots corresponding to verbs of result in English were used to investigate this question, given in (62).

(62) ʔayʔajuθəm verb roots corresponding to verbs of result in English

\[
\begin{align*}
\sqrt{pə́n} & \quad \text{"get buried"} & \sqrt{pə́l̓x̌} & \quad \text{"rise to the surface"} \\
\sqrt{tə̂q} & \quad \text{"get opened"} & \sqrt{ɬál̓} & \quad \text{"get ripped apart"} \\
\sqrt{gə́q} & \quad \text{"get closed"} & \sqrt{q̓am̓s} & \quad \text{"get put away"} \\
\sqrt{kʷə́ł̓} & \quad \text{"get spilt"} & \sqrt{q̓am̓s} & \quad \text{"get put away"} \\
\sqrt{wút} & \quad \text{"get bent"} & \sqrt{ɬák̓x̌} & \quad \text{"get extinguished"} \\
\sqrt{sáyp} & \quad \text{"get lined up"} & \sqrt{ɬúp} & \quad \text{"get healed"} \\
\sqrt{kʷə́q̓} & \quad \text{"get split"} & \sqrt{máč} & \quad \text{"get greased up"} \\
\sqrt{pə́sx̌} & \quad \text{"get deflated"} & \sqrt{hág} & \quad \text{"get warmed up"} \\
\sqrt{páχ} & \quad \text{"get torn"} & \sqrt{Č̓j̓x̌} & \quad \text{"fall apart"} \\
\sqrt{jáχ̓x̌} & \quad \text{"get melted"} & \sqrt{čáx̌} & \quad \text{"get cooked"}
\end{align*}
\]

To test stativized predicates built on these roots for the possibility of a pure stative reading, contexts were designed where the existence of an originating event as described by the root is semantically impossible or pragmatically unlikely. These contexts were presented alongside pictures chosen to reinforce the context. Consultants would then be asked if a prepared sentence containing a stativized predicate is acceptable denoting the pure state in that context.

Fourteen examples of stativized predicates with pure stative readings were found through this method, given in (63-74). In many of the contexts, the stativized predicates were produced spontaneously by at least one consultant once the context was presented (though not the

\[18\] Note that all 20 roots tested correspond to verbs of result in English, as per the classification of Levin and Rappaport Hovav (1991). Roots corresponding to verbs of manner were excluded from the investigation into pure stativity, as a much deeper understanding of the lexicon of the language would be needed to address what kind of pure stative reading these would receive, if such a reading possible at all. See Appendix 2 for more discussion on the manner/result distinction.
elaboration that accompanies them, which were accepted but not themselves spontaneously produced); where this is the case, the example is marked with a ⋄ symbol.

(63) paneč ta ćajys, pęrot neʔol te³e


get-buried-STV DET=rock, always=CLT be.there-PST DEM

“The rock is buried / underground, it has always been there.”

Context: Describing a picture of a rock underground, explained to have always been there.

(JF; MH; MW; KG)

(64) andalone ćaqet mamqayustən, xʷaʔ čeməs goq


get.opened

“The window is closed, it cannot be opened.”

Context: Describing a picture of a window built in such a way as it cannot be opened.

(JF; MH; MW; KG)

(65) andalone goqet ʔemen, xʷaʔ čeməs təqəɬ


get.opened-STV door, NEG MOD=3CNJ get.closed-PST

“The door is open, it has never closed.”

Context: Describing a picture of a doorway, described as never having had an actual door.19

(JF; MH; MW; KG)

This example illustrates an interesting lexical difference between English and ʔayʔajuθəm. In English, “door” refers to both the door and the doorway, but predominantly the door; if a doorway has no door, it is strange to call it a door at all, let alone talk about it being open or closed. In ʔayʔajuθəm, however, the word ʔemen to which door usually translated seems to refer to guided thoroughfares more generally, and can be used to refer to doorways without doors. It can also refer to paths and roads, in which case the words goq and təq (translations of “open” and “close”) have the more general meanings “clear” and “block”.

19
(66) wútə tə jɛʔje, teʔe naʔm̓ ƛ̓ oʔol̓

\[ \sqrt{\text{wút-it}} \quad tə=\sqrt{\text{ Jáʔja}}, \quad táʔa \quad \sqrt{\text{nám}=s} \quad \sqrt{\text{áʔl-uʔ}} \]

get.bent-STV DET=tree, DEM image=3POS grow-PST

“The tree is bent, it grew like that.”

Context: Describing a picture of a tree that grew with a bend on the trunk.

(JF; MW; KG)

(67) ṭuukʷ šiyep tə ˈt̓aʔq, teʔe naʔm̓ peyot neʔoʔɬ

\[ \sqrt{\text{tuukʷ}} \quad \sqrt{\text{šáy<1>p}} \quad tə=\sqrt{\text{táʔq}}, \quad táʔa \quad \sqrt{\text{nám}=s} \quad \text{páya=ʔut} \]

all get.lined.up<STV> DET=mountain, DEM image=3POS always=CLT

\[ \sqrt{\text{níʔ-uʔ}} \]

be.there-PST

“The mountains are all lined up, they’ve always been this way.”

Context: Describing a picture of mountains naturally lined up neatly by a lake.

(JF)

(68) kʷaʔqet təq, teʔe naʔm̓ peyot neʔoʔɬ

\[ \sqrt{\text{kʷaʔq-it}} \quad \sqrt{\text{táʔq}}, \quad táʔa \quad \sqrt{\text{nám}=s} \quad \text{páya=ʔut} \quad \sqrt{\text{níʔ-uʔ}} \]

get.split-STV mountain, DEM image=3POS always=CLT be.there-PST

“The mountain is split, it has always been this way.”

Context: Describing a picture of a mountain with a split peak.

(JF)

(69) ṭo̱SEXʷ tə səplən, teʔe naʔm̓ hiytəm

\[ \sqrt{\text{pás<1>xʷ}} \quad tə=\sqrt{\text{sáplən}}, \quad táʔa \quad \sqrt{\text{nám}=s} \quad \sqrt{\text{háy-təm}} \]

get.deflated<STV> DET=bread, DEM image=3POS get.made-CTR[3OBJ]-PASS

“The bread is flat, it is made like this.”

Context: Describing a picture of some tortillas.

(JF)
(70) pəχɛt tapneč, tɛʔe naṁs hiytəm
\[ \sqrt{pəχ} - \] it \[ √tápənač, tâʔa √nám=s √hóy-t-əm \]
\text{get.torn-STV pants, DEM image=3POS get.made-CTR[3OBJ]-PASS}
"The pants are torn, they are made like this."
Context: Describing a picture of jeans that are already ripped when you buy them.
(JF)

(71) jɛχʷet chocolate, qaǰeqot xʷaʔ hojet
\[ \sqrt{jɛχ} - \] it "chocolate", qáʔiʔut xʷaʔ √húj-it
\text{get.melted-STV chocolate, still=CLT NEG get.finished-STV}
"The chocolate is molten / melted, it is not ready yet."
Context: Describing a picture of molten chocolate in a factory, which has not been solidified yet.
(JF)

(72) qameš təʔaxeqawaṭxʷ, xʷaʔ če̓meš yəq̓ešit
\[ \sqrt{qá}m<\!i>s \]
tə=\[\sqrt{ʔaxeqawaṭx}w\], xʷaʔ čâm=as √yəq̓-aš-it
\text{get.put.away<STV> DET=bedroom, NEG MOD=3CNJ get.used-TR[3OBJ]-PASS}
"The room is organised, it has never been used."
Context: Describing a picture of a new hotel room that has never been occupied.
(JF)

(73) Jeqeqt təʔeqe, tɛʔe naṁs ʔəɬəɬ
\[ \sqrt{jə}q-\] it tə=\[\sqrt{jə}ʔəɬa, tâʔa √nám=s √ʔəɬ-uɬ\]
\text{fall.over-STV DET=tree, DEM image=3POS grow-PST}
"The trees are fallen over / on a lean, they grew that way."
Context: Describing a picture of a bunch of trees in an extremelly windy place that all grew on a lean in the direction of the wind.
(JF)
(74) 힐·헛 않 엘, 자염라 냫 러기 帑

fallapart-STV  house, still=CLT NEG get.built-CTR[OBJ]-PASS

“The house is destroyed, it is still not built.”

“(The material for) the house is scattered around, it is still not built.”

Context: Describing a picture of a disorganised pile of materials before a house gets built that makes it look like a house was destroyed there.

(JF; MH; MW; KG)

One possibility, which is very difficult to test, is that stativized predicates with pure stative readings express the result states of events which are somehow remote; that they do entail an originating event, even though it may be temporally remote or irrelevant to the conversation, or perhaps that they are coerced into a pure stative reading (H. Davis, p.c.). In example (67), for instance, it could be that the stativizer asserts the existence of an event which caused the mountains to become lined up at some point in the past, while saying nothing about what that event actually was.

A possible argument against this hypothesis arises out of a subset of eventive roots which seem to encode both a process and a transition into a state, such as √ʔp̓ə́ƛ̓š “rise to the surface” and √χáƛ “(rope-like object) break by overstretching”. Example (75) shows that √ʔp̓ə́ƛ̓š is accepted describing a duck emerging from under the water, but not for a bird landing onto it. Similarly, example (76) shows that √χáƛ is accepted describing a rope being pulled apart by two people, but not a rope being cut with scissors.

(75a) ṭəʔpə́ƛ̓š kʷaxʷwaχ

PROG~rise.to.surface  duck

“The duck is rising out of the water.”

# “The duck is landing in the water.”

(75a) ṭəʔpə́ƛ̓š kʷaxʷwaχ

PROG~rise.to.surface  duck

“The duck is rising out of the water.”

# “The duck is landing in the water.”

(75a) ṭəʔpə́ƛ̓š kʷaxʷwaχ

PROG~rise.to.surface  duck

“The duck is rising out of the water.”

# “The duck is landing in the water.”
(b)  
\[ \text{kʷúkʷʔam kʷaxʷwaχ} \]
\[ \text{kʷá~√kʷʔ-am √kʷákʷwaχ} \]
\[ \text{PROG~land-MD duck} \]

# "The duck is rising out of the water."
"The duck is landing in the water."

Context: Comparing a well-timed picture of a duck as it emerges out of a dive against one of a duck just as it lands in the water.

(JF)

(76a)  
\[ \text{χałúxʷom to χʷεʔum} \]
\[ \text{√χál-axʷ-om} \]
\[ \text{tə=√χʷićwəm} \]
\[ \text{get.ripped.apart-LCTR[3OBJ]-PASS DET=rope} \]

"The rope has been ripped apart"

# "The rope has been cut."

(77)  
\[ \text{páleš tə séšje, puqʷsiyišol} \]
\[ \text{√páš<STV>} \]
\[ \text{tə=√sáyša, √póqʷ-s-iyiš-ul} \]
\[ \text{rise.to.surface<STV> DET=leaf, fall.in.water-AUT-PST} \]

"The leaf is on the surface (of the water), it fell in."

Context: Accepted as a description of a picture of a leaf on the surface of a pond, described to have fallen in.

(JF)
(78) χαƛet tə χʷɛwom, ƛᵣʊxʷ-an
    √χáƛ-ił tə=√χʷiwəm, ƛᵣp-əxʷ-an

get.ripped.apart-STV DET=rope, get.cut-LCTR[3OBJ]-1S.ERG

“The rope is severed, I cut it.”

Context: Describing camping rope that was previously cut with a knife.

(JF)

Not all stativized verbs of result are easily accepted in pure stative contexts; some appear instead to be more strictly resultative. Examples (79-83) illustrate some of these predicates. Most of these were corrected to other forms in pure stative contexts, which are also given in each example.

(79a) kʷułⱢt qəye, # kʷu ƛɬq qəye ƛɛpəč
    √kʷ̑ próprio  tə=√qáya, kʷu=ƛɬ~√qɬq  qáya  √qɬp-nač
    get.spilt-STV DET=water, CLT=PROG~come.out water under-bottom

“The water is spilt, # it has been coming up through the floor.”

(b) ⬢ kʷeɬt qəye, kʷu ƛɬq ɬ qəye ƛɛpəč
    √kʷ̑ proprietà tə=√qáya, kʷu=ƛɬ~√qɬq  qáya  √qɬp-nač
    on.ground water, CLT=PROG~come.out water under-bottom

“The water is on the ground, it has been coming up through the floor.”

Context: Describing a picture of a puddle of groundwater pooling up through the concrete in someone’s basement.

(JF)

(80a) ƛopət ə čəño, # xʷaʔ čənəs kʷukʷtəm
    √ƛúp-ił ə=√čánu, xʷaʔ  čəm=as kʷ̑ ƛ̑ ~√kʷt-əm
    get.healed-STV 2S.POS=dog, NEG MOD=3CNJ PROG~sick-MD

“Your dog is healed up, # she’s never sick.”

---

20 It is possible that this predicate breaks down into √kʷ̑-it/> (with a stativizer), though the meaning of the hypothetical root √kʷ̑ is unclear; it could be related to kʷeʔeš “stand up” √kʷ̑-iš | stand.up-INTR/>,
kʷ̑təm “above” /√kʷ̑t-am | above-MD >/, or kʷeʔečin “top (of something)” √kʷ̑t-ičən | above.back/>.
"Your dog is healthy, she's never sick."
Context: Talking about the interviewer's dog.

"The water is heated, it has never been cold."
Context: Describing the naturally hot water of a thermal pool, which has hypothetically never been cold.

"The fish is greased up."
# "The fish is (naturally) greasy."

"The fish is greasy (naturally or not)"
Context: Describing a picture of some very greasy salmon.
(83a) ēc̓ɛt tə ?eʃtan
    √čáχ-it   tə=ʔl̓iʃtən
get.cooked-STV DET=food
“The food is cooked.”
# “The food (naturally) ready to eat.”

(b) ḥoǰet tə ?eʃtan
    √húj-it   tə=ʔl̓iʃtən
get.finished-STV DET=food
“The food is (naturally) ready to eat.”
Context: Describing a picture of salad, fruits, berries, etc.
    (JF)

Only one root was rejected in a pure stative context without such a correction, given in (84).

(84) ?? ƛ̓ákʷet nekʷ eyə, qaǰəʔot χəw̓s
    √ƛ̓ákʷ-it   √nákʷaya, qáʔiʔut  √χəw̓s
get.extinguished-STV light, still=CLT new
“The light is turned off; it is still new.”
Context: Describing a new lightbulb that has never been turned on.
    (JF)

Post-state readings were somewhat difficult to obtain. Attempting to obtain them alongside stative or resultative examples almost always failed. The pragmatics involved in post-stative readings are not well understood, which for many predicates makes it difficult to design contexts where they are likely. Furthermore, the complexity required of a context before a post-stative reading obtains leaves a lot of room for misinterpretation.

Five roots were targeted for more elaborate tests, chosen partially because they were the easiest to construct a pragmatically likely post-stative context for, and for some of them because in English the post-stative and pure stative forms are morphologically different, making it possible to create an implicit contrast during the elicitation.
The five roots tested are given in (85-89). These tests worked surprisingly well, and four of these yielded strongly positive judgements despite having them explicitly pointed out to be eccentric uses of the stativized predicates. However, none were spontaneously produced in the contexts given. Nevertheless, these examples show that post-stative readings at least appear to be available for stativized predicates in ?ayʔażùʔəm.\textsuperscript{21}

\textbf{(85) }gaʔet to məmqsəyustən, xʷʔaʔčxʷ q̓e naʔatəxʷ
\begin{align*}
\sqrt{gə̄q-} & -\text{it} \quad to=\sqrt{məmqsəyustən}, \ xʷʔaʔ=čxʷ=q̓jì \quad \sqrt{náʔ-} & -\text{at}=axʷ \\
\text{get.opened-} & \text{STV} \quad \text{DET}=\text{window}, \quad \text{NEG}=2\text{S.IND}=\text{again} \quad \text{get.done-CTR}[3\text{OBJ}]=2\text{S.CNJ}
\end{align*}

“The window is \textit{opened} (already), you don’t (need to) do it again.”
 Context: One co-worker telling another that the hourly job of opening the window for a few minutes then closing it again to freshen up the air has already been done. [Window is opened but no longer open]

(JF)

\textbf{(86) }jeʔet šə jəʔfe, ʔiy gəʔ⁰ et
\begin{align*}
\sqrt{jə̄q} & -\text{it} \quad šə=\sqrt{jə̄ʔ}ə, \quad ʔiy \quad \sqrt{gəʔ} & -\text{it} \\
\text{fall.} & \text{over-} \text{STV} \quad \text{DET}=\text{tree}, \quad \text{and} \quad \text{get.chopped-} & \text{STV}
\end{align*}

“The tree is \textit{felled} and chopped up (already).”
 Context: One lumberjack informing another that a tree that was to be cut down and chopped up has already been worked on. [Tree is felled but no longer fallen over]

(JF)

\textbf{(87) }qə̓mes šə ?əʔtən, ?uvkwʷ kʷu yəqtəm
\begin{align*}
\sqrt{qə̄m}<i> & -s \quad šə=\sqrt{ʔəʔtən}, \quad \sqrt{ʔuvkw} & -u=\sqrt{yəʔ-t-əm} \\
\text{get.put.away}< & \text{STV}> \quad \text{DET}=\text{food}, \quad \text{all} \quad \text{CLT}=\text{get.bought-CTR}[3\text{OBJ}]-\text{PASS}
\end{align*}

“The food is \textit{put away}, it has all been bought up (already).”
 Context: A store supervisor asks an employee if he finished his assigned task of putting away the food, which he has, but the food has already been all taken away by customers. [The food is put away but no longer in its storage space]

(JF)

\textsuperscript{21} It is possible that these stative predicates are simply interpreted in the past, as the language does not always distinguish between present and past tense. However, if this is the case, it did not come across in the discussions about these predicates with the consultant or her translations.
(88) ƛ̓ɛkʷet nɛkʷeyu, xʷaʔčxʷ qjɛ naʔataxʷ

get.extinguished-stv light, NEG=2.S.IND=again get.done-ctr[3OBJ]=2.S.CNJ

“The lights are turned off (already), you don’t (need to) do it again.”

Context: One coworked telling another that the daily job of turning off the lights to reset a faulty fuse in the middle of the day has already been done. [Lights are turned off but no longer off]

(JF)

(89) ƛ̓upč, ?iy kʷutəmuč qjɛ

get.healed-stv=1.S.IND and get.sick-md-pst=1.S.IND=again

Context: Someone is asked if they are healed from some sickness, but they have become sick with something else in the meantime. [Is healed but no longer healthy]

(JF)

---

22 This may have been rejected due to misunderstood lexical semantics of the root √ƛ̓up “get healed”; e.g. it could relate more specifically to the healing of wounds than illnesses in general.
Chapter 5  Formal Analysis

In this chapter, a formal approach to the data presented in §4 The ?ayʔajuʔam Stativizer is presented. This analysis aims to capture within the model-theoretic framework the conditions under which a stativized predicate may be interpreted as pure stative, resultative, or post-stative.

In essence, the analysis states that the different possible readings of a stativized predicate arise purely from pragmatics of the context and conversation in which it is used: a stativized predicate denotes the contextually most informative of the states conceptually related to the underlying eventive predicate by causality.

While this analysis focuses on and relates to data in ?ayʔajuʔam, it may also be applicable to adjectival participles in English. It contrasts with previous approaches in that no syntactic ambiguity is required to explain the different possible readings of a stativized predicate; these are instead derived by a pragmatic mechanism that is distinct from the syntactic machinery. Only one morpheme in one position is necessary to account for all readings of a stativized predicate.

5.1  EXCESS Function

The first thing that needs to be explored is what it means for a state to be conceptually related to an eventive predicate by causality. In short, if a state $Q$ is conceptually related to an eventive predicate $P$ by causality, it is logically impossible for a $P$ eventuality to not cause a $Q$ eventuality. What is important to note about this relation between a state and an event to understand the pure stative readings of stativized predicates is that it is not symmetric: if $Q$ is conceptually related to $P$ by causality, it is not the case that every $Q$ eventuality must be caused by a $P$ eventuality.

This idea is formalized as an operator EXCESS which probes the various possible extensions of an eventive predicate for a set of states conceptually related to it by causality. Let this set of states be called the excess of an eventive predicate, in the sense that these states are “left behind” by instantiations of the predicate. For a predicate concept $P_{(s,(v,t))}$, the EXCESS of $P$ is then the set of stative predicate concepts $Q$ which are related to $P$ by causality in all possible worlds. This is formalized in (133).
For every predicate concept $P_{(s,v,t)}$, the \textit{EXCESS} of $P$ is the set of stative predicate concepts $Q_{(s,v,t)}$ such that every eventuality $e$ in the extension of $P$ in each possible world $w$ causes an eventuality $e'$ in the extension of $Q$ in $w$.

There may be additional restrictions on what states can be part of the \textit{EXCESS} (e.g. only those predicate concepts which satisfy yet-unknown restrictions on natural predicates), but to exhibit the present proposal clearly this definition is sufficient. For similar considerations of clarity and exposition, \textit{excess} is used extensionally \textit{ad hoc} in the subsequent formalism, despite being defined intensionally.

To illustrate what the \textit{EXCESS} of a predicate is more concretely, consider the English predicate $P = \text{build a house}$. The \textit{EXCESS} of $P$ will contain the state of the house building event having culminated (the post-state), the house being erect (the pure state), and the conjunction of the house being erect and the building event having culminated (the resultative). It will also contain the \textit{disjunction} of the house being erect and the building event having culminated, which can be called the \textit{disjunctive reading}; however, it is not clear if it is possible for it to ever be the most informative reading; it seems to be an accident of the formalism, so it is included here only for completeness.

Because the \textit{EXCESS} operator quantifies over all possible worlds, it considers even strange imaginable worlds where a powerful creature \textit{builds a house} by snapping its fingers to bring a house into existence, and literally nothing else happens in the entire universe in that world. This means that states which are caused incidentally, even typical incidental states such as builders being tired, are systematically filtered out.
The stativizer denotes the *infimum* of this set of states given an ordering \( \preceq_{\text{info}(c)} \) based on *informativeness* in a context \( c \) (such that \( Q \preceq_{\text{info}(c)} Q' \) means that \( Q \) is at least as informative as \( Q' \) in \( c \)).\(^{23}\) This ordering is elaborated shortly.

It is not entirely clear if the stativizer is a lexical or a phrasal morpheme, or that showing it to be in one position in one language would be consequential for any other, but only one stativizer in one syntactic position is required to account for the pure stative-resultative ambiguity in stativized predicates in ʔayʔajuθm (and in English).

\[
\begin{align*}
\text{Lexical stativizer} & \quad \text{(91) } \llbracket \text{STV} \rrbracket^{g,w,c} = \lambda P_{(v,t)} \lambda x \lambda e \left[ \text{inf}_{\text{info}(c)} \left[ \text{EXCESS} \left( P(x) \right) \right] (e) \right] \\
\text{Phrasal stativizer} & \quad \text{(91) } \llbracket \text{STV} \rrbracket^{g,w,c} = \lambda P_{(v,t)} \lambda e \left[ \text{inf}_{\text{info}(c)} \left[ \text{EXCESS}(P) \right] (e) \right]
\end{align*}
\]

For every predicate \( P_{(v,t)} \), the stativizer \( \text{STV} \) returns the most informative stative predicate \( Q \) in the \( \text{EXCESS} \) of \( P \) in a context \( c \).

Figure 8 and figure 9 illustrate the structure of the VP given either of these morphemes, assuming the phrasal stativizer merges at the head of Travis’ (2010) Inner Aspect phrase (IAspP). Note that the denotations of the two trees are identical.

---

\(^{23}\) Note that this is similar to positing a choice function over the excess, as Reinhart (1997) does to derive the extension of specific indefinites. Constructing it as an ordering among the states better illustrates what is happening in the pragmatics.
5.2 Informativeness

The notion of informativeness here relates to Grice's (1975) cooperative principle: “make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged” (p. 45). Under the current definition, an utterance is more informative than another if it is a more complete answer to the question under discussion (Roberts, 1996), or if it contains less superfluous information.

The formal notion of a question under discussion (QUD) employed here is somewhat simpler than the fully elaborated notion outlined by Roberts (1996), but it suffices for the present purpose. The QUD is considered a contextually salient set of q-alternatives: unvalued propositions which the interlocutors of a discourse attempt to value (directly or through entailment/implicature). A partial answer to the QUD is thus an assertion that values a subset of the unvalued propositions, and a complete answer is an assertion that values all the propositions in the QUD. An assertion is a more complete answer to the QUD than another if the number of propositions it values is greater. Superfluous information is any entailment or implicature of an assertion which has no relevance to the QUD.

Superfluous information cannot be quantified straightforwardly. It arises out of a competition between the states in the EXCESS of a predicate to be as relevant as possible to the QUD. If a QUD requires an answer about a current state and does not concern its origin, the resultative state is superfluous in comparison to the pure state, and is thus less informative.
However, superfluousness can come from more than just the competition between the states in the excess of a predicate to answer the QUD: if a derived stative predicate encroaches the natural domain of an existing simpler stative predicate, it is lexically “blocked” by the simpler form. This is because the Maxim of Manner (Grice, 1975) requires interlocutors to be brief, avoiding obscurity and ambiguity, which generates a pressure for a differential between the derived stative and any simpler predicate, prompting an interpreter to account for the presence of the stativizer as a markedness implicature: “... the speaker seems to have gone out of his way to avoid using the unmarked expression and so must be trying to avoid whatever the unmarked expression would suggest” (Levinson, 2000, p. 137).

Formally, this markedness implicature manifests itself as a penalization of the informativeness of the pure stative reading, leading to a resultative interpretation. Only if no such simpler predicate exists to block the pure stative reading does the pure stative reading become available to the stativized stem. See §5.4 for a closer exploration of this mechanism.

### 5.3 Lexical Blocking

This section explores the lexical blocking interaction between stativized predicates and stative roots or simpler predicates which are similar in meaning. It is assumed that there is some sort of markedness hierarchy concerning the complexity of a form which drives this blocking (Rullmann, p.c.), where bare roots and some derived predicates outrank stativized predicates. Explicating the exact nature of this hierarchy, and how some derived predicates can outrank stativized predicates (e.g. √χʷí-í-im “greasy”, derived with a middle voice marker, outranks √máč-ít “greased”), is left for future work.

Consider the stativized ṭayʔajθəm predicate in example in (92). It can receive a pure stative reading, as can its English translation; this is because in both languages, the stativized predicate does not encroach on the natural domain of any other root or simpler predicate. There is no simpler stative predicate that indicates that a window is simply closed without alluding to a closing event, so the reading is available to the stativized stem without triggering a markedness implicature.
(92) təqeq mamqeqyustən, xʷaʔ čəmes gəq
\[ \sqrt{təq}-it \quad tə=\sqrt{mámqeyustən}, \ xʷaʔ \ čəm=as \quad \sqrt{gəq} \]

\textit{close-STV DET=window, \quad NEG \ MOD=3CNJ \ get.opened}

“The window is \textit{closed}, it cannot be opened.”

Context: Describing a picture of a window built in such a way as it cannot be opened.

(JF; MH; MW; KG)

This can be seen more clearly in example (93), where the stativized predicate easily receives a pure stative reading in ?ayʔaǰuθəm, but the participle \textit{buried} in the English translation is much more easily interpreted as resultative. This is due to a markedness implicature arising from the semantically simpler root \textit{underground}, which was preferred by several native English speakers in the context given.

(93) panət tə χajiys, peyot neʔol təʔə
\[ \sqrt{pən}-it \quad tə=\sqrt{χəjəys}, \ páya=ʔut \quad \sqrt{ʔnʔ-ʔə} \quad təʔa \]

\textit{get.buried-STV DET=rock, \quad always=CLT \ be.there-PST \ DEM}

“The rock is \textit{buried} / \textit{underground}, it has always been there.”

Context: Describing a picture of a rock underground, explained to have always been there.

(JF; MH; MW; KG)

It seems that there is no root or simpler predicate with the same meaning as the English \textit{underground} in ?ayʔaǰuθəm; consultants would always give a paraphrase such as (94) when prompted to translate it. However, it is impossible to actually prove that no such word exists. As the paraphrase is not a simpler construction than the stativized predicate, it does not cause blocking.

(94) ɬepəm χajiys gîże
\[ \sqrt{ɬip}-əm \quad \sqrt{χəjəys} \quad \sqrt{gəjə} \]

\textit{below-MD \ rock \ earth}

“The rock is under the ground.”

Example (95) shows a case where only a resultative reading is available for a stativized predicate both in ?ayʔaǰuθəm and its translation in English. The pure stative reading of \( \sqrt{máč-}\textit{it} \) “be greased” is to be blocked by \( \sqrt{ʔxɨł-im} \) “be greasy” in the ?ayʔaǰuθəm example, and similarly a pure stative reading of “be greased” is blocked by “be greasy” in the English translation.
The excess of every eventive predicate contains the state of it having culminated; the post-state. However, because the information a post-state conveys boils down to asserting the existence of an event in the extension of the underlying predicate, it is rarely more informative than a simple past; the contribution of the stativizer to the conversation is thus difficult to ascertain, which violates the Maxim of Manner (Grice, 1975). Only in cases where the stativity of a post-state conveys recency or topicality can it be informative, which is the reason stativized predicates denoting post-states rarely obtain.

### 5.4 Example Computations

Figure 4 shows the structure of the stative VP in example (96), assuming a lexical stativizer and a simplified choice-functional account of the Salish determiner (Reinhart, 1997; Matthewson, 1999). Note, however, that it makes no difference for the structure of the tree or the semantic derivation within it if the example is read as stative or resultative, as the distinction is made in the pragmatics of the context (and the pressures of the lexicon) rather than in the syntax or semantic calculus.

(96)  
\[
gəq̓et \ tə \ məmq̓ayustən \\
g̱og̓-it \quad tə=\sqrt{məmq̓ayustən} \\
\text{get.opened-} \det=\text{window} \\
\text{“The window is open(ed).”}
\]
Figure 4: Structure and computation of example (140)

The excess can be calculated independently of any context and is given in (97). A version of it in less formal language is given in (98), but keep in mind that the English used within it for the sake of clarity does not accurately represent the exact semantics of the ?ayʔajuθəm example. In fact, this example was chosen precisely because of a discrepancy between the two languages: in English, the root “open” is ambiguous between an adjective denoting a pure state and a verb denoting a transition, while the analogous ?ayʔajuθəm root √g̓ə́q is strictly eventive. This lexical discrepancy makes it easier to illustrate the mechanism being employed in this analysis.

The excess contains the pure state [a], the post-state [b], the resultative state [c], and the (never realized) disjunctive reading [d].

(97) \[
\text{EXCESS}(\lambda e(\text{get.opened}(f_c(x|\text{window}(x)), e))) = \\
\{\lambda e[\text{open}(f_c(x|\text{window}(x)), e)], \quad \text{[a]} \}
\]

\[
\lambda e\exists e'[\text{get.opened}(f_c(x|\text{window}(x)), e') \land e' \ll e], \quad \text{[b]} \\
\lambda e\exists e'[\text{open}(f_c(x|\text{window}(x)), e) \land \text{get.opened}(f_c(x|\text{window}(x)), e') \land e' \ll e], \quad \text{[c]} \\
\lambda e\exists e'[\text{open}(f_c(x|\text{window}(x)), e) \lor \text{get.opened}(f_c(x|\text{window}(x)), e') \land e' \ll e]] \quad \text{[d]}
\]

(98) \[
\text{EXCESS}([\text{the window opens}])^{c,g,w} = \\
\{[\text{the window is open}]^{c,g,w}, \quad \text{(pure stative reading) [a]} \\
[\text{the window is opened}]^{c,g,w}, \quad \text{(post-stative reading) [b]} \\
[\text{the window is open and the window is opened}]^{c,g,w}, \quad \text{(resultative reading) [c]} \\
[\text{the window is open or the window is opened}]^{c,g,w} \} \quad \text{(disjunctive reading) [d]}
\]
To compute which of these readings the stativized predicate receives, it must be placed in a context where the QUD provides an appropriate set of q-alternatives to order the states in the excess of the underlying eventive predicate.

**Context 1 (c1):**

The windows in a small store must be kept closed to allow the air conditioner to work efficiently. However, the air gets stale, so the employees are tasked with opening it briefly then closing it again every hour. One does so, then tells his workmate *goqet to momqeyustan* to inform her that the job is done for the next hour.

The QUD in this context is not concerned with the current state of the window, but rather the completion state of a recent iteration of a recurring task, which happens to be to open the window. The QUD thus contains the unvalued proposition “the opening window task is completed”; for the sake of clarity, this is represented in (99) as a full question. Other unvalued propositions in the QUD in c1 may include whether or not the sales target has been reached, etc.

\begin{equation}
\text{QUD}_{c1} = \{ \text{is the opening window task completed?}, \text{have we reached our sales target?}, \ldots \}
\end{equation}

Given this QUD, the pure state [a] is entirely superfluous. The post-state [b] evaluates one q-alternative. The result state [c] evaluates one q-alternative but contains superfluous information about the current state of the window. The disjunction [d] is potentially relevant, but at best contains superfluous information. Thus, the informativeness ordering in Context 1 is [b] ≺_{\text{info}(c1)} [c] ≺_{\text{info}(c1)} [d] ≺_{\text{info}(c1)} [a], the infimum of which is the post-state [b].

The formula in (100) derives the extension of the stativized predicate at the VP level in Context 1 by calculating the contextual informativeness infimum of the excess of the eventive predicate, which was shown to be the post-state.

\begin{equation}
[\text{goqet to momqeyustan}]^{c1,g,w}
= \lambda e [\inf_{\text{info}(c1)} \text{EXCESS}(\lambda e' [\text{get.opened}(f_{c1} \{x \mid \text{window}(x)\}, e')])(e)]
= \lambda e \left[ (\lambda e'\exists e'' [\text{get.opened}(f_{c1} \{x \mid \text{window}(x)\}, e'') \land e'' \ll e'])(e) \right]
= \lambda e \exists e' [\text{get.opened}(f_{c1} \{x \mid \text{window}(x)\}, e') \land e' \ll e]
\end{equation}
Example (101) shows that this is indeed the reading that obtains in this context.

(101) \( gəq\text{-}t\) to məmqəyustən, \( xʷaʔ čxʷ qį̍ tə naʔataxʷ \)
\[
\sqrt{g\text{-}q\text{-}it} \quad tə=\sqrt{məmqəyustən}, \quad xʷaʔ=čxʷ=qį̍ tə \quad \sqrt{náʔ\text{-}at=axʷ}
\]
\( \text{get.opened-STV} \quad \text{DET=window,} \quad \text{NEG=2S.IND=again} \quad \text{get.done-CTR[OBJ]=2S.CNJ} \)

“The window is opened (already), you don’t (need to) do it again.”

Context: One coworked telling another that the hourly job of opening the window for a few minutes then closing it again to freshen up the air has already been done. [Window is opened but no longer open]

(JF)

Context 2 (c2):

Another day, the boss notices that the store is unusually hot despite the air conditioner running really hard. He then notices that the windows are open for some reason, uttering angrily \( gəq\text{-}t\) to məmqəyustən!

The QUD in this context is concerned only with the current state of the window, and not the existence of some opening event.

(102) \( \text{QUD}_{c2} = \{\text{what is causing the aircon to fail?}, \text{have we sold enough teaspoons today?}, ... \} \)

Under this QUD, the pure state [a] evaluates one q-alternative, the post-state [b] is entirely superfluous, the result state [c] evaluates one alternative but contains superfluous information, and the disjunction [d] is potentially relevant, but at best contains superfluous information. The informativeness ordering in Context 2 then turns out to be \( \text{[a]} <_{\text{info}} \text{[c]} <_{\text{info}} \text{[d]} <_{\text{info}} \text{[b]} \), the infimum of which is the pure state [a]. The formula in (103) then shows the computation of the stativized predicate at the VP level in Context 2, yielding a pure state.

(103) \( [gəq\text{-}t\) to məmqəyustən]\) c2,g,w
\[
= \lambda e[\text{inf}_{\text{info}(c2)}[\text{EXCESS}(\lambda e'[\text{get.opened}(f_{c2}[x|\text{window}(x)], e')])](e)]
= \lambda e[[\lambda e'([\text{open}(f_{c2}[x|\text{window}(x)], e')])](e)]
= \lambda e[\text{open}(f_{c2}[x|\text{window}(x)], e)]
\]

Context 3 (c3):

In another nearby store, there is no air conditioning at all. In fact, the first thing on the to-do
list every day in the summer is to open all the windows, else the shop quickly gets very hot.

An employee does this and tells his boss *goq̓et tə məməq̓eyustən* to inform her that the job is done, and the windows are now open and ready for the day.

The QUD in this context is concerned with both the current state of the window and the completion state of a recent iteration of a recurring task.

(104) $\text{QUD}_{c3} = \{\text{is the daily opening window task completed?}, \text{are the windows open?}, \ldots\}$

Under this QUD, the pure state [a] evaluates one q-alternative, the post-state [b] evaluates another q-alternative, the result state [c] evaluates two q-alternatives, and the disjunction [d] evaluates one or two, which is not as informative as definitively evaluating two. The ordering is thus $[c] \lessdot_{\text{info}(c3)} [d] \lessdot_{\text{info}(c3)} [a] =_{\text{info}(c3)} [b]$, where [a] and [b] are equivalent up to $\lessdot_{\text{info}(c3)}$. The infimum is thus the result state [c], yielding a resultative VP denotation in Context 3 as in (105).

(105) $[\text{goq̓et tə məməq̓eyustən}]_{c3,g.w}^{c3,g.w}$

\[
= \lambda e[\text{inf}_{\text{info}(c3)}[\text{EXCESS}(\lambda e'[\text{get.opened}(f_{c3}\{x|\text{window}(x)\}, e')])](e)]
\]

\[
= \lambda e[\lambda e'[\exists e''[\text{open}(f_{c3}\{x|\text{window}(x)\}, e')]
\land \text{get.opened}(f_{c3}\{x|\text{window}(x)\}, e'') \land e'' \ll e']](e)
\]

\[
= \lambda e[\exists e'[\text{open}(f_c\{x|\text{window}(x)\}, e) \land \text{get.opened}(f_c\{x|\text{window}(x)\}, e') \land e' \ll e]]
\]

For those roots where a simpler predicate exists to refer to the pure state, the informativeness of the pure state in the excess is permanently penalized. Consider example (106).

(106a) $\text{mečət tə jənxʷ}$

\[
\sqrt{\text{máč-ɪt}} \quad \text{tə=ðjənxʷ}
\]

$\text{get.greased-STV}$

$\text{DET=fish}$

"The fish is *greased up.*"

# "The fish is (naturally) *greasy.*"

Example (149a) is not accepted in a context where a fish that is naturally greasy is described, despite that being the resulting state. Consultants offered (149b) instead, preferring the bare stative root predicate $\sqrt{x}^{wɨ}-ɪm$ "greasy".
"The fish is greasy (naturally or not)."

The structure of the VP in (106a) is the same as before; again, assuming a lexical stativizer, this is given in figure 5.

The EXCESS of the underlying eventive predicate of (106a) is given in (107), and a less formal version is given in (108). Four analogous states to those in the previous examples are indexed similarly; the pure state [a], the post-state [b], the resultative [c], and a disjoined pure and post-state [d].

(107) \[\text{EXCESS}(\lambda e[\text{get.greased}(f_c\{x|\text{fish}(x)\},e)]) = \]
\[
\{\lambda e[\text{greasy}(f_c\{x|\text{fish}(x)\},e)], \lambda e\exists e'[(\text{get.greased}(f_c\{x|\text{fish}(x)\},e') \land e' \ll e)], \lambda e\exists e'[(\text{greasy}(f_c\{x|\text{fish}(x)\},e) \land \text{get.greased}(f_c\{x|\text{fish}(x)\},e') \land e' \ll e)], \lambda e\exists e'[(\text{greasy}(f_c\{x|\text{fish}(x)\},e) \lor \text{get.greased}(f_c\{x|\text{fish}(x)\},e') \land e' \ll e])\} \]

(108) \[\text{EXCESS}([[\text{the fish got greased}]]^{\text{c.g,w}}) = \]
\[
\{[[\text{the fish is greasy}]]^{\text{c.g,w}}, \quad \text{(pure stative reading) } [a]
\]
\[
[[\text{the fish is greased}]]^{\text{c.g,w}}, \quad \text{(post-stative reading) } [b]
\]
\[
[[\text{the fish is greasy and the fish is greased}]]^{\text{c.g,w}}, \quad \text{(resultative reading) } [c]
\]
\[
[[\text{the fish is greasy or the fish is greased}]]^{\text{c.g,w}} \} \quad \text{(disjunctive reading) } [d]
\]
The contextual mechanism that operates on the excess of a blocked predicate is not different from when there is no blocking. However, the lexical blocking penalizes the pure state $[a]$. The extent to which the pure state is penalized is not clear, but it is tentatively formalized here as a "point" of superfluity, forcing it one place back in the order. In a context $c$ that would have otherwise yielded a pure state as the infimum of the informativeness ordering, the blocking causes the pure state to instead share a minimal position in the order with the result state, yielding the ordering $[a] <_{\text{info}(c)} [c] <_{\text{info}(c)} [d] <_{\text{info}(c)} [b]$. As this order lacks an infimum, the computation crashes and the sentence cannot be interpreted in context $c$.

### 5.5 Empirical Predictions

This approach makes at least two clear cross-linguistic empirical predictions. Assuming that a language has a stativizer operating along the same lines as that of ūayājuθām, pure stative readings of eventive predicates derived by this morpheme will obtain iff:

1) The pure stative reading is conceptually available and pragmatically selected;

2) No root (or simpler stem) expressing the same pure state exists to block it.

### 5.6 Strengths of the Analysis

This approach shows several strengths considered against the existing analyses presented in §3.4:

1) No additional null morphology is required, such as the omnipresent stativizers and inchoativizers required by Jackson’s (2005) analysis. The analysis presented here treats eventive verb roots as underlyingly eventive, and stative verb roots as underlyingly stative. This is particularly important given the transparent derivational morphology of Salish languages.

2) It is not necessary to posit two syntactically distinct positions (or denotations) for a morpheme with a single phonological realization, such as Kratzer’s (2001) distinction between a VP stativizer and a viewpoint stativizer.

3) It allows for an intuitive understanding of the difference between stativized predicates which can have pure stative readings and those that cannot, without assuming any lexical listing or specific structure for a root extension.
4) Consider an English sentence such as *the rock is buried* containing a stativized predicate which would be rejected in a pure stative context, such as describing a rock which has been deep underground for its entire existence. At least in the judgement of the author, the sentence is not rejected because it is *false* in that context, but rather because the predicate is *uninterpretable*. Existing analyses predict that the sentence is simply false, but the analysis presented here predicts that it is uninterpretable as the computation is crashing due to lexical blocking rather than evaluating to 0.

### 5.7 Shortcomings of the Analysis

One of the biggest problems for this proposal is that it does not answer what it means for a stative predicate to be “simpler” than a derived stativized predicate. It cannot simply be morpheme count; in English, the pure stative reading of *be buried* is lexically blocked by the bimorphemic *be underground*, and √xʷił-im “greasy” (with a middle-voice marker) blocks a pure stative reading of √máč-it “be greased up” (with a stativizer), though in both cases the blocking root has the same number of morphemes as the stativized forms. It could be because “underground” and √xʷił-im are not built by productive morphological operations, being thus lexicalized into sufficiently root-like idiomatic constructions. More examples of these cases would be required to show this.

This analysis also does not explain why a stativized predicate would ever be used to refer to a post-state instead of a simple past (or a perfect, in English). Supposedly the reason relates to recency (possibly even immediacy), probably also brevity of speech, but a much more elaborate pragmatic framework would be required to investigate and account for this.

Additionally, a methodological problem arises out of the lexical blocking account since it relies on the (non-)existence of lexical items, which is impossible to definitively falsify in a fieldwork setting (Rullmann, p.c.).
Chapter 6 Conclusion

In this thesis, data was presented which illustrates stativized predicates in ?ayʔajuθəm with pure stative, resultative, or post-stative readings. Pure stative readings refer to “a state without any implication of its origin”, resultative readings refer to “both a state and the preceding action it has resulted from” (Nedjalkov & Jaxontov, 1988, p. 6), and post-stative readings refer to the state of some event having culminated.

An analysis was presented to derive the correct reading of a stativized predicate through pragmatics, once given an appropriate context. This analysis states that a stativized predicate denotes the contextually most informative of the states conceptually related to its underlying eventive predicate by causality, subject to lexical blocking relations in the lexicon: if a simpler predicate exists to denote a pure state which may otherwise have been denoted by a stativized predicate, the stativized predicate will be blocked by the simpler form and the stativized predicate will be unable to receive pure stative readings (e.g. be buried vs. be underground; √máč-it “be greased” vs. √xʷiʔ-im “be greasy”).

Some problems left for future work:

a. This investigation focused on stativized predicates built directly on verb roots. It is not clear if this analysis of the stativizer can account for the readings of stativized predicates built on more complex stems, such as those explored in Appendix 1.

b. The syntax of stativized predicates, and their relationship to stative roots, was not explored during this investigation. If stative roots are adjectives, do stativized predicates behave in the same way? Is the stativizer itself an adjectivizer?

c. The phonology of the stativizer needs to be explored in much greater detail, especially with larger stems containing lexical suffixes.

d. The history of the ?ayʔajuθəm stativizer, and its cognates in other Salish languages, is not well understood; it is not a reflex of the Proto-Salish *ʔac-stativizer (Kinkade, 1996), which is much more widespread in other Salish languages.

e. A more advanced exploration of the lexical semantics of ?ayʔajuθəm verb roots and derived predicates is needed to more accurately evaluate some of the assumptions made in this thesis, such as that conducted by Bar-el (2005) for Squamish.
References


Appendix 1  Combinatorial Properties of the Stativizer

The investigation so far has focused on stativized stems built on underived verb roots. However, Watanabe (2003, pp. 410-49) reports that the stativizer productively co-occurs with almost every available piece of derivational morphology. In this section, some observations about these stems are offered and discussed, though an extensive and proper formal analysis is beyond the scope of this thesis.

Stativized Unergative Verbs

Unergative verbs form a closed subset of verbal roots which interpret their intransitive argument as an agent when unmarked. While they appear to be exceptions to the general unaccusativity of Salish verb roots, H. Davis (1997) argues based on data from Lilooet Salish that unergatives are derived from unaccusative roots by a null allomorph of the middle voice marker, which can be ambiguous between active-intransitive and medio-reflexive readings.

At least one unergative root/stem can be stativized, given in (109) and (110).

(109) ʔaχɛθ to mɛmow to t̓əɬɬ
       ʔáχiθ t̓ə=mimaw t̓ə=t̓úɬɬ
       lie.down DET=cat DET=bed
       "The cat lay down on the bed."

(110) ʔaχɛθ to mɛmow to t̓əɬɬ
       ʔáχiθ t̓ə=mimaw t̓ə=t̓úɬɬ
       lie.down\STV DET=cat DET=bed
       "The cat is lying on the bed."

Most unergative roots are rejected with stative morphology of the expected shape. Some examples of this are given in (111-113).

(111a) ʔoɬtxʷ
       ʔúɬtxʷ
       enter enter<STV>
       "to enter"

(112a) ʔoɬtxʷ
       ʔúɬtxʷ
       enter enter<STV>
       “to enter”

(111b) ʔuɬɛt
       ʔúɬɛt
       run run<STV>
       “to run”

(112b) ʔuɬɛt
       ʔúɬɛt
       run run<STV>
       “to run”
However, many unergative roots have unusual stative forms. Some examples are given in (114-116), with tentative glossing.

(114a) ʔəltən  (114b) #ʔəltən
√ʔəltən  √ʔəlt<AI>n
eat  eat<STV>
“to eat”

(115a) ƛ̓əcť  (115b) ƛ̓iyəcť
√ƛ̓əcť  √ƛ̓iyəcť
fall.sleep  fallsleep<STV?>
“fall asleep”

(116a) ¿owuɬ  (116b) ¿iyəwəɬ
√ʔowuɬ  ?iɬ<AI>¿uɬ
embark  embark<STV>?
“embark”

Stativized Active-intransitive Stems

The active-intransitive morpheme -ʔəm derives an unergative stem from a (lexically unaccusative) verb root. The derived active-intransitive stem interprets its sole argument as an agent, but an oblique object can be given. Verb roots with active-intransitive derivation are often translated as “to do Xing”, or having an implicit object “to X something / things”.

(117a) ɣ dispro  (117b) ɣ disproʔam
√ɣ dispro  √ɣ dispro-ʔam
break  break-<AI>
“to break” (unacc.)  “to break something / things”

Stative morphology combines with the active-intransitive marker, with limited productivity. These stems are usually translated into the English progressive ‘to be Xing’, though English
progressives are otherwise always translated into the CV-progressive. However, sometimes the stative reading can be understood from context, such as in example (118) below.

(118a) ɬuɬuθʔəmč

\[
\text{Jú} \sim \sqrt{\text{juθ}}-\text{ʔəm}=\tilde{c} \\
\text{PROG} \sim \text{get.pushed-AI}=1\text{S.IND}
\]

“I am pushing something.”

Speaker comment: “You are pushing it to move it.”

(118b) ɬuθčəmč

\[
\sqrt{\text{juθ}}-\text{i}>\text{m}=\tilde{c} \\
\text{get.pushed-AI}<\text{STV}>=1\text{S.IND}
\]

“I am pushing something.”

Speaker comment: “You are pushing it to keep it in place.”

Additional examples of accepted stative and active-intransitive marked stems are given in (119-121) (Watanabe, 2003, p. 418).

(119a) ɬayʔəm

\[
\sqrt{\text{ka}y}-\text{ʔəm} \\
\text{get.grabbed-AI}
\]

“hold sth.”

(119b) ɬayʔɛm

\[
\sqrt{\text{ka}y}>\text{i}>\text{m} \\
\text{get.grabbed-AI}<\text{STV}>
\]

“be holding sth.”

(120a) kʷɛyʔəm

\[
\sqrt{k}^\text{w} \text{ɛy}-\text{ʔəm} \\
\text{get.hidden-AI}
\]

“hide sth.”

(120b) kʷɛyʔɛm

\[
\sqrt{k}^\text{w} \text{ɛy}>\text{i}>\text{m} \\
\text{get.hidden-AI}<\text{STV}>
\]

“have sth. hiding”

(121a) ɛpʔəm

\[
\sqrt{\text{ɛp}-\text{ʔəm} \\
\text{get.scratched-AI}
\]

“scratch sth.”

(121b) ɛpʔɛm

\[
\sqrt{\text{ɛp}-\text{i}>\text{m} \\
\text{get.scratched-AI}<\text{STV}>
\]

“be scratching sth.”

Some examples of rejected stative and active-intransitive marked stems are given in (122-124).
It was not possible during the investigation of these stems to generate a concrete generalization regarding how a root will be interpreted with the stativizer and active intransitive (STV+AI), or even to predict which roots are acceptable with STV+AI. The only hypothesis that seems likely given the data obtained here and that in Watanabe (pp. 417-25) is that the combination refers to a state of an indeterminate patient which requires constant effort or attention on the part of the agent to maintain (indicating then an unchanging effort rather than an unchanging situation). This would suggest that the stativizer merges above (in)transitivizers in the stem, being then pushed behind them by its phonology. Testing this hypothesis has proved difficult, as consultants usually offer stativized causative stems as translations for such examples.

Furthermore, it is possible that some of these examples are not stative at all, but rather some sort of ablaut pluralional marker, related to the one reported by Watanabe (pp. 459-70). Because of the overlap between the realizations of the vowels /a/ and /i/ in this environment, it is impossible to tell apart stative /-ʔ<作品内容>/ and a hypothetical plural /-ʔ<作品内容>/ from segmental phonology alone (it may be possible to do so in at least some cases based on suprasegmental phonology, but this was not specifically investigated).

This ambiguity is exacerbated by the fact that it appears to not be possible to stativize active-intransitive stems built on CVCC roots without triggering the usual ablaut plural, as reported by Watanabe (p. 419).
This potential pluractional or marker is discussed further below, regarding the combination of the stativizer with control transitive stems.

**Stativized Middle Voice Stems**

The middle voice marker \(-Vm\) derives a medio-reflexive stem from an unaccusative root. This morpheme is largely unproductive, except in those roots that carry a lexical suffix.

\[(126a) \quad \text{mēqšč} \quad \sqrt{\text{mīq}-\text{śān}=č} \quad \text{get.submerged-foot}=\text{1S.IND} \quad \text{“My feet got submerged.”} \]

\[(126b) \quad \text{mēqšnāmč} \quad \sqrt{\text{mīq}-\text{śān-ām}=č} \quad \text{get.submerged-foot-MD}=\text{1S.IND} \quad \text{“I submerged my feet.”} \]

Many cases of lexicalized middle voice markers exist, which makes analysing the co-occurrence of the stativizer with the middle voice marker difficult. Even more problematically, the vowel in the middle voice suffix is not predictable, making it difficult to tell apart a stativized form from one where the middle voice marker simply happens to have an /i/ in it.

Watanabe (2003) reports the stativizer co-occurring with the middle voice marker in several cases, leading to an interpretation that is similarly difficult to discern from the progressive, but that occasionally comes across in the translation.

\[(128a) \quad \text{qākwümč} \quad \sqrt{\text{qōk}-\text{ām}=č} \quad \text{get.stopped-MD}=\text{1S.IND} \quad \text{“I stopped.”} \]

\[(128b) \quad \text{qākw̥emč} \quad \sqrt{\text{qōk̥}-\text{ām}=č} \quad \text{get.stopped-MD-STV}=\text{1S.IND} \quad \text{“I am still.”} \]

Some additional examples, adapted from Watanabe (2003, p. 425) are given in (129-131).
(129a) ƛ̓ɛɬəm
√ƛ̓áɬ-əm
get.salted-MD
“add salt”

(129b) ƛ̓ɛɬəm
√ƛ̓áɬ-<i>m
get.salted-MD<STV>
“be salted”

(130a) nɛtʰosəm
√nátʰ-us-əm
nod-face-MD
“nod”

(130b) nɛtʰosəm
√nátʰ-us-<i>m
nod-face-MD<STV>
“be nodding”

(131a) kʷutəm
√kʷət-əm
get.sick-MD
“get sick”

(131b) kʷutəm
√kʷət-<i>m
get.sick-MD<STV>
“be sick”

**Stativized Control Transitive Stems**

Stems marked with the control transitivizer -Vt have traditionally been analyzed as indicating that the agent is in full control of the event denoted by the stem – that the action is carried out in full volition and ability (Thompson, 1985). More recent analyses by Watanabe (2003) and Jacobs (2011), building on observations by J. Davis (1978) and Kroeber (1985) about control predicates in ?ayʔajuθəm, instead highlight the aspectual property of control predicates: they have a culmination *implicature* but no *entailment* (see also Bar-el, 2005; Bar-el, H. Davis, & Matthewson, 2004a for analyses of non-culminating accomplishments, though these works do not explore their connection to agent control explicitly).

(132) *Traditional control and limited control contrast*

(Watanabe, 2003, pp. 202-3)

<table>
<thead>
<tr>
<th>Control</th>
<th>Limited control</th>
</tr>
</thead>
<tbody>
<tr>
<td>tóf⁰otas</td>
<td>tóf⁰oxʷas</td>
</tr>
<tr>
<td>√tıʔ⁰-utːas</td>
<td>√tıʔ⁰-axʷas</td>
</tr>
<tr>
<td>get.shot-CTR[3OBJ]-3ERG</td>
<td>get.shot-LCTR[3OBJ]-3ERG</td>
</tr>
<tr>
<td>“She shot it.”</td>
<td>“She accidentally shot it.”</td>
</tr>
<tr>
<td></td>
<td>“She managed to shoot it.”</td>
</tr>
</tbody>
</table>

(133) *Aspectual contrast between control and limited control stems*
The stativizer combines with the control transitivizer with productivity limited by either lexical or currently unidentified constraints. Like stativized active-intransitive stems, stativized control stems are often translated into the English progressive.

(134a) huqʷtam čeño tə χajiys
    √háqʷ-t-am √čánu tə=√χάjays
    get.smelled-CTR[3OBJ]-PASS dog DET=rock
    “The dog sniffed at the rock.”

(134b) χʷoxʷmot huqʷetamuł čeño tə χajiys
    √χúx-mut √háqʷ-<f>e-t-am-uł √čánu tə=√χάjays
    long.time-very get.smelled-CTR[3OBJ]<STV>-PASS-PST dog DET=rock
    “The dog was sniffing at the rock for a long time.”

As is the case with stativized active-intransitive stems, there is a difficulty finding stativized control transitive stems built on CVCC roots; it is unclear if the form in (135b) is a control stative or an instantiation of a pluractional marker which occurs with CVCC roots, as reported by Watanabe (2003, pp. 464-5).

(135a) λapxʷatułč saplin
    √λápxʷ-at-uł=č √sáplin
    get.broken-CTR[3OBJ]-PST=1S.IND bread
    “I broke the bread (in two).”
Sometimes the stative reading of the stativized control transitive stems comes across in the translation in a similar manner to stativized active-intransitive stems. This is shown in (136), where the stativizer occurs as secondary stress on the vowel of the transitivizer.

(136a) hagetulč tə lasup
\[\sqrt{\text{hág}}\text{-at}=\text{č} \quad \text{tə}=\sqrt{\text{lá}}\text{sup}\]

warm.up\text{--CTR}\{3OBJ\}-PST=1S.IND \quad \text{DET}=\text{soup}

“I warmed up the soup.”

(136b) χoχmotč haget tə lasup
\[\sqrt{\text{χúχ}}\text{-mut}=\text{č} \quad \sqrt{\text{hág}}\text{-\text{á}t} \quad \text{tə}=\sqrt{\text{lá}}\text{sup}\]

long.time-very=1S.IND \quad warm.up\text{--CTR}\{3OBJ\}\text{--STV} \quad \text{DET}=\text{soup}

“I have been keeping the soup warm for a long time.”

Context: Waiting for someone.

Interestingly, some stativized control transitive stems (or rather, control transitive stems that appear to be stativized) receive straightforward pluractional readings, such as in (137) taken from Watanabe (2003, p. 431).

(137a) ?əχt
\[\sqrt{\text{ʔəχ}}\text{-t}\]

get.coughed\text{--CTR}\{3OBJ\}

“cough it out”

(137b) ?əχέť
\[\sqrt{\text{ʔəχ}}\text{-<t>ę}\]

break\text{--CTR}\{3OBJ\}\text{--STV}>

“keep coughing it out”

Unlike the pluractional cases of the stativizer combining with the active-intransitive, different phonological predictions are generated by the hypothesis that there is a separate ablaut pluractional marker. On strong roots (roots containing a vowel that is not a schwa), the control transitivizer carries a link vowel, which means that the stem has a CVCVC shape and thus the stative surfaces as a secondary stress. The stative analysis then predicts that in roots containing a /u/, the stativized control stem should surface as /CúCúC/, while the pluractional ablaut analysis predicts /CúCaC/.
Interestingly, both forms were found, but not as would be expected by a differing semantic account. Some speakers simply prefer /CúCúC/, and others /CúCaC/, for all cases of stativized/pluractionalized control transitive stems based on /u/ roots. Eliciting example (138) found in Watanabe (2003, p. 433), two forms were found, as shown in (139) and (140).

(138) qʷomot
\(q:\text{úm-ut} \quad \text{put.in.mouth-CTR[3OBJ]} \quad \text{“put it in mouth”} \)

(139) % qʷomót
\(q:\text{úm-út} \quad \text{put.in.mouth-CTR[3OBJ]\STV} \quad \text{“keep it in mouth”} \)

(140) % qʷoméč
\(q:\text{úm-<a>t} \quad \text{put.in.mouth-CTR<?>[3OBJ]} \quad \text{“keep it in mouth”} \)

This variation was particularly clear during a shared elicitation with two consultants. The prompt consisted of a cartoon picture of a standoff between two cowboys, and one continuation where they suddenly shoot each other once, and another where they shoot each other multiple times, as in figure 6. The consultants agreed about how to describe former situation, given in (141).

(141) χoχmot papkʷostawɬ, hoy ?iy τótʰotawɬ
\(χ:\text{úx-mut} \quad \text{pápkʷ-us-t-awɬ} \quad \text{long.time-very} \quad \text{stare-face-CTR-RCP} \quad \text{end and} \quad \text{get.shot-CTR-RCP} \quad \text{“They stared at each other for a long time, then suddenly shot each other.”} \)

(MW; KG)

However, describing the latter situation, the speakers explicitly disagreed about what form the final verb should take. The first consultant suggested τótʰetawɬ in (142), even calling it a “plural form”, while the second consultant wanted τótʰótawɬ, as in (143).

(142) χoχmot papkʷostawɬ, hoy ?iy τótʰetawɬ
\(χ:\text{úx-mut} \quad \text{pápkʷ-us-t-awɬ} \quad \text{long.time-very} \quad \text{stare-face-CTR-RCP} \quad \text{end and} \quad \text{get.shot-CTR-RCP} \quad \text{“They stared at each other for a long time, then suddenly shot each other over and over.”} \)

(# MW; KG)
Figure 6: Two prompts to test stativized/pluractionalized control transitive stem

It is also possible that these constitute a different aspectual construction from the usual stativizer, or one which forms part of a composite stativization in ?ayʔajuθəm. In most Central Salish languages, predicates analogous to ?ayʔajuθəm derived statives are built by prefixing the Proto-Salish *ʔac- stativizer, usually onto stems that have been marked by a cognate of the ?ayʔajuθəm progressive marker. These analogous stems are often called “resultatives”, though it is not clear if these are resultative in the formal sense of Nedjalkov and Jaxontov (1988). Some examples of this process in the Musqueam dialect of Halkomelem are given in (144), obtained from Suttles (2004).
**Resultative** forms in Halkomelem

(Suttles, 2004, pp. 182-3)

<table>
<thead>
<tr>
<th>Plain</th>
<th>Progressive</th>
<th>Resultative</th>
</tr>
</thead>
<tbody>
<tr>
<td>qʷím</td>
<td>qʷíwám</td>
<td>sásqʷíwám</td>
</tr>
<tr>
<td>&quot;disembark&quot;</td>
<td>&quot;be disembarking&quot;</td>
<td>&quot;ashore&quot;</td>
</tr>
<tr>
<td>mátqʷt</td>
<td>mátqʷt</td>
<td>smátqʷ</td>
</tr>
<tr>
<td>&quot;immerse it&quot;</td>
<td>&quot;be immersing it&quot;</td>
<td>&quot;immersed&quot;</td>
</tr>
<tr>
<td>qʷςós</td>
<td>qʷəqʷςós</td>
<td>səqʷəqʷısı</td>
</tr>
<tr>
<td>&quot;sink&quot;</td>
<td>&quot;be sinking&quot;</td>
<td>&quot;sunk&quot;</td>
</tr>
</tbody>
</table>

Suttles also reports stems which appear very similar to stativized control transitive stems in ṣayʔajuθom. However, he calls them “durative” stems, because their morphological composition is different from that of the resultative; these have no stative prefix, a different form of reduplication (which is apparently not mutually exclusive with the progressive) and exhibit the same vowel quality change and stress shift to the right edge of the stem that is associated with resultatives built on CaC roots (this is likely a cognate process to the formation of the ṣayʔajuθom stative with larger stems). Some examples are given in (145).

**Durative** control transitive forms in Halkomelem

(Suttles, 2004, pp. 174-5)

<table>
<thead>
<tr>
<th>Plain</th>
<th>Plain prog.</th>
<th>Durative</th>
<th>Durative prog.</th>
</tr>
</thead>
<tbody>
<tr>
<td>kʷéčət</td>
<td>kʷékʷəcət</td>
<td>kʷəkʷcət</td>
<td>kʷ₁kʷcət</td>
</tr>
<tr>
<td>&quot;look at it&quot;</td>
<td>&quot;be looking at it&quot;</td>
<td>&quot;watch it&quot;</td>
<td>&quot;be watching it&quot;</td>
</tr>
<tr>
<td>ʔχότ</td>
<td>ʔχέτ</td>
<td>ʔαχέτ</td>
<td>ʔιθχέτ</td>
</tr>
<tr>
<td>&quot;push it away&quot;</td>
<td>&quot;be pushing it away&quot;</td>
<td>&quot;hold it away&quot;</td>
<td>&quot;be holding it away&quot;</td>
</tr>
<tr>
<td>kʷέχt</td>
<td>kʷəkʷέχt</td>
<td>kʷəχέt</td>
<td>kʷəkʷəχέt</td>
</tr>
<tr>
<td>&quot;drop it&quot;</td>
<td>&quot;be dropping it&quot;</td>
<td>&quot;leave it alone&quot;</td>
<td>&quot;be leaving it alone&quot;</td>
</tr>
</tbody>
</table>

It is unclear if the existence of an analogous “durative” aspect in ṣayʔajuθom would account for the anomalies encountered in the data on control transitives, but it is a possible avenue of investigation.
Stativized Limited Control Transitive Stems

Under the Agent Control analysis, stems transitivized by the limited control transitivizer -ng indicate that the agent carries out the action unintentionally or only after some difficulty (Thompson, 1985). This analysis has similarly come under fire, as Watanabe (2003) and Jacobs (2011) show that its semantics assert culmination, and that the frequent translations relating to the agent’s lack of control is an artifact of the pragmatics of its use.

Watanabe (2003) reports only one clear case of the limited control transitivizer co-occurring with the stativizer.

(146a)  
\[
\text{tuχʷuxʷ} \quad \sqrt{\text{tόχʷ-axʷ}} \\
\text{get.learned-LCTR[3OBJ]} \\
\text{"learn it"}
\]

(146b)  
\[
\text{tuχʷnexʷ} \quad \sqrt{\text{tόχʷ-n<\text{>}}xʷ} \\
\text{get.learned-LCTR[3OBJ]<STV>} \\
\text{"know it"}
\]

However, Mellesmoen and Andreotti (2017) report a much more productive form of the co-occurrence, as a suprasegmental feature on the transitivizer typical of larger stativized stems. This is unexpected, however, as the vowel of the limited control transitivizer is generally assumed to be a schwa; the realization of the suprasegmental allomorph of the stativizer suggests that this vowel is actually strong.

Stativized limited control stems indicate a recent action, similar to an English perfect aspect. Some examples are given in (147-149).

(147a)  
\[
\text{yıpuxʷas} \quad \sqrt{\text{yόp-axʷ-as}} \\
\text{get.broken-LCTR[3OBJ]-3ERG} \\
\text{"He broke it."}
\]

(147b)  
\[
\text{yıpuxʷas} \quad \sqrt{\text{yόp-όxʷ-as}} \\
\text{get.broken-LCTR[3OBJ]\STV-3ERG} \\
\text{"He (just) broke it."}
\]

(148a)  
\[
\text{xʷotmuxʷan} \quad \sqrt{\text{xʷόtm-axʷ-an}} \\
\text{get.dropped-LCTR[3OBJ]-1S.ERG} \\
\text{"I dropped it."}
\]

(148b)  
\[
\text{xʷotmóxʷan} \quad \sqrt{\text{xʷόtm-όxʷ-an}} \\
\text{get.dropped-LCTR[3OBJ]\STV-1S.ERG} \\
\text{"I (just) dropped it"}
\]
Stativized Causative Stems

The function of the causative transitivizer -\textit{stg} is somewhat underspecified; it occurs in a range of environments yielding a range of readings which are likely determined by context. H. Davis (p.c.) calls it the “default” transitivizer, merging where other transitivizers cannot. It is also the only transitivizer which is spelt out outside the stativized stem (not triggering a change in the shape of the stativizer).

Stativized stems can be productively transitivized by the causative transitivizer. These stems often receive state maintenance readings, translated as “have it Xed” or “keep it Xed”.

\begin{align*}
\text{(149a)} \quad & \text{pəχοxʷas} \\
& \text{√pəχ-əxʷ- as} \\
& \text{get.torn-LCTR[3OBJ]-3ERG} \\
& \text{“He tore it.”} \\
\text{(149b)} \quad & \text{pəχόxʷas} \\
& \text{√pəχ-əxʷ- as} \\
& \text{get.torn-LCTR[3OBJ]\text{STV}-3ERG} \\
& \text{“He (just) tore it.”}
\end{align*}

With overt DP or 3rd person pronominal objects, the surface form of the causative suffix alternates between -\textit{sx}" and -\textit{stəx}" with no apparent difference in meaning; the difference in agent control reported by Watanabe (2003) could not be reproduced, though this may be due to interspeaker variation. Additional examples of stative predicates transitivized by the causative transitivizer are given below.

\begin{align*}
\text{(150a)} \quad & \text{təqət İəmen} \\
& \sqrt{təq-}\text{-it} \quad \sqrt{\text{ylimin}} \\
& \text{get.closed-STV \text{ door}} \\
& \text{‘The door is closed.’}
\end{align*}

\begin{align*}
\text{(150b)} \quad & \text{təqətstəm tə θukuʷnəčtan tə İəmen} \\
& \sqrt{təq-}\text{-it-st-əm} \quad tə=\sqrt{θukuʷnəčtan} \ tə=\sqrt{\text{ylimin}} \\
& \text{get.closed-STV-CAU[3OBJ]-PASS DET=chair \ DET=door} \\
& \text{‘The chair is keeping the door closed.’}
\end{align*}
(151a)  gəqət
√gəq-it
get.opened-STV
‘to be open’

(151b)  gəqətsxʷ/gəqətstəxʷ
√gəq-it-stəxʷ
open-STV-CAU[3OBJ]
‘to keep it open’

(152a)  pənɛt
√pən-it
get.buried-STV
‘to be buried’

(152b)  pənɛtsxʷ/pənɛtstəxʷ
√pən-it-stəxʷ
get.buried-STV-CAU[3OBJ]
‘to have it buried’

(153a)  kʷayɛt
√kʷay-it
get.hidden-STV
‘to be hidden’

(153b)  kʷayɛtsxʷ/kʷayɛtstəxʷ
√kʷay-it-stəxʷ
get.hidden-STV-CAU[3OBJ]
‘to have it hidden’
Appendix 2  Manner/Result Complementarity

A way that English verbs can be partitioned based on their lexical semantics that does not relate to lexical aspect is based on whether they encode manner or result. Verbs of manner encode information about how an event progresses, and verbs of result encode information about what state results from the event (Levin & Rappaport Hovav, 1991). Example (154) lists some examples of each of these classes.

(154) Verbs of manner

- blink, jog, run, scrub, sweep, swim, wipe, yell, etc.

Verbs of result

- break, clean, crush, destroy, dim, shatter, etc.

(Levins & Koontz-Garboden, 2012, p. 332)

The primary diagnostic to distinguish these two classes is to assert the culmination of a predicate, but to deny any resulting state. While some verbs of manner may heavily imply certain resulting states, these are still cancellable pragmatic implicatures arising from context, as shown in example (155). Note that this test is not an attempt at cancelling culmination; in fact, culmination is pointedly being asserted. What this test attempts to cancel is a transition into some result state (other than the post-state).

(155) Denial of result and verbs of result

a. Shane just broke the vase, # but nothing is different about it.
b. Shane just shattered the bottle, # but nothing is different about it.
c. Shane just destroyed his house, # but nothing is different about it.

Denial of result and verbs of manner

a. Adam just swept the floor, but nothing is different about it.
b. Adam just wiped the table, but nothing is different about it.
c. Adam just punched Joe, but nothing is different about him.

(adapted from Beavers & Koontz-Garboden, 2012, p. 337)

It is generally difficult to find stativized predicates built on verbs of manner, and without context they are often rejected, as shown in example (156). However, some counterexamples to this exist, which seem to have a result implicature which is stronger somehow.

89
(156) Stativized predicates built on verbs of manner usually infelicitous without context

?? My eyes are blinked.
?? The mile is jogged.
?? My name is yelled.
?? Joe is punched.

The floor is swept. (Implicature: the floor is clear)
The table is wiped. (Implicature: the table is clean)

Levin and Rappaport Hovav (1991) describe the classes of verbs of manner and verbs of result as complementary, positing that it is not possible for a natural language verb to encode information about both how an event progresses and what state results from it. This hypothesis is often called the Manner/Result Complementarity, and the restriction it places on possible verb meanings is formalized in (157) in terms of lexical decomposition.

(157) a. \[[x \text{ACT}_{\text{root}}]\] (Verb of manner)

b. \[[x (\text{BECOME STATE})_{\text{root}}]\] (Verb of result, unaccusative)

c. \[[[x \text{ACT}] \text{CAUSE} [y (\text{BECOME STATE})_{\text{root}}]]\] (Verb of result, transitive)

d. \# [[x \text{ACT}_{\text{root}}] \text{CAUSE} [y (\text{BECOME STATE})_{\text{root}}]]

(adapted from Beavers & Koontz-Garboden, 2012, p. 333)

Note that this partition relates does not commute with lexical aspect: the distinction between verbs of manner and verbs of result traverses the eventive lexical aspect classes, as shown in (158).

(158) Manner/Result Complementarity across lexical aspect classes

<table>
<thead>
<tr>
<th>Activities</th>
<th>Accomplishments</th>
<th>Achievements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Verbs of Manner</strong></td>
<td>sweep the floor</td>
<td>carve a sculpture</td>
</tr>
<tr>
<td></td>
<td>wipe the table</td>
<td>run a mile</td>
</tr>
<tr>
<td><strong>Verbs of Result</strong></td>
<td>draw circles</td>
<td>draw a circle</td>
</tr>
<tr>
<td></td>
<td>build houses</td>
<td>build a house</td>
</tr>
</tbody>
</table>

24 This schema is given from all verbs of manner, whether transitive, unergative, or even unaccusative. While the question of the relation argument structure with these two classes is not trivial, it is not explored here.
In the adapted schema of Pustejovsky (1991), this restriction can be represented as in (68), where verbs of manner are characterized as having a logical fulcrum on their process, while verbs of result have a logical fulcrum on the transition to a result state.

(159) Manner/Result Complementarity in adapted Pustejovsky event schemata

![Diagram of Manner/Result Complementarity]

Verbs of manner entail a process, may implicate a transition

Verbs of result entail a transition, may implicate a process

The validity of the Manner/Result Complementarity (or at least this version of it) has come into question due to apparent counterexamples such as manner-of-killing verbs given in (160), but the distinction between verbs of manner and verbs of result is useful in the present investigation because verbs of manner and verbs of result pattern differently when stativized.

(160) Manner-of-killing verbs

- crucify, drown, electrocute, guillotine, hang

(Beavers & Koontz-Garboden, 2012, p. 335)

Furthermore, verbs of manner show that a transition does not need to occur for a predicate to be telic; some predicates which encode processes but no transition, such as punch a man or run a mile, are telic. It is possible for a process to encode a natural endpoint – an encoded final phase to delineate it – but no transition into some result state. This could be indicated in the event schemata as in (161), using rounded or square brackets around the process, akin to interval notation, indicating whether the process contains its boundaries.
To test ʔayʔajuθəm for a manner/result distinction among its verb roots, the result of either the bare predicate or the limited control transitive derived from an eventive root were broadly denied. This was done by juxtaposition with the sentence example (162).

(162) xʷukʷt tam̓ʔajems
     xʷúkʷt tam̓ʔaj-ɛms
     none what get.changed-MD=3POS
     “nothing changed about it.”

A great difficulty that was faced with this diagnostic is that the consultant would constrain the domain of xʷúkʷt “none” to exclude the result state of the predicate being tested, as shown in (163) and (164). Because of this, roots corresponding to English verbs of result and those corresponding to verbs of manner patterned identically in terms of the acceptability of the prompts. However, the subsequent discussion with the consultant about the possible situation these sentences could describe may reveal that there is a difference.

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25 The limited control transitive is used because the result state of a control transitive predicate can always be denied felicitously. Under the agent control analysis, the limited control transitivizer marks an action as completed unintentionally or only after some difficulty (Thompson, 1985); however, this goes against more recent observations that this transitivizer is predominantly aspectual and often accepted in environments where the agent is in control (Watanabe, 2003, pp. 204-14; Jacobs, 2011; Andreotti, 2017).
(163) Broad result denial with roots corresponding to verbs of result in English

(a) čet təq?əmen, xʷu̱kʷʷt təmʔəje̱ms
cəʔat $\sqrt{təq}$ ṅaməʔ, xʷu̱kʷʷt təm $\sqrt{ʔəj}$-im=s
now get.closed door, none what get.changed-MD=3POS
“The door just closed, (but) nothing (else) changed about it.”
Consultant (JF) comment: The door must have closed, but nothing else changed about it. It made the same noise as before, eh?

(b) čets pəχuxʷ təq?əmen, xʷu̱kʷʷt təmʔəje̱ms
cəʔat=c $\sqrt{pəχ}$-axʷ təq?əmen, xʷu̱kʷʷt təm $\sqrt{ʔəj}$-im=s
now=1.SIND get.torn-LCTR[3OBJ] 1S.POS=shirt, none what get.changed-MD=3POS
“I just tore my shirt, (but) nothing (else) changed about it.”
Consultant (JF) comment: It got ripped but nothing else changed about it.

(c) čets Ɂəχʷ tuw, xʷu̱kʷʷt təmʔəje̱ms
cəʔat $\sqrt{Ɂəχ}$-tuw, xʷu̱kʷʷt təm $\sqrt{ʔəj}$-im=s
now get.melted ice, none what get.changed-MD=3POS
“The ice just melted, (but) nothing (else) changed about it.”
Consultant (JF) comment: The ice did melt, but nothing else happened to it. This one is a bit strange.

(164) Broad result denial with roots corresponding to verbs of manner in English

(a) čets təq?əmen, xʷu̱kʷʷt təmʔəje̱ms
cəʔat=c $\sqrt{təq}$-axʷ $\sqrt{ləməʔ}$, xʷu̱kʷʷt təm $\sqrt{ʔəj}$-im=s
now=1.SIND get.shot-LCTR[3OBJ] bottle, none what get.changed-MD=3POS
“I just shot the bottle, (but) nothing changed about it.”
Consultant (JF) comment: It’s ok even if nothing at all changed about the bottle.

(b) čets pəχuxʷ təq?əmen, xʷu̱kʷʷt təmʔəje̱ms
cəʔat $\sqrt{pəχ}$-axʷ təq?əmen, xʷu̱kʷʷt təm $\sqrt{ʔəj}$-im=s
now get.washed-LCTR[3OBJ] 1S.POS=shirt, none what get.changed-MD=3POS
“I just washed my shirt, (but) nothing changed about it.”
Consultant (JF) comment: Nothing changed about the shirt, it could be exactly the same. I hate it when that happens, then I have to wash it again.
While it thus remains unclear if such a distinction exists among verb roots in ṭayʔajutθəm, the fact that certain verbs in English entail no result state made testing them for pure stativity impossible, as there is no way to know without an in-depth familiarity with ṭayʔajutθəm lexical semantics and pragmatics what such a pure state would be. However, ten roots corresponding to verbs of manner in English were tested for post-stativity. These are listed in (165).

(165) Verb roots corresponding to verbs of manner in English

<table>
<thead>
<tr>
<th>Root</th>
<th>Meaning</th>
<th>Root</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/tútʰ/</td>
<td>“get shot”</td>
<td>/qáp</td>
<td>“get touched”</td>
</tr>
<tr>
<td>/xʷáʔtqʷ/</td>
<td>“get scrubbed”</td>
<td>/λós</td>
<td>“get punched”</td>
</tr>
<tr>
<td>/xʷíp</td>
<td>“get swept”</td>
<td>/yóm</td>
<td>“get kicked”</td>
</tr>
<tr>
<td>/pítʰ/</td>
<td>“[clothes] get washed”</td>
<td>/χím</td>
<td>“get clawed”</td>
</tr>
<tr>
<td>/θáʔp</td>
<td>“get bathed”</td>
<td>/χíq</td>
<td>“[itch] get scratched”</td>
</tr>
</tbody>
</table>

Stativized predicates built on nine of the ten roots were accepted in post-stative contexts. However, the consultant almost always preferred transitive passives in these contexts; it is not clear why this is the case. All ten examples are given in (166-175).

(166) ḥʔətʰ et lamayə, xʷukʷt taʔ ajems, xʷaʔ y̕ápas

<table>
<thead>
<tr>
<th>Root</th>
<th>Meaning</th>
<th>Root</th>
<th>Meaning</th>
<th>Root</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/tútʰ-ʔt/</td>
<td></td>
<td>/lámaya</td>
<td></td>
<td>/qáp</td>
<td></td>
</tr>
<tr>
<td>get.shot-STV</td>
<td>bottle, none what get.changed-MD=3POS, NEG</td>
<td></td>
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<td>/yəp=as</td>
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<tr>
<td>get.broken-STV</td>
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</tbody>
</table>

“(Though) the bottle is shot, nothing changed about it, it did not break.”

Context: The bottle was shot, but the bullet just bounced off without even leaving a scratch because it is made of really strong glass.

(JF)
(167) χʷôteqʷ tə kʷăt, xʷúkʷt tám ʔajems, qaʔeʔot čupχ
\[ \sqrt{χʷόt<qʷ} tə=\sqrt{kʷăt}, \ xʷúkʷt \ tám \ √ʔaj-im=s, \]
\[ \text{get.scrubbed<STV} \ \ \ \ \ \text{DET}=\text{plate}, \ \ \ \ \ \text{none} \ \ \ \ \ \text{what} \ \ \ \ \ \text{get.changed-MD}=3\text{POS}, \]
\[ qáji=ʔut \ \ \ \ \ \sqrt{čápχ} \]
\[ \text{still}=\text{CLT} \ \ \ \ \ \text{dirty} \]
"(Though) the plate is \textbf{scrubbed}, nothing changed about it, it is still dirty."

Context: A dishwasher has scrubbed a dirty plate hard, but to no avail; it has some really stubborn dirt on it.

(JF)

(168) xʷipet tə ʔeyomuxʷtan, xʷukʷt tám ʔajems, qaʔeʔot kʷikʷet sayjε
\[ \sqrt{xʷíp-ít} tə=\sqrt{ʔáyumuxʷtən}, \ xʷúkʷt \ tám \ √ʔaj-im=s, \]
\[ qáji=ʔut \]
\[ \text{get.swept-STV} \ \ \ \ \ \text{DET}=\text{floor}, \ \ \ \ \ \text{none} \ \ \ \ \ \text{what} \ \ \ \ \ \text{get.changed-MD}=3\text{POS}, \ \ \ \ \ \text{still}=\text{CLT} \]
\[ kʷí~\sqrt{kʷ?-ít} \ \ \ \ \ \sqrt{sáyjə} \]
\[ \text{PL~on.ground-STV} \ \ \ \ \ \text{leaves} \]
"(Though) the floor is \textbf{swept}, nothing changed about it, leaves are still scattered on it."

Context: Some wind keeps blowing leaves back onto the floor a sweeper is trying hard to clear.

(JF)

(169) ʔet⁰et tə qasneys, xʷukʷt tám ʔajems, qaʔeʔot čupχ
\[ \sqrt{ʔet⁰et-ít} tə=\sqrt{qásney=s}, \ xʷúkʷt \ tám \ √ʔaj-im=s, \]
\[ qáji=ʔut \]
\[ \text{get.washed-STV} \ \ \ \ \ \text{DET}=\text{shirt}=3\text{POS}, \ \ \ \ \ \text{none} \ \ \ \ \ \text{what} \ \ \ \ \ \text{get.changed-MD}=3\text{POS}, \ \ \ \ \ \text{still}=\text{CLT} \]
\[ \sqrt{čápχ} \]
\[ \text{dirty} \]
"(Though) his shirt is \textbf{washed}, nothing changed about it, it is still dirty."

Context: A shirt is pulled out of the machine with a big stain still on it.

(JF)
“(Though) my dog is **bathed**, nothing changed about her, she is still dirty.”

Context: The dog is bathed after jumping into mud, but despite a decent effort she is still dirty after being bathed.

(JF)

“(Though) the plank is **punched**, nothing changed about it, it is not broken.”

Context: A martial artist punched a plank to break it, but it was too hard to break.

(JF)

“(Though) the (punch)bag is **kicked**, nothing changed about it, it is not damaged.”

Context: A martial artist kicked a punchbag, but did not damage it.

(JF)

“(Though) the cat is **clawed at**, nothing changed about it, it is not hurt.”

Context: A cat got into a fight and got clawed at, but the other cat’s claws did not pierce the skin.

(JF)
"(Though) my nose is scratched, it is still itchy."
Context: Talking about cat hair and allergies.
(JF)

"(Though) the window is touched, nothing changed about it, it is still clean."
Context: A child touches the glass of a store window, but leaves no finger marks.
(JF)