Building Statives and Inchoatives in Nsyilxcn*

John Lyon
University of British Columbia – Okanagan

Abstract: This paper examines aspectual properties of derived statives and inchoatives built on both adjectival and change-of-state roots, and establishes possible event-structural semantic templates for lexical classes, as well as definitions for the stative and inchoative markers. The goal is to provide a foundation for further work on lexical and sentential aspect. Nsyilxcn shows evidence for a semantic distinction between adjectival and change-of-state roots, as shown by the distribution of two homophonous yet semantically distinct *c-* prefixes, an imperfective and a stative. Regarding statives, I show that *c-* derives an unaccusative target state (Kratzer 2000; Davis et al. 2020), and that change-of-state roots must come pre-specified with both stative and event arguments. This analysis of change-of-state roots differs from that advanced by Davis (2021) for St'át'imcets Salish, and raises interesting questions regarding possible semantic variation across Salish at the root level. Nsyilxcn supports an *ontological* approach to root semantics (Rappaport Hovav & Levin 1998), and speaks against Embick's (2009) *Bifurcation Thesis*.

Keywords: statives, inchoatives, event structure, aspect, semantics, Interior Salish

1 Introduction

1.1 Language information

Nsyilxcn (a.k.a. Okanagan, ISO: 639-3) is a Southern Interior Salish language spoken in south-central British Columbia, and the northern interior of Washington State. There are approximately 81 fluent elder speakers on the Canadian side of the border (FPCC 2022) and likely fewer on the American side. The examples in this paper come primarily from Delphine Derickson Armstrong (Westbank reserve) with whom I have worked since 2022, as well as from Upper Nicola elders *twi-*Lottie Lindley and Sarah McLeod, with whom I worked between 2009 and 2016. Additional examples come from materials published by Anthony and Nancy Mattina.

1.2 Summary

This paper examines the aspectual properties of adjectives and change-of-state (CoS) roots, specifically semantic interactions between roots, stativity, imperfectivity, and inchoativity, with the aim of establishing a root-level semantics in order to provide a firm basis for further aspectual work. This research complements previous aspectual studies by N. Mattina (1996) and A. Mattina (1993) for Nsyilxcn, as well as aspectual work in other Salish languages (Bar-el 2005 for Sḵwx̱wú7mesh; Kiyota 2008 for SENĆOŦEN; Davis et al. 2020 for St'át'imcets and ʔayʔaǰuθəm). This study also provides insight into the event structure of verbal roots and how this might vary across Salish, as

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Contact: john.lyon@ubc.ca

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well as having implications for semantic theories of lexical roots and how they relate to event structure.

The study finds that there are two, homophonous *c*- prefixes in Nsyilxcn: an imperfective marker and a stative marker. Imperfective *c*- is not category-specific: it attaches to all eventive predicates (those with an *e* argument, formally speaking). This eventive class includes stage-level adjectives, and inchoativized predicates formed from adjectival, nominal, and verbal roots.[1] Stative *c*- has cognates across Northern Interior Salish, and while it is likely the historical source of imperfective *c*-, it is semantically distinct and category-specific, attaching only to verbal, change-of-state roots, and yielding an unaccusative target state (Kratzer 2000). I show that imperfective *c*- and stative *c*- are sensitive to differences in the semantics of lexical roots: whereas stage-level adjectives and inchoativized predicates are properties of events (Kratzer 1989), CoS roots are properties of *both* a transitional event, and a resulting state. This approach converges with Kratzer's (2000) analysis of German *target states*, and shares some similarities with Beavers and Koontz-Garboden's (2020) analysis of English CoS roots (Yu et al. 2023).

Because stative *c*- attaches only to CoS roots, the idea that roots are categorially specified is supported (Davis 2021), however, I claim that there must be a semantic distinction made between CoS roots and adjectival roots in addition to a categorial distinction. Primary evidence for this comes from two areas. First, CoS roots cannot occur in the imperfective without first being inchoativized or undergoing other derivational processes, while S-level adjectives and other eventive predicate types can take the imperfective in their base forms. If CoS roots, as verbal roots, were *only* properties of events, they should be able to occur in the imperfective similarly to S-level adjectives and other eventive predicates in Nsyilxcn (and similarly to CoS roots in St'át'imcets). Second, stativized CoS roots may co-occur with instrumental nominals which reference a causing event (N. Mattina 1996; Davis & Demirdache 1997), while homogenous adjectives cannot. I show that for Nsyilxcn, the causing event must be present in the underlying representation of a CoS root (Kratzer 2000) rather than introduced by a stativizer (Embick 2009).

Nsyilxcn differs from other Salish languages such as St'át'imcets (Davis 2021; Lyon & Davis 2022) in that unaccusative CoS roots may not be used in bare form. The reason for this, I claim, is that although CoS roots are pre-equipped with both event and state argument positions (Beavers & Koontz-Garboden 2020; Yu et al. 2023), they themselves entail neither an event nor a resulting state, and are hence underspecified without further derivation. The inchoative is necessary to foreground the event argument, and background a resulting state argument in CoS roots (by existential closure of the *s* variable), while stative *c*- has the opposite effect: it backgrounds the event argument (by existential closure of the *e* variable), and foregrounds the resulting state (Kratzer 2000; Burton & Davis 1996 for St'át'imcets).

This analysis correctly predicts **(i)** the absence of underived CoS roots in natural speech, **(ii)** the complementary distribution of stative *c*- and inchoative marking, and **(iii)** that the imperfective will apply to an inchoative predicate, as a property of events, but not a stative predicate, as a property of states.

St'át'imcets Salish provides an interesting point of contrast in at least three other respects: First, the imperfective auxiliary *wa7* can apply not only to bare CoS roots, but also to stativized CoS predicates, as well as adjectives. Because CoS roots and adjectives pattern together in this respect, there is less evidence for an analysis of CoS roots in St'át'imcets as encoding an event *as well as* a

[1] IPFV *c*- also attaches to activities and transitive causatives, though these are not discussed in this paper.

resulting state, which supports Davis' (2021) analysis of CoS roots as encoding only an event transition. Seen from a different angle, St'át'imcets stative *es-* may be analyzed as introducing a resulting state variable to a CoS root (supporting an Embick 2009-style approach), rather than these roots coming pre-specified with a stative argument (Kratzer 2000). Because Nsyilxcn and St'át'imcets CoS roots, though both unaccusative, appear to differ semantically in this respect, the 'unaccusativity hypothesis' (Perlmutter 1978; Davis 1997) must accommodate some degree of variation. Second, while Davis et al. (2020) show that St'át'imcets *es-* derives a resultant state, I show Nsyilxcn cognate stative prefix *c-* derives a target state (Kratzer 2000), which raises questions regarding the semantic evolution of the prefix, and why Salish languages vary in this respect. Third, the fact that imperfective *wa7* can target both resultant states and adjectives in St'át'imcets suggests that both are ontologically stative, again in contrast to Nsyilxcn, where target states do not occur in the imperfective, but adjectives do. This raises questions relating to target versus resultant stativity (Kratzer 2000), the compatibility of states with imperfectivity, and the ontological status of states.

Overall, Nsyilxcn supports an *ontological* approach to event structure, which holds that roots fall into different semantic classes and that this accounts for their distribution (Rappaport Hovav & Levin 1998), as opposed to a *free distribution* approach (Borer 2005): Nsyilxcn adjectives are ontologically distinct from CoS roots, and their different distributions follow as a result. Nsyilxcn also provides evidence against the *Bifurcation Thesis for Roots* (Embick 2009), which holds that event templates may not introduce event structural components which are independently found in lexical roots: the Nsyilxcn inchoative marker introduces a CoS BECOME predicate (Dowty 1979) to adjectives, despite the fact that BECOME is independently found in CoS roots. Nsyilxcn also supports a more abstract version of recent approaches to English CoS roots (Beavers & Koontz-Garboden 2022; Yu et al. 2023), though the empirical tests used to establish ontological classes are quite different.[2]

1.3 Outline

The paper is structured as follows: In Section 2, I examine semantic differences between individual-level adjectives, stage-level adjectives, and change-of-state (CoS) roots, both with and without *c-* prefixes, and show that the imperfective attaches to S-level adjectives but not I-level adjectives or CoS roots, while stative *c-* attaches only to CoS roots. Primary evidence for a separate stative *c-* prefix comes from the absence of habitual readings in statives, and the ability of statives to co-occur with instrument-denoting nominals. I analyze stative *c-* as backgrounding the event transition of a CoS root, and foregrounding a resulting *target* state, following Kratzer's (2000) analysis of target states in German (see also Burton & Davis 1996; Davis et al. 2020; Beavers & Koontz-Garboden 2020). I then propose a semantics for adjectives, CoS roots, and the stative marker which derives the available readings, as well as the inability for CoS roots to be used in bare form.

In Section 3, I examine the distribution and semantic effects of inchoativity. The inchoative in Nsyilxcn is category neutral, attaching to adjectives, nouns, and CoS roots which have not been stativized. It introduces an event transition and an entailed resulting state to homogenous adjectival predicates, while in verbal, CoS roots, it closes an underlying state variable. The inchoative thus

[2] English-style resultative constructions (e.g., *John wiped the table clean*) are not possible in Nsyilxcn, because the manner and result components lexicalize into single verbs. For example, 'I broke the box open' was translated as *kɬk̓ʷƛ̓ípn iʔ knəxnáx* (Delphine Derickson Armstrong, VF), where the transitive verb stem *kɬk̓ʷƛ̓ip(nt)-* carries the entire meaning 'to break open'.

has an effect essentially opposite to that of stative *c*-: it foregrounds the event transition and backgrounds the resulting state (Yu et al. 2023). This analysis, or one similar, is shown to be necessary from the fact that imperfective *c*- always targets the event transition in inchoative predicates, resulting in an in-process, non-culminative (or habitual) reading which contrasts with culminative readings found in plain inchoatives.

In Section 4, I briefly compare Nsyilxcn and St'át'imcets statives, and suggest a different analysis for St'át'imcets, which unlike Nsyilxcn, does utilize bare unaccusative CoS roots. I briefly discuss possible historical reasons for this variation within Salish.

In Section 5, I discuss the relevance of this work for Salish linguistics and the wider theoretical literature in some detail and conclude.

2 Statives and imperfectivity

This section discusses differences between adjectival and CoS roots with respect to *c*- prefixation. These differences show that there are two separate aspectual *c*- prefixes: imperfective *c*- attaches to adjectives, while stative *c*- attaches to CoS roots. Stative *c*- derives a target state with CoS roots.

2.1 Adjectives

Adjectives in Nsyilxcn only sometimes take the form of bare CV(C)C roots (e.g., *mur* 'smooth', *x̌aʕl* 'light', *yus* 'dark', *piq* 'white', *c̓uy* 'dark') but they more typically involve C_1C_2 characterizing reduplication (e.g., *təɬtáɬt* 'straight, true'). Adjectives often end with a *-t* suffix (e.g., *x̌ʷupt* 'weak', *ʔilxʷt* 'hungry') which has been analyzed historically as a 'stative' suffix, but is not synchronically productive (N. Mattina 1996).[3]

Adjectives have default present tense readings, and may be characterized as homogenous states, having neither an inherent initial nor final point (N. Mattina 1996; Kiyota 2008). They encode neither a transition nor an event culmination. Examples of adjectives are given in (1).[4,5]

(1) a. **t̓íkʷəlqʷ** iʔ sqəltmíxʷ.
tall DET man
'The man is tall.' (VF | Delphine Derickson Armstrong)

b. **nk̓əwpíls** i-stəmtímaʔ.
lonely 1SG.POSS-maternal.grandmother
'My grandmother is lonesome.' (Delphine Derickson Armstrong)

[3] *-t* in fact loosely correlates with the availability of a zero-inchoative interpretation, as I discuss in places.
[4] To aid the reader, words under discussion are shown in bold. This does not indicate prosodic prominence.
[5] Gloss abbreviations used in this paper are as follows: ADJT – adjunct; C – complementizer; C2 – final reduplication; CAUS – causative transitivizer; CISL – cislocative; CONT – continuative; DET – determiner; DIR – directive transitivizer; DUB – dubitative; EMPH – emphatic; EPIS – epistemic; ERG – ergative subject; EVID – evidential; FAC – factual; FUT – future; INCH – inchoative; INDP – independent; IPFV – imperfective; LOC – locative; MID – middle; NEG – negative; NMLZ – nominalizer; OBL – oblique; PL – plural; POSS – possessive; SG – singular; STAT – stative; SUBJ – intransitive subject.

c. **təɬtált** iʔ s-c-qʷəlqʷílt-s.
straight DET NMLZ-STAT-speak-3POSS
'His words are true.' (Delphine Derickson Armstrong)

d. lut t̓ **x̌ʷupt** iʔ pəptwínaʔxʷ.
NEG NEG.FAC weak DET old.woman
'The old lady isn't weak.' (VF | Delphine Derickson Armstrong)

e. **k̓ʷək̓ʷáct** iʔ sqəltmíxʷ.
strong DET man
'The man is strong.' (Delphine Derickson Armstrong)

f. t̓i **piq** iʔ smik̓ʷt, tałt píq-laʔxʷ.
EMPH white DET snow straight white-land
'The ground is all white.' (VF | Delphine Derickson Armstrong)

g. axáʔ **nʕast** t knəxnáx.
this heavy OBL box
'The box is heavy.' (Delphine Derickson Armstrong)

h. **ʔilxʷt** iʔ kəkwáp.
hungry DET dog
'The dog is hungry.' (Delphine Derickson Armstrong)

i. **c̓uy**.
dark
'It's really dark.' (VF | Delphine Derickson Armstrong)

j. **k̓íwəlx** iʔ kəkwáp.
old DET dog
'The dog is old.' (VF | *twi*-Lottie Lindley)

k. **ɬʕát̓**.
wet
'It's wet.' (Delphine Derickson Armstrong)

l. kn **sult** ʕapnáʔ.
1SG.SUBJ frozen now
'I am frozen now.' (*twi*-Lottie Lindley, Sarah McLeod)

2.1.1 The individual/stage-level distinction

Nsyilxcn adjectives may be described as individual-level (I-level) or stage-level (S-level) (Carlson 1977). One diagnostic that teases apart the two classes is whether an adjective can occur with imperfective *c-* or not (Lyon 2010). I-level adjectives and nouns may not take *c-* (2), while S-level

adjectives may (3).[6,7] Fluent speakers indicate that attaching *c-* to an I-level state makes it sound as if the property is temporary, which results in pragmatic infelicity. The semantic difference between an imperfective, *c-* prefixed adjective and a bare one is sometimes subtle out-of-the-blue.

(2) a. *ṫi **c-piq** iʔ smiḵʷt. ← ṫi **piq** iʔ smiḵʷt.
EMPH IPFV-white DET snow
'The snow is white.' (Delphine Derickson Armstrong)

b. ***c-t̓ikʷəlqʷ** iʔ sqəltmíxʷ. ← **t̓íkʷəlqʷ** iʔ sqəltmíxʷ.
IPFV-tall DET man
'The man is tall.' (Delphine Derickson Armstrong)

c. ***c-ḵ̓ʷəcḵ̓ʷáct** iʔ sqəltmíxʷ. ← **ḵ̓ʷəcḵ̓ʷáct** iʔ sqəltmíxʷ.
IPFV-strong DET man
'The man is strong.' (Delphine Derickson Armstrong)

d. ***c-təltált** iʔ s-c-qʷəlqʷílt-s. ← **təltált** iʔ scqʷəlqʷílts.
IPFV-straight DET NMLZ-STAT-speak-3POSS
'His words are true.' (Delphine Derickson Armstrong)

e. *iʔ xƛ̓ut ṫi **c-ḵ̓ʕay**, tałt ṫəsṫʕást. ← iʔ xƛ̓ut ṫi **ḵ̓ʕay**, tałt ṫəsṫʕást.
DET rock EMPH IPFV-hard straight solid
'The rock is hard, it is really solid.' (Delphine Derickson Armstrong)

f. *kn **c-sqəltmíxʷ**. ← kn **sqəltmíxʷ**.
1SG.ABS IPFV-man
'I am a man.' (*twi*-Lottie Lindley)

(3) a. **c-ʔilxʷt** iʔ kəkwáp, ałíʔ lut ṫa c-ʔəm•ám.
IPFV-hungry DET dog because NEG NEG.FAC IPFV-feed•C2.INCH
'The dog is hungry because it doesn't get fed.' (VF | Delphine Derickson Armstrong)

b. **c-nḵ̓əwpíls** ixíʔ t sqəltmíxʷ.
IPFV-lonely that OBL man
'That's a lonely man.' (VF | *twi*-Lottie Lindley)

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[6] *c-* has been labelled as an 'actual' prefix (A. Mattina 1973), though I analyze it as an imperfective, following A. Mattina (1998), Dunham (2011), and Lyon (2021). Imperfective *c-* closely follows the pattern of imperfective *wa7* in St'át'imcets, as opposed to stative *es-*, which may not attach to adjectives (Davis, in prep). See also Kiyota (2008) for similar distributions of the imperfective in SENĆOŦEN.

[7] Though nouns do not take the imperfective, a prefix *c-* does apply to articles of clothing, contributing a meaning of 'to wear' or 'to have'. For example, *kn c-qʷácqn* 'I have a hat on' (A. Mattina 1993) and *kn c-npəptaẃsqn* 'I have a toque on' (Delphine Derickson Armstrong, VF), but not **kn c-stáłəm* 'I have a boat' which instead requires the prefix *k(ł)-* 'to have', as in *kn k-stáłəm* 'I have a boat' (Delphine Derickson Armstrong). This use of *c-* seems more related to stative *c-* than the imperfective, however, more work is required here. Burton and Davis (1996) discuss a similar use of St'át'imcets stative *es-*.

c. **k̓ík̓əm** **c-ʕimt** iʔ sqəltmíxʷ.
almost IPFV-angry DET man
‘The man was almost mad.’ (*twi*-Lottie Lindley)

d. lut pənʔkín kn t̓ c-ntils kn **c-k̓íwəlx**.
NEG when 1SG.SUBJ NEG.FAC IPFV-think 1SG.SUBJ IPFV-old
‘I never thought I’d get old.’ (VF | Delphine Derickson Armstrong)

e. axáʔ **c-nʕast** t knəxnáx.
this IPFV-heavy OBL box
‘This is a heavy box.’ (Delphine Derickson Armstrong)

Next, I-level states can be modifiers in Complex Nominal Predicates (CNPs) (4), while unprefixed S-level adjectives cannot (5) (Lyon 2010; see Davis et al. 1997 for St’át’imcets and Secwepemctsín).[8] S-level states may however function as CNP modifiers if they are prefixed by imperfective *c*- (6).[9,10] The brackets below indicate CNP structures.

(4) a. [**təłtáłt** t ylmíxʷəm].
straight OBL chief
‘He is a straight-forward chief.’ (*twi*-Lottie Lindley)

b. kʷ [**k̓ʷəck̓ʷáct** t sqəltmíxʷ].
2SG.SUBJ strong OBL man
‘You are a strong man.’ (*twi*-Lottie Lindley)

c. kn [**sílxʷaʔ** t sqəltmíxʷ].
1SG.SUBJ big OBL man
‘I am a big man.’ (Vf | *twi*-Lottie Lindley)

d. [**qʷənqʷín** t c̓ʕán̓c̓ən̓] i-s-c-wík.
green OBL grasshopper 1SG.SUBJ-NMLZ-STAT-see
‘What I saw were green grasshoppers.’ (Vf | *twi*-Lottie Lindley)

(5) a. *[**qʷím̓•əm̓** t sqəltmíxʷ].
startled•C2.INCH OBL man
‘He is a frightened man.’ (*twi*-Lottie Lindley)

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[8] I-level states in a CNP structure are attributive (non-intersective) modifiers of a noun. (Davis et al. 1997). Examples enclosed entirely in brackets have null absolutive 3rd person subjects.
[9] The form in (5a) is an inchoative S-level adjective, while the remainder in (5) are homogenous S-level adjectives.
[10] The CNP pattern might suggest that imperfective *c*- has the effect of converting an S-level state into an I-level state (Lyon 2010). One issue, however, is that stative *c*- prefixed, target statives (see Section 2.2.3) can also occur as CNP modifiers. Overall, what may qualify a predicate to be a CNP modifier is that it denotes an eventuality, but one which is aspectually inert. Imperfective adjectival modifiers within a CNP, specifically, have their event variables existentially closed.

b. *[**nk̓əwpíls** t sqəltmíxʷ].
lonely OBL man
'That's a lonely man.' (*twi*-Lottie Lindley)

c. *kn [**ʔilxʷt** t sqəltmíxʷ].
1SG.SUBJ hungry OBL man
'I am a hungry man.' (*twi*-Lottie Lindley)

d. *kn [**limt** t sqəltmíxʷ].
1SG.SUBJ happy OBL man
'I am a happy man.' (*twi*-Lottie Lindley)

e. *talíʔ [**paʔpaʔsílx** t sqəltmíxʷ].
very worried OBL man
'He is a worried man.' (*twi*-Lottie Lindley)

(6) a. [**c-qʷím̓•əm̓** t sqəltmíxʷ.]
IPFV-startled•C2.INCH OBL man
'He is an easily frightened man.' (*twi*-Lottie Lindley)

b. [**c-nk̓əwpíls** t sqəltmíxʷ.]
IPFV-lonely OBL man
'That's a lonely man.' (*twi*-Lottie Lindley)

c. axáʔ [**c-nʕast** t knəxnáx].
this IPFV-heavy OBL box
'This is a heavy box.'[11] (Delphine Derickson Armstrong)

d. kn [**c-limt** t sqəltmíxʷ].
1SG.SUBJ IPFV-happy OBL man
'I am a happy man.' (VF | *twi*-Lottie Lindley)

e. talíʔ [**c-paʔpaʔsílx** t sqəltmíxʷ].
very IPFV-worried OBL man
'He is a worried man.' (VF | *twi*-Lottie Lindley)

Additional evidence for a formal distinction between S-level and I-level states comes from the distribution of the compounding root *wiʔs-* 'to finish'. N. Mattina (1996:106–107) claims that *wiʔs-*

[11] Example (6c) is ambiguous between the bracketed CNP structure as shown, and one where the demonstrative and the oblique-marked nominal form a DP constituent, i.e., *[axáʔ] cnʕast [t knəxnáx]*, with a 'floated' demonstrative in initial position (Lyon 2013) and a main predicate *cnʕast* 'being heavy'. Example (1g) above, which is minimally similar to (6c) but without *c-*, must be a case of the latter rather than a CNP. Consider also that the volunteered translations support *heavy* being a modifier in (6c), but the main predicate in (1g).

can be used to test for an eventive stem. The observation is that while I-level adjectives never take *wiʔs-* (7), S-level adjectives may in certain contexts (8).

(7) a. ***wiʔs-t̓íkʷəlqʷ** iʔ sqəltmíxʷ.
finish-tall DET man
'The man is finished being tall.' (Delphine Derickson Armstrong)

b. ***wiʔs-k̓ʷəck̓ʷáct** iʔ sqəltmíxʷ.
finish-strong DET man
'The man is finished being strong.' (Delphine Derickson Armstrong)

(8) a. kn **wiʔs-límt**.
1SG.SUBJ finish-happy
'I'm done being happy.' (N. Mattina 1996:109)

b. **wiʔs-nk̓əwpíls** i-stəmtímaʔ.
finish-lonely 1SG.POSS-maternal.grandmother
'My grandmother is done being lonesome…' (because we went to see her.)
(Delphine Derickson Armstrong)

S-level states are temporary properties, while I-level states are not (N. Mattina 1996)[12], and so imperfective *c-* appears only to attach to temporary properties. This distinction may be modeled by assuming that I-level adjectives and nouns lack an event(uality) variable (Kratzer 1989): they are properties of individuals, and do not directly relate this individual to any event-structural or temporal dimension. Homogenous S-level adjectives, in contrast, despite lacking any event transition or CoS, do have an event(uality) variable. The distribution of imperfective *c-* here follows assuming that imperfective *c-* links predicates of events to predicates of times (Rullmann & Matthewson 2018), and that imperfective *c-* requires an event variable which is provided by an S-level adjective. This distinction is formalized in Section 2.3.

In Section 3, I show that imperfective *c-* is grammatical with an I-level state if it has first been inchoativized. This follows if inchoativity introduces an event variable to an otherwise non-eventive predicate.[13]

2.1.2 Adjectives and imperfectivity

This section applies a series of aspectual tests to S-level adjectives in order to establish them as homogenous predicates, and to show that the *c-* prefix found with adjectives is an imperfective.

First, adjectives are atelic, with our without *c-*: they may continue indefinitely. This shows that *c-* does not introduce any event transition into the event structure of the adjectival base.

[12] N. Mattina (1996:150) notes that "because [S-level but not I-level] states are conceptualized as subject to change and development, they have stem aspect alternants that encode change of state." For example: *ɬʕaʼntín* 'I wet something', *cɬʕaʼstín* 'I usually wet it', *ɬʔaʼ* 'It got wet'.

[13] This also hints that *stages* (Carlson 1977) are not immediately useful as a semantic primitive of S-level predicates in Nsyilxcn (contra Lyon 2010): the inchoative applies to I-levels and S-levels alike, so is insensitive to stages.

(9) a. iʔ knəxnáx **nʕast** t spiʔsc̓íɬt, uɬ púti ʔ **nʕast** ʕapnáʔ.
DET box heavy OBL yesterday and still heavy now
'The was box was heavy yesterday, and it's still heavy now.'
(Delphine Derickson Armstrong)

b. iʔ qáqxʷəlx **sult** t spiʔsc̓íɬt, uɬ púti ʔ **sult** ʕapnáʔ.
DET fish frozen OBL yesterday and still frozen now
'The fish was frozen yesterday, and it's still frozen now.'
(Delphine Derickson Armstrong)

c. iʔ knəxnáx **c-nʕast** t spiʔsc̓íɬt, uɬ púti ʔ **c-nʕast** ʕapnáʔ.
DET box IPFV-heavy OBL yesterday and still IPFV-heavy now
'It was being heavy yesterday, and still being heavy today.'
(Delphine Derickson Armstrong)

d. iʔ qáqxʷəlx **c-sult** t spiʔsc̓íɬt, uɬ púti ʔ **c-sult** ʕapnáʔ.
DET fish IPFV-frozen OBL yesterday and still IPFV-frozen now
'The fish was being frozen, and it's still being frozen now.'
(Delphine Derickson Armstrong)

(10) a. ṫi **həmhámt** iʔ tmxʷúlaʔxʷ, uɬ way̓ k̓ʷənx-ásq̓ət
EMPH damp DET land and already how.many-day
mat **s-həmhámt-s**.
EVID NMLZ-damp-3POSS
'The ground is wet now, and it's been wet for a few days.'
(VF | Delphine Derickson Armstrong)

b. kn **ʔilxʷt** t s-ńíṅẇiʔ-s sx̌əlx̌ʕált,
1SG.SUBJ hungry(INCH) OBL NMLZ-later-3POSS day
uɬ púti ʔ kn **(c)-ʔilxʷt**.
and still 1SG.SUBJ (IPFV)-hungry
'I got hungry earlier today, and I'm still hungry.[14] (Delphine Derickson Armstrong)

S-level adjectives prefixed by *c-* have both habitual (11) and in-progress (12) interpretations, providing good evidence for an imperfective analysis of *c-*.

[14] The translation in (10b) shows how a sub-class of S-levels, which includes *ʔilxʷt*, are ambiguous between a homogenous and inchoative interpretation. I have found that there is a somewhat strong tendency for adjectives ending in *-t* to behave this way. This is only a tendency, however. Because *-t* is (i) non-segmentable with many adjectives (N. Mattina 1996), (ii) barring a few cases, does not seem to derive an adjectival or inchoative predicate from a CoS root, and (iii) co-occurs with overt inchoative marking, I do not analyze *-t* as an inchoative.

(11) a. nyʕip kʷu **c-ɬʕaʔ̓** kʷu ɬ sk̓ʷək̓ʷíyməlt.
always 1PL.SUBJ IPFV-wet 1PL.SUBJ when child
'We were always wet when we were kids.' (Delphine Derickson Armstrong | VF)

b. uc kʷ **c-ʔílxʷt**?
DUB 2SG.SUBJ IPFV-hungry
'Do you get hungry (typically)?' (*twi*-Lottie Lindley)

c. pintk kn **c-sult**.
always 1SG.SUBJ IPFV-frozen
'I'm always getting frozen.' (VF | *twi*-Lottie Lindley)

(12) a. kʷu **c-ɬʕaʔ̓** ʕapnáʔ.
1PL.SUBJ IPFV-wet now
'We're wet now.' (Delphine Derickson Armstrong)

b. uc kʷ **c-ʔilxʷt** ʕapnáʔ?
DUB 2SG.SUBJ IPFV-hungry now
'Are you hungry right now?' (Delphine Derickson Armstrong)

c. iʔ sɬiqʷ **c-sult** ʕapnáʔ.
DET meat IPFV-frozen now
'The meat is frozen now.' (VF | Delphine Derickson Armstrong)

When a habitual adverb is overt, imperfective *c-* is required (13).

(13) a. nyʕip ***(c)-nqʷaʕíls** ɬaʔ sk̓laxʷ.
always IPFV-drunk when evening
'He's drunk every evening.' (Sarah McLeod)

b. kn ***(c)-ʕimt** yaʕyáʕt sx̌əlx̌ʕált.
1SG.SUBJ IPFV-angry every day
'I'm mad every day.' (Sarah McLeod)

c. pintk ***(c)-ƛ̓axʷt** iʔ qáqxʷəlx.
always IPFV-many.dead DET fish
'The fish are always dying.' (*twi*-Lottie Lindley)

Both plain and imperfective S-level adjectives may be used in past (14) and future tenses (15), which is expected if imperfective *c-* is a tense-independent sentential aspect marker. Note however that future imperfectives are dispreferred to prospective *ks-* forms, inchoatives, or other overtly marked future predicates for reasons which are currently unclear.

(14) a. t spiʔsc̓íɬt kn **(c)-ʔilxʷt**.
OBL yesterday 1SG.SUBJ IPFV-hungry
'Yesterday I was hungry.'
(VF'ed without *c*-, judged good with | Delphine Derickson Armstrong)

b. kn łə xʷuy k̓l tk̓əmkníɬxʷ t p̓iʔsc̓íɬt,
1SG.SUBJ when go to outside OBL yesterday
t̓i **(c)-píq-laʔxʷ** iʔ təmxʷúlaʔxʷ iʔ t smik̓ʷt.[15]
EMPH IPFV-white-ground DET land DET OBL snow
'When I went outside yesterday, the ground was all white with snow.'
(VF'ed without c-, judged good with | Delphine Derickson Armstrong)

(15) a. cəm̓ kʷu **(c)-ʔalʔílxʷt** mi sic iʔ sc̓íɬən c-kícx-st-səlx.
EPIS 1PL.SUBJ IPFV-hungry(PL) FUT then DET food CISL-arrive-CAUS-3PL.ERG
'We are going to be hungry by the time they bring the food.'
(Delphine Derickson Armstrong)

b. łaʔ t̓ɨ́wtəm, lut t̓a kn **c-ʕimt**.
when next.year NEG NEG.FAC 1SG.SUBJ IPFV-angry
'Next year I won't be angry.' (*Sarah McLeod, ✓Delphine Derickson Armstrong)

Homogenous S-level adjectives seem to lack any event transition:[16] Punctual adverbial clauses anchor to an arbitrary point internal to the temporal span of the adjective. Since the punctual adverbs denote the cause of the adjectival states in (16), it is infelicitous if the state exists prior to the time of the punctual adverb.

(16) a. #c-łwin k̓l tk̓əmkniɬxʷ uɬ talíʔ **ɬʕat̓**.
STAT-abandon to outside and very wet
'When it got left outside, it was (already) really wet.' (Delphine Derickson Armstrong)

b. #ixíʔ łaʔ n-wt-nt-ixʷ iʔ l knəxnáx, uɬ **nʕast**.
that when LOC-put.in-DIR-2SG.ERG DET in box and heavy
'When you put that in the box, it was (already) really heavy.'
Comment: "I like the other one [18b] better, because it's happening."
(Delphine Derickson Armstrong)

[15] Note that *piqlaʔxʷ* patterns as an S-level despite *piq* patterning as an I-level. It seems possible that the ground being white is a temporary state (so long as the snow lasts), whereas the quality of snow being white is not a temporary property, but is true as a generic statement.

[16] I-level adjectives are judged odd in the context of punctual adverbs: *ʔk̓ʷəck̓ʷáct iʔ sqəltmíxʷ łaʔ xʷuy k̓l kʷílstən* 'The man got strong when he went to the sweathouse' (Delphine Derickson Armstrong).

Imperfective *c-* ensures that the reference time of a punctual adverbial is some non-initial subset of the temporal span of an S-level adjective (17). Because a temporal subset of a homogenous adjective is still homogenous, the aspectual interpretations of (16) and (17) are similar.[17]

(17) a. kn ła? ł-c-kicx ki? kn **c-q̓ilt**.
1SG.SUBJ when return-CISL-arrive ADJT.C 1SG.SUBJ IPFV-sick
'I was already sick when I came back home.' (Delphine Derickson Armstrong)

b. łwi[n]-nt-əm i? citxʷ-tət, uł púti? **c-klaʕ̓** i? c̓ik̓ʷsxən.
abandon-DIR-1PL.ERG DET house-1PL.POSS and still IPFV-turned.on DET light
'When we left our house, the light was still on.' (VF | Delphine Derickson Armstrong)

If the adjective is inchoative, encoding a CoS (Section 3), then a punctual adverb can anchor to the beginning of the run-time of an adjective, resulting in a 'sequential' reading (Bar-el 2005; Kiyota 2008).[18]

(18) a. c-łwin k̓l tk̓əmkníłxʷ uł talí? **ł<ʔ>ʕat̓**.
STAT-abandon to outside and very wet<INCH>
'When it got left outside, it got really wet.' (Delphine Derickson Armstrong)

b. ixí? ła? n-wt-nt-ixʷ i? l knəxnáx, uł **n<ʔ>ʕast**.
that when LOC-put.in-DIR-2SG.ERG DET in box and heavy<INCH>
'When you put that in the box, it got heavy.' (Delphine Derickson Armstrong)

c. kn ła? ł-c-kicx ki? kn **q̓ilt**.
1SG.SUBJ when return-CISL-arrive ADJT.C 1SG.SUBJ sick(INCH)
'I got sick when I came back home.' (VF | Delphine Derickson Armstrong)

d. #łwí[n]-nt-əm i? cítxʷ-tət, uł púti? **kla<ʔ>ʕ̓** i? c̓ik̓ʷsxn.
abandon-DIR-1PL.ERG DET house-1PL.POSS and still turned.on<INCH> DET light
#'When we left our house the light still came on.' (Delphine Derickson Armstrong)

[17] The examples in (17) are felicitous, unlike those in (16), because the adverbials do not denote causes. Note also that imperfective *c-* ensures that an adjective like *q̓ilt*, which is ambiguous between homogenous 'sick' and inchoative 'get sick', retains its homogenous interpretation. This explains the difference between (18c), which has a zero-inchoative interpretation, and the adjectives in (16) and (17) which do not.

[18] Imperfective *c-* alternates with a null perfective in verbal predicates, though the possibility of perfective adjectives is obscured by zero-derived inchoative readings of adjectives like *ʔilxʷt* 'be hungry/get hungry', *sult* 'be frozen/get frozen', and *q̓ilt* 'be sick/get sick'. Inchoatives always yield a sequential, perfective-like interpretation in the presence of a punctual adverb, while homogenous S-level adjectives like those in (16) do not, which shows that the absence of imperfective *c-* does not automatically entail that a null perfective is present. I suggest below that the adjectives in (16) contain a null, neutral viewpoint aspect.

Similarly to punctual adverbials, manner adverbs can modify an S-level adjective if it is inchoative (19) (see Section 3), but not a homogenous S-level adjective (20).

(19) a. kn **ɬ<ʔ>ʕaṫ** t kʷəkʷalíʔ.
1SG.SUBJ wet<INCH> OBL slow
'I'm getting wet slowly from the rain.' (Delphine Derickson Armstrong)

b. **n<ʔ>ʕas** iʔ knəxnax t kʷəkʷalíʔ.
heavy<INCH> DET box OBL slow
'The box got heavy slowly.'
Comment: "I'm carrying a box and it is slowly getting heavy, like with my groceries, before I get to the door." (Delphine Derickson Armstrong)

c. **kla<ʔ>ʕ̓** iʔ cikʷsxn t kʷəkʷalíʔ.
turned.on<INCH> DET light OBL slow
'The light came on slowly.'
Comment: "Yes, if you're using a dimmer light." (Delphine Derickson Armstrong)

(20) a. *kn **ɬʕaṫ** t kʷəkʷalíʔ.
1SG.SUBJ wet OBL slow
'I am slowly wet from the rain.' (Delphine Derickson Armstrong)

b. ***nʕas** iʔ knəxnáx t kʷəkʷalíʔ.
heavy DET box OBL slow
'The box got heavy slowly.'
Comment: "An object doesn't get heavy unless you're putting something in."
(Delphine Derickson Armstrong)

The examples in (19) and (20) are important since they show that although homogenous S-levels (20) are properties of event(ualities) (as evidenced by their ability to take imperfective *c-*), they may not be modified by adverbs which require a change-of-state.

Next, homogenous S-level adjectives may not occur with oblique instruments (21), even with the imperfective (22), though they may occur with instruments as inchoatives (23) (see Section 3). Assuming that oblique instruments must make reference to a causing event (Davis & Demirdache 1997), and by extension a CoS, the ungrammaticality of instruments with homogenous S-level adjectives is consistent with an argument that they do not encode any CoS, and that imperfective *c-* does not introduce any CoS.

(21) a. ***ɬaʕṫ** iʔ lasmíst iʔ t sqʷit.
wet DET shirt DET OBL rain
'The shirt was made wet by the rain.' (Delphine Derickson Armstrong)

b. *kn **ʔilxʷt** iʔ t sc̓iɬn.
1SG.SUBJ hungry DET OBL food
'I was made hungry by the food.'[19] (Delphine Derickson Armstrong)

(22) a. *kn **c-q̓ilt** iʔ t sc̓iɬn.
1SG.SUBJ IPFV-sick DET OBL food
'I was sickened by the food.'[20] (Delphine Derickson Armstrong)

b. *kn **c-ʔilxʷt** iʔ t sc̓iɬn.
1SG.SUBJ IPFV-hungry DET OBL food
'I was made hungry by the food.' (Delphine Derickson Armstrong)

(23) a. **ɬ<ʔ>ʕaq̓** iʔ lasmíst iʔ t sq̓it.
wet<INCH> DET shirt DET OBL rain
'The shirt got wet by the rain.' (Delphine Derickson Armstrong)

b. kn **q̓ilt** iʔ t siwɬkʷ.
1SG.SUBJ sick(INCH) DET OBL water
'I got sick by the water.' (Delphine Derickson Armstrong)

c. iʔ sxʷuynt **ʕam-áp** iʔ t x̌yáɬnəx̌ʷ.
DET ice thawed-INCH DET OBL sun
'The ice was melted by the sun.' (Delphine Derickson Armstrong)

d. **n<ʔ>ʕas** iʔ knəxnáx iʔ t xƛ̓ut.
heavy<INCH> DET box DET OBL rock
'The box got heavy from the rocks.' (Delphine Derickson Armstrong)

Overall, *c-* is analyzable as an imperfective with adjectives. The strongest evidence for this comes from the habitual readings, especially since the temporal overlap effects in the presence of punctual adverbs, by themselves, could in principle be the effect of a target stativizer, as I discuss later in this section. As an imperfective, *c-* requires a predicate argument which denotes a property over event(ualities), and I suggest that a homogenous S-level adjective provides such an argument. Homogenous S-level adjectives do not, however, denote a CoS, as shown by the examples above involving punctual and manner adverbials, and instruments of causation.

2.2 Change-of-state roots

Change-of-state (CoS) roots are distinguished from adjectives in that they cannot be used in bare form except with an agentive reading. Despite this, I claim these are unaccusative roots which are

[19] The prediction is that (22b) should be grammatical under an inchoative interpretation.
[20] When making reference to a causing event, adjectives in many cases preferentially derive into transitive forms, in addition to the inchoative forms discussed in this paper. For example, the adjective *q̓ilt* 'sick/get sick' is the root in transitive *nq̓əltúsən iʔ scʔiɬn* "I was made sick by the food" (Delphine Derickson Armstrong, VF).

zero-derived into middles. Additionally, I show that *c-* prefixation on a CoS root yields a target state reading, rather than an imperfective reading. I therefore posit two distinct *c-* prefixes, an imperfective and a stative.

2.2.1 Agentive readings of change-of-state roots

CoS roots in Nsyilxcn are typically used to derive activity or accomplishment verbs (N. Mattina 1996). They can be used in bare form in some Salish languages (Davis 2021; Lyon & Davis 2022), and have been analyzed as telic unaccusatives (cf. Davis et al. 2020 for ʔayʔaǰuθəm and St'át'imcets), essentially achievements, denoting the culmination of an event. In stark contrast to adjectives, bare CoS roots in Nsyilxcn have agentive interpretations, with culminated event readings (24).[21,22]

(24) a. kn **nik̓**.
1SG.SUBJ get.cut
'I cut something.'
Comment: "What are you cutting?" (Delphine Derickson Armstrong)

b. kn **kʷum**.
1SG.SUBJ get.stored.away
'I put away whatever.' (Delphine Derickson Armstrong)

c. kn **naq̓ʷ**.
1SG.SUBJ get.stolen
'I stole something.'
Comment: "*stiṁ ascnáq̓ʷ*. What did you steal? I would ask."
(Delphine Derickson Armstrong)

d. kn **ɬwin**.
1SG.SUBJ get.abandoned
'I left something.' (Delphine Derickson Armstrong)

e. #**naq̓ʷ** in-kəwáp.
get.stolen 1SG.POSS-horse
#'My horse stole something.' (Delphine Derickson Armstrong)

Patient-oriented interpretations are not available for bare CoS roots (25).

(25) a. *kn **p̓ič̓**.
1SG.SUBJ get.pinched
'I got pinched.' (Delphine Derickson Armstrong)

[21] These examples contradict findings in A. Mattina (1994, 2004) and Dilts (2006), and contrast with St'át'imcets, where the equivalent bare roots are patient-oriented (Lyon & Davis 2022:47).
[22] This holds for CoS roots under negation as well: **lut kn t̓ nik̓.* '*I wasn't cut./I didn't cut something.' **lut kn t̓ x̌aq̓* 'I wasn't paid' (Delphine Derickson Armstrong).

b. *waẏ **tax** iʔ qəpqíntən-s.
already get.combed DET hair-3POSS
'Her hair is already combed.' (Delphine Derickson Armstrong)

c. *kn **x̌aq̓**.
1SG.SUBJ get.paid
'I got paid.' (Delphine Derickson Armstrong)

d. ***q̓aẏ̓** mnímłtət iʔ stəłtáɬ-tət iʔ k̓l scəcm̓álaʔ-tət.
get.written 1PL.INDP DET rights-1PL.POSS DET to children-1PL.POSS
'Our Family Declaration got written.' (Delphine Derickson Armstrong)

e. *kn **nik̓**.
1SG.SUBJ get.cut
'I got cut.' (Delphine Derickson Armstrong)

f. ***naq̓ʷ** in-kəwáp.
get.stolen 1SG.POSS-horse
'My horse got stolen.' (Delphine Derickson Armstrong)

CoS roots have been described as "notionally transitive" (A. Mattina 1994), and can optionally co-occur with oblique-marked objects (26) in what appear to be the equivalent of *-m* middles (27).

(26) a. incá kn **kʷum** t sx̌əẇ̓-íɬc̓aʔ.
1SG.INDP 1SG.SUBJ get.stored.away OBL dry-meat
'I stored dried meat.' (VF | Delphine Derickson Armstrong)

b. **náq̓ʷ** in-kəwáp t lawán.
get.stolen 1SG.POSS-horse OBL oats
'My horse stole the oats.' (VF | Delphine Derickson Armstrong)

c. kn **p̓ic̓** t c̓ar̓t.
1SG.SUBJ get.pinched OBL salt
'I pinched some salt.' (Delphine Derickson Armstrong)

The bare CoS roots in (24) to (26) optionally take a middle *-m* suffix (27), in contrast to adjectives which generally cannot (28).[23,24] Overall these examples suggest that when bare agentive CoS roots are used, these are actually zero-derived middles (see Davis 1997).

[23] N. Mattina (1996) refers to *-m* in grooming verbs as a true middle, since the agent and patient of the verb are co-referent (e.g., *txam*). Other intransitive verbs with *-m* are analyzed as "generic object intransitives", and are not considered true middles. There may be semantic differences between the two relating to how they interact with inchoativity, as I note in passing below. I nevertheless retain the 'middle' label here for descriptive convenience. See A. Mattina (1994) and Dilts (2006) for further discussion.

[24] Ṣome roots and stems which pattern like adjectives in other respects can take middle *-m: kn kláʕəm t c̓ik̓ʷsxən* 'I turned on some lights', *kn súltəm t qáqxʷəlx* 'I'm freezing fish', and *kn kłcqám t siwłkʷ* 'I set some

(27) a. kn **p̓íc̓-əm** t c̓ar̓t.
1SG.SUBJ get.pinched-MID OBL salt
'I pinched some salt.' (Delphine Derickson Armstrong)

b. kn **ník̓-əm**
1SG.SUBJ get.cut-MID
'I'm cutting something.' (Delphine Derickson Armstrong)

(28) a. *kn **nʕás-əm** t knəxnáx.
1SG.SUBJ heavy-MID OBL box
'I heavied the box.' (Delphine Derickson Armstrong)

b. *kn **q̓ílt-əm**.
1SG.SUBJ sick-MID
'I sickened something.' (Delphine Derickson Armstrong)

As further evidence for a zero-derived approach, not every CoS root can be used in bare form. For such cases, middle *-m* (or other intransitivizer) is required for an agentive interpretation.

(29) a. kn **k̓ʷúl̓-*(m)** t pumín.
1SG.SUBJ get.made-MID OBL drum
'I made a drum.' (VF | Delphine Derickson Armstrong)

b. kn **xəlk̓-*(ám)** t síc̓əm.
1SG.SUBJ get.rolled.up-MID OBL blanket
'I rolled up the blanket.' (Delphine Derickson Armstrong)

c. kn **x̌əw̓-*(ám)** t sc̓win.
1SG.SUBJ get.dried-MID OBL salmon
'I dried some salmon.' (VF | Delphine Derickson Armstrong)

d. kn **tíxʷ-*(m)** t síyaʔ.
1SG.SUBJ get.gathered-MID OBL saskatoon
'I gathered some saskatoons.' (VF | Delphine Derickson Armstrong)

e. way̓ kn **təx-*(ám)**.
already 1SG.SUBJ get.combed-MID
'I combed it already.' (Delphine Derickson Armstrong)

water down'. Unlike unambiguous CoS roots however, these adjectives have unaccusative interpretations when used in bare form. It is possible that a subclass of adjectives, represented by these examples, are ambiguous as CoS roots.

f. kn **q̓əy̓-*(ám)** t puʔpákʷ.
1SG.SUBJ get.written-MID DET book
'I wrote a book.' (Delphine Derickson Armstrong)

Attempting to attach imperfective *c-* to a bare CoS root in the absence of middle *-m* is generally ungrammatical (30), probably due to the competing interpretation of the form without middles as statives (see Section 2.2.2). An apparent exception is *naq̓ʷ* (30c) which retains a zero-derived middle interpretation.[25] Otherwise, middle *-m* is required, and a habitual reading results.

(30) a. kn **c-q̓əy̓-*(ám)** yaʕyáʕt sx̌əlx̌ʕált.
1SG.SUBJ IPFV-get.written-MID every day
'I write every day.' (Delphine Derickson Armstrong)

b. kn **c-ník̓-*(əm)** t sliṗ yaʕyaʕt sx̌əlx̌ʕált.
1SG.SUBJ IPFV-get.cut-MID OBL firewood every day
'I cut wood every day.' (Delphine Derickson Armstrong)

c. kn **c-naq̓ʷ-(əm)** t apəls yaʕyáʕt sx̌əlx̌ʕált.
1SG.SUBJ IPFV-get.stolen-MID OBL apples every day
'I steal apples every day.' (Delphine Derickson Armstrong)

In sum, despite having the appearance of agentive CoS roots, evidence suggests these involve derivation using a zero middle, which presumably introduces an event agent. From this it follows that Nsyilxcn CoS roots are never actually used in bare form. Given, then, that they always require some kind of derivation, they are *bound unaccusatives*, and the unaccusativity hypothesis (Davis 1997, 2021) holds for Nsyilxcn, as it does for other Salish languages examined so far. The ability to maintain an unaccusative interpretation in the absence of derivational morphology is one test distinguishing CoS roots from adjectives.

2.2.2 Stative *c-*

There are at least two basic ways[26] to derive a CoS root into a usable, patient-oriented form: by stative *c-*, and through inchoativity (Section 3). When one attempts to use a bare CoS root as an unaccusative, it is generally corrected into either a stative or an inchoative form. Attaching *c-* on a CoS root always gives a 'result state' reading, often called 'resultive' or 'resultative' in Salish literature (A. Mattina 1989; van Eijk 1990).

In this section I show that stative *c-* is distinct from imperfective *c-*. Stative *c-* appears to be cognate with stative markers in other Northern Interior Salish languages, for example, *es-* in

[25] Consider *kn cnaq̓ʷ* which can mean either 'I steal' or #'I got stolen'. The first interpretation involves imperfective *c-* and a zero middle, whereas the second is a stative. Delphine Derickson Armstrong's judgements indicate that the majority of CoS roots are not ambiguous in this way, for example, *#kn cq̓ay̓* can only mean #'I'm written', not *'I write'. The question of how best to classify roots like *naq̓ʷ* in this respect, or how exactly it differs from other CoS roots, is a question for future research.

[26] Nominalization is also a possibility, which I touch on in places, though the semantic effect of nominalization on a bare CoS root remains a question for future research.

St'át'imcets (van Eijk 1997; Davis in prep), and *c-/s-* in Secwepemctsín (Kuipers 1974), and yields a similar surface interpretation. Below the surface, however, these cognate prefixes yield different semantics: St'át'imcets *es-* yields a *resultant* state (Davis et al. 2020) while Nsyilxcn *c-* yields a *target* state (Section 2.2.3; Parsons 1990; Kratzer 2000).

There are aspectual similarities between imperfective adjectives and statives in Nsyilxcn, which I attribute to imperfective predicates and target states having similar semantics. Like imperfective adjectives, statives derived from CoS roots have default present tense readings. In the present tense, the transition into the resulting state is interpreted as having occurred in the past. These forms are often translated using *already* (31).

(31) a. kn **c-x̌aq̓**.
1SG.SUBJ STAT-get.paid
'I'm already paid.' (VF | Delphine Derickson Armstrong)

b. kn **c-nik̓**.
1SG.SUBJ STAT-get.cut
'I got cut.'
Comment: "If you had an operation, you could say that."
(VF | Delphine Derickson Armstrong)

c. way̓ **c-tax** iʔ qəpqíntən-s, lut t̓ə k̓s-áyaʔ-qn.
1SG.SUBJ STAT-get.combed DET hair-3POSS NEG NEG.FAC bad-top.of-head
'Her hair is already combed, it isn't a mess.' (Delphine Derickson Armstrong)

d. kn **c-łwin.**
1SG.SUBJ STAT-get.abandoned
'I've been left.' (Delphine Derickson Armstrong)

e. **c-q̓ay̓** mnímłtət iʔ stəłtáł(t)-tət iʔ k̓l scəcm̓álaʔ-tət.
STAT-get.written 1PL.INDP DET truth-1PL.POSS DET to children-1PL.POSS
'Our family declaration is written.' (VF | Delphine Derickson Armstrong)

f. lut kn t̓a kł-kəwáp ałíʔ **c-naq̓ʷ** in-kəwáp.
NEG 1SG.SUBJ NEG.FAC have-horse because STAT-get.stolen 1SG.POSS-horse
'I don't have a horse because it is stolen.' (VF | Delphine Derickson Armstrong)

g. in-k̓mínk **c-tr̓aq**.
1SG.POSS-wall STAT-get.kicked
'My wall has already been kicked.' (Delphine Derickson Armstrong)

h. iʔ sqəltmíxʷ way̓ **c-suxʷ** iwáʔ c-laʕ̓ʷs.
DET man already STAT-get.recognized even.though STAT-mask
'The man was already recognized even though he wore a mask.'
(VF | Delphine Derickson Armstrong)

Also like adjectives, CoS statives may have past (32) or future tense (33–35) readings, though there is a distinct dispreference for future uses of statives, in favour of an inchoative.[27]

(32) a. i-sláx̌t **c-x̌aq̓** t spiʔsc̓íɬt.
1SG.POSS-friend STAT-get.paid OBL yesterday
'My friend was paid yesterday.' (Delphine Derickson Armstrong)

b. kn ɬaʔ ʔacqaʔ t spiʔsc̓íɬt, iʔ sɬiq **c-kʷum**.
1SG.SUBJ when go.outside OBL yesterday DET meat STAT-get.stored.away
'When I went outside yesterday, the meat was already put away.'
(Delphine Derickson Armstrong)

(33) ɬaʔ ntəx̌ʷəx̌ʷqín ɬaʔ x̌lap, **c-q̓ay̓** iʔ q̓əy̓mín.
when noon when tomorrow STAT-get.written DET paper
'By noon tomorrow, the paper will already be written.' (Delphine Derickson Armstrong)

(34) *Context*: *Two Blackfeet planning to steal a* sqilxʷ *man's horse that coming night.*

a. x̌lap mi **c-naq̓ʷ** iʔ kəwáp-s.
tomorrow FUT.C STAT-get.stolen DET horse-3POSS
'His horse will be stolen by tomorrow.' (Delphine Derickson Armstrong)

b. x̌lap mi **náq̓ʷ•əq̓ʷ** iʔ kəwáp-s.
tomorrow FUT.C get.stolen•C2.INCH DET horse-3POSS
'His horse will get stolen by tomorrow.' (VF | Delphine Derickson Armstrong)

(35) a. isláx̌t cəm̓ **c-x̌aq̓** ɬaʔ x̌lap.
1SG.POSS-friend EPIS STAT-get.paid when tomorrow
'My friend will be paid tomorrow.' (Delphine Derickson Armstrong)

b. isláx̌t cəm̓ **x̌áq̓•əq̓** ɬaʔ x̌lap.
1SG.POSS-friend EPIS get.paid•C2.INCH when tomorrow
'My friend will get paid tomorrow.' (VF | Delphine Derickson Armstrong)

Statives also resemble imperfective adjectives in terms of temporal overlap effects: the CoS must have happened before the reference time of a punctual temporal adverbial.

[27] Speculatively, future uses of statives may be marked because the event transition is temporally more proximal to the reference time than the resulting state. Conversely, unmarked past tense uses of statives are easy to obtain: given that the event has already occurred, the resulting state is temporally more proximal than the transition. Alternatively, future/prospective *ks-* forms may offer a less ambiguous temporal reading. This alternative, unlike the appeal to proximity, addresses the parallel dispreference for future imperfective adjectives.

(36) a. iʔ snkɬc̓aʔsqáx̌aʔ **c-naq̓ʷ** l sntəx̌ʷəx̌ʷqín.
DET horse STAT-get.stolen at noon
'The horse was *already* stolen by noon.' (Delphine Derickson Armstrong)

b. ła ʔ kɬnk̓ahk̓ʷíp-s iʔ kɬnk̓míp John, uɬ **c-c̓ax**ʷ
when open.door-(DIR)-3ERG DET door John and STAT-get.spilled
iʔ siwɬkʷ aʔ c-kɬcaq iʔ sx̌lilp.
DET water DET IPFV-container.facing.up DET floor
'The water sitting on the floor was *already* spilled when John opened the door.'
(Delphine Derickson Armstrong)

Finally, statives are similar to S-level adjectives in that they can function as CNP modifiers (37), showing that syntactically, statives might in some cases be analyzed as adjectival predicates (Lyon 2010). What imperfective adjectives and the (target) stative modifiers in (37) have in common is that they are both aspectually "inert" (cf. Davis 2011 on deverbal adjectives in St'át'imcets): their event variables have been closed, and the predicate must be true of the argument relative to the reference time.[28]

(37) a. [**c-c̓ax**ʷ t siwɬkʷ] i-s-c-wík.
STAT-get.spilled OBL water 1SG.POSS-NMLZ-STAT-get.seen
'What I saw was spilled water.' (Delphine Derickson Armstrong)

b. [**c-naq̓ʷ** t kəwáp] i-s-c-wík.
STAT-get.stolen OBL horse 1SG.POSS-NMLZ-STAT-get.seen
'A stolen horse is what I saw.' (Delphine Derickson Armstrong)

Although both imperfective adjectives and statives are tense-independent (except for marked future uses), atelic, show temporal overlap with punctual adverbs, and may act as modifiers in CNPs, there are several factors which support a separate, stative analysis of *c-* with CoS roots: (i) the absence of imperfective readings with statives, (ii) the ability of statives to co-occur with instrumental adjuncts, and (iii) the (partial) ability of statives to undergo manner modification.

First, statives do not clearly have habitual, or in-progress eventive interpretations. Habitual readings of stative roots are sometimes accepted under the scope of habitual adverbials (in brackets, 38), but imperfective inchoatives are preferred in these contexts, and offered as corrections. In other cases, habitual forms such as the imperfective causative in (39b) are volunteered.

(38) a. i-slax̌t nyςip **c-x̌aq̓** [**ła ʔ** **c**-wiʔ-st-ís
1SG.POSS-friend always STAT-get.paid when IPFV-finish-CAUS-3ERG
iʔ s-c-k̓ʷúl̓-s].
DET NMLZ-STAT-work-3POSS
'My friend always gets paid when he finishes his work.'
Comment: "Good, but *cx̌áq̓əq̓* sounds better than *cx̌aq̓*."
(Delphine Derickson Armstrong)

[28] The examples in (37) also show how a stative predicate can be nominalized and possessed. I do not discuss nominalized statives in this paper, except in passing.

b. **c-kʷum** iʔ sx̌əẇ-íɬc̓aʔ [**ɬaʔ** **c-**k̓ʔaym].
STAT-get.stored DET dried-meat when IPFV-fall
'The meat is put away in the fall.' (Delphine Derickson Armstrong)

(39) *Context: Showing someone around in a kitchen.*

a. #**c-p̓y̓q** iʔ sɬiqʷ alá ʔ iʔ l nk̓ʷl̓cncútən.
STAT-get.cooked DET meat here DET in cooking.container
Target: 'Meat is cooked in this pot.' (Delphine Derickson Armstrong)

b. alá ʔ mi **c-p̓yq-st-íxʷ** iʔ sɬiqʷ iʔ l nk̓ʷl̓cncútən.
here FUT.C IPFV-get.cooked-CAUS-2SG.ERG DET meat DET in cooking.container
'Here is where you cook the meat, in the pot.' (VF | Delphine Derickson Armstrong)

Volunteered translations of statives in the absence of a habitual adverbial are single-event and resultative (40).[29]

(40) q̓sapi **c-pul̓** iʔ sip̓y̓.
long.ago STAT-get.tanned DET hide
'Long ago, the hide is tanned.'
Target: 'Long ago, hides were tanned.'
Comment: "You're just talking about one hide." (Delphine Derickson Armstrong)

The only sense in which a stative may be understood as *in-progress* is an in-progress reading of the resulting state. Again, imperfective inchoatives are preferred, and offered as corrections (41).

(41) #ʕac̓-nt, i-slax̌t **c-x̌áq̓** ʕapnáʔ.
look-DIR 1SG.POSS-friend STAT-get.paid now
'Look, my friend is getting paid right now.'
Comment: "*cx̌áq̓əq̓* sounds better than *cx̌aq̓*." (Delphine Derickson Armstrong)

Overall, it seems clear there is no eventive component available in a stative CoS root to yield an imperfective reading. This follows if stative *c-* derives an aspectually inert predicate from a verbal CoS root whose original event argument has been existentially closed, and is therefore not open for existential closure by an imperfective.

Second, statives differ from adjectives in being able to occur with instrumental adjuncts which reference a *causing event* (cf. N. Mattina 1996; Davis & Demirdache 1997:108), an event which brings about the CoS. Statives share this property with inchoatives, as discussed above, and below in Section 3.

[29] There is nothing inherent about the determiner *iʔ* that should force reference to a single entity: *iʔ* allows generic and non-specific readings (Lyon 2015), but stative *c-* seems to prevent a generic interpretation.

(42) a. **c-miɁ̓ƛ̓** iʔ ṗúyxən iʔ t míƛ̓mən.
STAT-get.painted DET car DET OBL paintbrush
'The car was painted by the paintbrush.' (Delphine Derickson Armstrong)

b. kn **c-ṗiċ̓** iʔ t ċíṗmən.
1SG.SUBJ STAT-get.pinched DET OBL pliers
'I've already been pinched by the pliers.' (Delphine Derickson Armstrong)

c. way̓ **c-q̓ay̓** i-s-c-kʷúl̓ iʔ t nɬəkʷɬəkʷtúɬ.
already STAT-get.written 1SG.POSS-NMLZ-STAT-get.made DET OBL computer
'My work was written by the computer.' (Delphine Derickson Armstrong)

d. way̓ **c-nik̓** iʔ sṗíċən iʔ t kr̓kriẇstn.
already STAT-get.cut DET rope DET OBL scissor
'The rope was cut by the scissors.' (Delphine Derickson Armstrong)

Third, it was shown above that homogenous adjectives cannot by modified by a manner adverb, whereas inchoative adjectives may, the hypothesis being that manner adverbs require a CoS. Statives pattern with both homogenous and inchoative adjectives in this respect, depending on whether the manner adverb is interpreted as modifying the event or the resulting state.

If the manner adverb modifies the CoS event, similarly to the case with inchoative adjectives, then the sentence is judged acceptable. In (43a,b), the reference time is fixed to the resulting state, and the events of scraping and stealing which lead up to the resulting state are asserted as having occurred quickly.

(43) a. t xʷus **c-ʔiq̓** iʔ síṗiʔ.
OBL fast STAT-get.scraped DET hide
'The hide is already tanned quickly.' (Delphine Derickson Armstrong)

b. **c-naq̓ʷ** iʔ kəwáp t xʷúsxʷəst.
STAT-get.stolen DET horse OBL quick
'The horse was quickly stolen.' (Delphine Derickson Armstrong)

Similarly to the case of homogenous adjectives, however, if the manner adverb is interpreted as modifying the result state, as shown by Delphine's comments for (44a), then the structure is illicit. An inchoative is offered as a correction (44b) (see Section 3).

(44) a. ***c-ċ̓axʷ** iʔ siwɬkʷ t k̓ək̓alíʔ.
STAT-get.spilled DET water OBL slow
'The water is spilled slowly.'
Comment: "How can it be *k̓ək̓alíʔ* when it is already spilled?!"
(Delphine Derickson Armstrong)

b. **c-ċ̓xʷ•axʷ** iʔ siwɬkʷ t k̓ək̓alíʔ.
IPFV-get.spilled•C2.INCH DET water OBL slow
'The water is spilling slowly.' (VF | Delphine Derickson Armstrong)

Assuming that a saturated event argument is what **(i)** allows statives to be used as CNP modifiers, similar to imperfective adjectives, **(ii)** prevents an imperfective from applying to a stative, thus blocking habitual readings, and **(iii)** forces an illicit manner adverbial modification of a result state in cases like (44a), this implies that the instruments in (42) and the manner adverbs in (43) must be referencing the event *prior* to that event argument being saturated, i.e. *prior* to stativization.

From this, it follows that stativization in these cases must be applying to a phrase (see Kratzer 2000),[30] and that the CoS and causing event must be present in the CoS root itself, rather than being introduced by stative *c-* (Embick 2009). This constitutes important evidence for a semantic distinction between CoS roots, which are semantically causative (Davis & Demirdache 1997), and adjectives, which are not.

In sum, despite many similarities between imperfective adjectives and statives, evidence suggests that there are two separate *c-* prefixes: imperfective *c-* which attaches to eventive stems (including stage-level adjectives and inchoative predicates, t.b.d.), and stative *c-* which attaches to CoS roots, which are semantically causative, and encode both of a event transition and a target state, as I argue in the next section. The semantic similarities between the two types can be attributed to their both deriving atelic predicates from eventive bases and yielding predicates which must hold true of the argument at the reference time. Their semantics are nevertheless distinct: the imperfective returns a sub-interval of the run-time of an event(uality) denoting predicate, while the stative entails an event culmination and transition into a target state.

2.2.3 Target states and resultant states

Davis et al. (2020) developed a series of storyboards (Burton & Matthewson 2015) designed to test whether derived statives in St'át'imcets and ʔayʔaǰuθəm denote *target* states or *resultant* states.[31] As originally described in Parsons (1990), and later formally distinguished in Kratzer (2000), target states are in principle reversible, and describe a state that must continue to affect an argument relative to a reference time in order to be felicitously used. Resultant states, in contrast, simply entail that an event has culminated at some point prior to the reference time (like the English perfect), and as such are not reversable, and do not require the state to continue affecting an argument at a subsequent reference time. Davis et al.'s (2020) test results indicate that while St'át'imcets *es-* derives a resultant state, ʔayʔaǰuθəm stative reduplication derives a target state.

Given that variation within Salish family exists, it is important to determine how Nsyilxcn *c-* statives pattern. Several storyboards were tested, the results for three of which I present here.

[30] There is independent evidence that stative *c-* can apply to a constituent larger than a bare CoS root. In *cwiʔsmiɬ̓ iʔ p̓uyxən iʔ t k̓ʷuɬ̓məns iʔ miɬ̓mən* 'The car was already painted with the paintbrush' (Delphine Derickson, VF), the compounding root *wiʔs-* 'to finish' modifies the event transition (similarly to a licit manner adverbial (43)) and occurs on the inside of stative *c-*. The analysis shown in Section 2.3, likewise, shows the stative applying to a bare CoS root plus its internal, patient argument. In deriving CNP uses of statives, however, the stative may apply prior to a CoS root taking its internal argument.

[31] Thanks to Gloria Mellesmoen (UBC Linguistics) for making these storyboards available.

Figure 1: The Broken Cup

Figure 2: The Breakdown

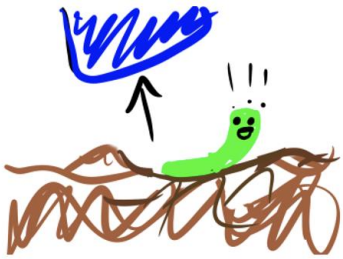

Figure 3: The Trodden Worm

Figure 1 represents the final pane of the story about a woman who drops a cup, whose broken pieces are scattered, after which she uses glue to piece the cup back together. The stative *cpak*^{w} 'to be scattered' is volunteered earlier in the storyboard to describe a pane in which the shattered pieces lay strewn about the floor. If *cpak*^{w} denotes a resultant state, it should be felicitous to use even after the cup has been glued back together (Figure 1), similarly to English present perfect *It has been scattered*. If *cpak*^{w} is a target state, it should not be felicitous in Figure 1, since the state no longer actively affects the cup. Results indicate a target state (45).[32]

(45) #ʕapnáʔ **c-pak^{w}** iʔ lpot.
now STAT-scattered DET cup
'The cup has been scattered.' (Delphine Derickson Armstrong)

The final scene in the second storyboard is illustrated by Figure 2. This tells the story of a couple whose car breaks down, after which they try to push the car to a service station. For one version, they successfully push the car, and the stative *cyrmín* 'to be pushed' is volunteered. In an alternate version (Figure 2), they try to push the car, but to no avail. Under this scenario, a pushing event has occurred, but there is no discernable target state affecting the car. Hence, the prediction is that *cyrmin* can only be used in this context if it denotes a resultant, rather than a target state. Again, Nsyilxcn *cyrmin* patterns as a target state (46).

(46) #ʕapnáʔ **c-yrmín** iʔ ṗuyxn.
now STAT-get.pushed DET car
'The car has now been pushed.'
Comment: "No, *ʕapnáʔ lut t̓ ksyrmíntəm, małnʕast*."
'We're not going to push it now, it's too heavy.' (Delphine Derickson Armstrong)

The last storyboard I discuss involves a worm which is stepped on: Under the first version, he is squashed and killed, for which the stative *cṗaċ* 'to be squashed' was volunteered. Under the second version, he is stepped on and presumably killed, however, when the foot lifts, the worm has miraculously survived (Figure 3). The volunteered form for Figure 3 includes the inchoative *ṗáċəċ*.

[32] Note that the adverb *ʕapnáʔ* 'now' is necessary to force a present tense reading of the stative. There is otherwise nothing to prevent the stative from being interpreted in the past tense, which invalidates the test.

(47) **p̓áć•əć̓** iʔ mámlaʔ náx̌əmɬ púti̓ʔ c-xʷəlxʷált.
get.squashed•C2.INCH DET worm but still IPFV-alive
'The worm got squashed but it is still alive.' (VF | Delphine Derickson Armstrong)

I will show in Section 3 that inchoatives entail result states, hence *p̓áć̓əć̓* 'get squashed' should entail stative *cp̓ać̓* 'to be squashed'. When I attempted to substitute stative *cp̓ać̓* for the inchoative in (47), however, Delphine indicated that you could not say it that way, since "it would already be squashed". This indicates that while the worm was squashed at prior reference time, as entailed by *p̓áć̓əć̓*, one cannot for Figure 3 state the equivalent of *The worm has been squashed*, since the state no longer affects the worm at the present time. Again, this shows that Nsyilxcn *c-* derives a target state, not a resultant state.

Last, consider that Nsyilxcn statives are compatible with *púti̓ʔ* 'still' (48). This supports an analysis of *c-* states as target states, since as discussed by Kratzer (2000), *still* requires a state that is in principle reversable. Resultant states, in contrast, denote irreversible, culminated events which must hold forever after. An adverb like *still* should therefore be redundant with resultant states.

(48) a. iʔ sɬiqʷ **c-x̌aẇ̓** t spiʔsc̓íɬt, uɬ púti̓ʔ ʕapnáʔ **c-x̌aẇ̓**.
DET meat STAT-get.dried OBL yesterday and still now IPFV-dry
'The meat was dried yesterday, and it's still dry today.'[33]
(Delphine Derickson Armstrong)

b. in-kəwáp **c-naq̓ʷ** t spiʔsc̓íɬt, uɬ putíʔ ʕapnaʔ
1SG.POSS-horse STAT-get.stolen OBL yesterday and still now
c-naq̓ʷ.
STAT-get.stolen
'My horse was stolen yesterday, and it's still stolen now.'
(Delphine Derickson Armstrong)

c. way̓ **c-t̓ak̓ʷ** snk̓lip, uɬ púti̓ʔ **c-t̓ak̓ʷ**.
already STAT-get.layed.down coyote and still STAT-get.laid.down
'Coyote has fallen and he is still lying there.' (VF | Delphine Derickson Armstrong)

[33] Roots such as *x̌aẇ̓* and *sult* seem ambiguous between adjectives and CoS roots, and this is reflected in the the translation and glossing of (48a). Overall, there seems to be a continuum of eventive unaccusatives, consisting of four classes: At one end of the continuum are **(I)** unambiguous, homogenous adjectival roots (e.g., *nʕas* 'heavy', *łʕat̓* 'wet'), followed by **(II)** adjectives which are always unaccusative and do not occur as agentive middles with *-m*, but allow zero-inchoative interpretations (e.g., *ʔilxʷt* 'hungry/get hungry', *q̓ilt* 'sick/get sick') followed by **(III)** adjectives which allow agentive readings with middle *-m* and may be ambiguously interpretable as CoS roots (e.g., *sult* 'frozen/get frozen', *x̌aẇ̓* 'dry/get dried'), followed by **(IV)** unambiguous CoS roots at the other end of the continuum. In favour of an ambiguous adjectival/CoS analysis of *sult* (and in contrast to 22), consider that like other statives, *csult* can occur with an oblique instrument and a resulting state interpretation: *csult iʔ sɬiqʷ iʔ t sc̓ałt* 'The meat was frozen by the cold'. If CoS roots are defined as those that can occur with stative *c-* or middle *-m,* then a sub-class of adjectives (class III) meet these criteria. Class IV can occur with either imperfective *c-* or stative *c-*, unlike the other classes. Under the analysis outlined in this paper, class IV are lexically and semantically ambiguous. Further work is needed to more clearly define these four classes.

Formally speaking, target states, unlike resultant states, must have a stative component to their meaning which serves as an anchor for a reference time. Kratzer (2000) posits that certain roots in German come pre-equipped with stative and eventive arguments, and that a target stativizer existentially closes the event variable, foregrounding the state. I follow essentially this approach for Nsyilxcn CoS roots, as discussed in detail in the next section.

2.3 Analysis of Nsyilxcn lexical classes and the stative marker

2.3.1 Lexical classes

The difference between Nsyilxcn I-level (49a) and S-level adjectives (49b) can be modeled as follows:[34] imperfective *c-* requires an event variable (49c) (Rullmann & Matthewson 2018), but I-level states and nouns do not have such a variable: there is a type clash. I assume that *e* ranges over both events and states (Kratzer 2000) and the imperfective ranges over predicates of type ⟨s,t⟩, those with an open event variable.

(49) a. $\lambda x \lambda w \, . \, P(x)(w)$ *individual-level state, noun*

b. $\lambda x \lambda e \lambda w \, . \, P(x)(e)(w)$ *stage-level state*

c. $[\![c\text{-}_{IPFV}]\!] = \lambda P_{\langle s,t \rangle} \lambda t \lambda w \exists e \, .[P(e)(w) \wedge t \subseteq \tau(e)]$ *imperfective c-*[35]

CoS roots encode a target state, an event (which may or may not be instantaneous) leading up to a CoS instantiated by a predicate BECOME (Dowty 1979),[36] and a predicate CAUSE that links together the event and target state in a causal relation. The formula in (50) states that an entity *x* becomes *P* through an event *e* in world *w*, and that this event *e* causes a state *s* in world *w*.

(50) $\lambda x \lambda s \lambda e \lambda w \, . \, [\text{BECOME}(P(x)(e)(w)) \wedge \text{CAUSE}(e,s)(w)]$ *change-of-state root*

I follow Kratzer (2000) in making an ontological distinction between *s* "state" and *e* "event" variables in (50): *e* ranges over events proper and states, while *s* ranges specifically over states.

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[34] For this paper I follow ontological distinctions and formal types used in Kratzer (2000:6): "I take logical representations to be expressions of an intensional typed-calculus with the basic types t (propositions), e (entities), s (states, events), and i (intervals of times). As for variables, 'x' ranges over entities, 'e' over eventualities, including events proper and states, 's' ranges over states, 't' over intervals of time, [and ignoring intensionality] P over functions of type ⟨s,t⟩, 'R' over functions of type ⟨s⟨s,t⟩⟩, 'Q' over functions of type ⟨e⟨s,t⟩⟩, and 'T' over functions of type ⟨e⟨i,t⟩⟩."

[35] I assume the following for the null perfective and imperfective *c-* (Rullmann & Matthewson 2018):

(i) Imperfective $[\![\text{c-}]\!]^{g,t0,w0} = \lambda P_{\langle l,st \rangle} \lambda t \lambda w \, . \, \exists e[P(e)(w) \, \& \, t \subseteq \tau(e)]$
(ii) Perfective $[\![\emptyset\text{-}]\!]^{g,t0,w0} = \lambda P_{\langle l,st \rangle} \lambda t \lambda w \, . \, \exists e[P(e)(w) \, \& \, \tau(e) \subseteq t]$

I abstract away from the semantics of habituality, though there is a significant amount of theoretical literature linking it to basic, sub-interval imperfectivity, for example Deo (2009) and Alexyenko (2018).

[36] Dowty (1979:140) defines BECOME as follows: "[BECOME φ] is true at *I* iff there is an internal *J* containing the initial bound of *I* such that ¬ φ is true at *J* and there is an interval *K* containing the final bound of *I* such that φ is true at *K*."

Because *s* is a special case of *e*, S-level adjectives (49b) may denote states as well as events proper (N. Mattina 1996).[37] I argue against an ontologically stative analysis of S-level adjectives in Nsyilxcn, i.e., *λxλs.P(x)(s):* Because the imperfective applies to S-level adjectives but not CoS roots in Nsyilxcn, assuming a different ontological status for adjectives and the result state component of a CoS root straightforwardly predicts their different distributions, without need to reference syntactic categories. Because CoS roots have open event arguments as well as open stative arguments, they are of type ⟨s⟨s,t⟩⟩. While the imperfective in (49c) does not range over predicates of this type, the stative does, as discussed further in Section 2.3.2 below.

I assume a causative structure for CoS roots (Chierchia 1989; Davis & Demirdache 1997; Kratzer 2000, 2005), instantiated by the predicate CAUSE: The target state *is caused by* the event. Because these are unaccusatives, I make no explicit reference to any agent (cf. N. Mattina 1996; Davis & Demirdache 1997). I include a CAUSE predicate as part of the template for a CoS root (similar to Kratzer's 2000 underived target state participle stems), rather than as contributed by a stativizer (Embick 2009) because of above examples showing that oblique instruments and manner adverbials reference the causing event prior to stativization.

In terms of the lexical decomposition of bare CoS roots, I leave the *e* and *s* variable sub-events unbound, for two reasons. First, the two sub-events are individually targeted by two different aspectual processes which are in complementary distribution with one another: the stative marker targets the event argument, while inchoativity targets the state argument, as will be shown. Second, this approach offers an explanation for why CoS roots in Nsyilxcn may not be used as bare unaccusatives (in contrast to CoS roots in St'át'imcets Salish, see Lyon & Davis 2022): With both stative and eventive arguments open, they are semantically underspecified. In other words, while it is clear that a CoS is involved as part of the lexical meaning of a CoS root, there is no way to use it in a temporally anchored proposition since it is unclear whether a reference time should target the eventive portion, or the target state. This underspecification is resolved through further derivation by, for example, stative *c-* or the inchoative (see Section 3).

This analysis makes CoS roots in Nsyilxcn different from recent approaches to CoS roots in English (Yu et al. 2023; Beavers & Koontz-Garboden 2012, 2020), which come pre-equipped with one of their two arguments existentially closed. Instead, Nsyilxcn CoS roots are similar to underived target state participle stems in German (Kratzer 2000). Nsyilxcn may support an analysis of English CoS roots as likewise having unbound sub-events, with result state readings emerging as the result of a null stativizer (Lieber 1980).

2.3.2 The stativizer

Possible semantics for the stativizer include the two definitions in (51) (Parsons 1990; Kratzer 2000; see also Davis et al. 2020), however, given the evidence presented in Section 2.2.3 that *c-* derives a target state, the semantics of stativizer *c-* are best represented by (51b).

[37] N. Mattina (1996:154) notes that "states easily shift between an LCS [lexical conceptual structure] that encodes the semantic operator *be* and one that encodes an act. When a State is understood to refer to an act, it can have stem alternants that name events. This is the only base type of the three whose alternants do not show the prototypical ES [event structure] of the base. This ontological mutability of States is, perhaps, their defining characteristic."

(51) a. $\lambda P_{\langle s,t\rangle}\lambda t\,.\,\exists e[P(e)\ \&\ \tau(e) < t]$ *resultant stativizer*

b. $[\![c\text{-}_{STAT}]\!] = \lambda R_{\langle s\langle s,t\rangle\rangle}\lambda s\exists e\,.\,R(s)(e)$ *target stativizer*

The target stativizer in (51b) "combines with a predicate that encodes *both* an event *and* a target state [i.e., a CoS root (50)] and existentially closes the event argument, backgrounding the event and foregrounding the target state" (Davis et al. 2020; cf. Kratzer 2000; and Burton & Davis 1996 for St'át'imcets).[38] The state variable can then be existentially closed,[39] temporally modified, and/or passed on to tense. From this analysis, any temporal overlap effects associated with statives are attributable to the reference time not having access to the event transition, which has been existentially closed. Figure 4 shows a sample derivation of a stative.

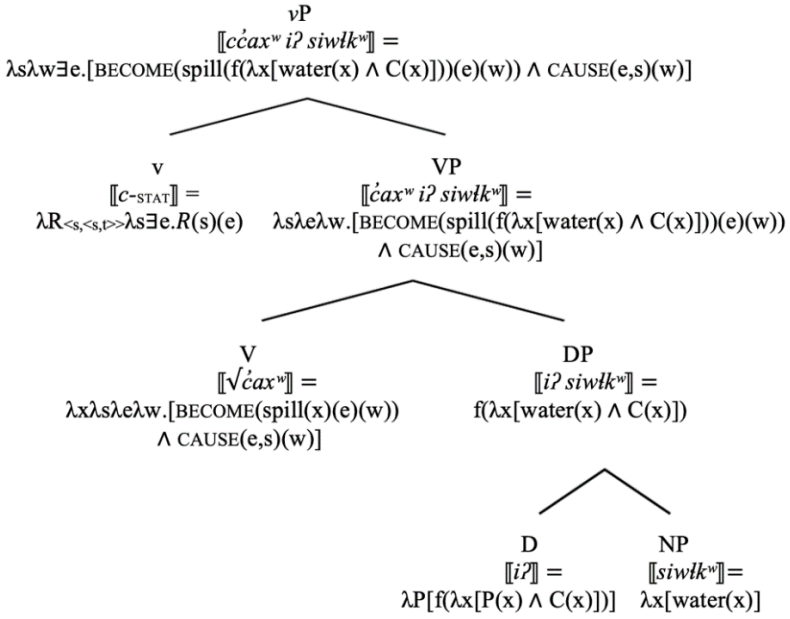

Figure 4: Derivation of an Nsyilxcn stative[40]

[38] Burton and Davis (1996) claim that stative *es-* in St'át'imcets (the functional equivalent of Nsyilxcn *c-* in the context of resulting states) "removes the prominent individual variable from event-structure [i.e., the initial transition into the result state] and makes the remaining variable prominent [i.e., the result state]." This approach assumes that roots have both event and resulting state variables.

[39] As Kratzer (2000:12) notes, given that resultant state participles can be formed from stems with both a target state and a Davidsonian argument, but when the resultant (and target) stativizers apply, a state argument is left "dangling", and suggests "something should force existential quantification of target state arguments before aspectual operators come into play", and she proposes that "V" existentially closes the argument, which Aspect then targets.

[40] The derivation in Figure 4 reflects phrasal stativizations (cf. Kratzer's 2000:7 'phrasal case'), as supported by the manner adverbial and instrumental examples discussed above. It does not reflect CNP uses of statives as adjectival modifiers of nouns. Given (i) that CNP structures involve predicate modification *prior* to the resulting complex predicate taking an internal argument, and (ii) that stative *c-* is what licenses a CoS root to

Syntactically, I follow Davis (1997) and Baier (2020) in assuming *v* is the locus of (in)transitive morphology such as *-m* (and its zero-variant) in Salish, and that CoS roots are assigned to the head position of a complement VP. Concerning *v,* Embick (2009:5) writes that "target states come about in the interpretation of syntactic structures in which a state is in a local relationship with an event, the latter associated with verbalizing structure v: [v STATE]." Similarly, Yu et al. (2023), following Kratzer (2005), propose that *v* introduces a CAUSE event to a CoS root.

In Nsyilxcn, I have provided evidence against separating CAUSE from the lexical semantics of CoS roots themselves, so I instead follow Kratzer (2000) in analyzing target stativizer *c-* as existentially closing a causative event variable which comes pre-specified in the complement. I do assume that the stativizer is syntactically a *v* head, especially given examples like (30) which seem to show middle *-m* and stative *c-* in complementary distribution: middle *-m* introduces an agent, while stative *c-* removes the possibility of an agent. The argument DP in Figure 4 is a patient. Lyon (2015) analyzes the determiner *iʔ* as introducing a choice function over the intersection of a nominal property and the context set, returning an e-type individual. The target stativizer will not apply to adjectives or nouns in Nsyilxcn, assuming that *both* an event and target state variable are necessary in the base form.

Overall, this approach to the stativizer and lexical classes accounts for both the complementary distribution of stative prefixes and adjectives, as shown in other Salish languages such as ʔayʔajǔθəm which also has derived target states (Davis et al. 2020), as well as the compatibility of the imperfective with both adjectives and verbal predicates.

Before concluding this section, there is a historical point worth making: if the Nsyilxcn imperfective *c-* has its origins as a stative marker, we might expect some semantic similarity between the two markers, especially if the divergence is somewhat recent. Target states and imperfectives share a requirement that an eventuality be in the process of affecting an argument relative to a reference time, and both of these contrast with resultant states in this respect. As such, this analysis accords with a common historical root for the two *c-* prefixes, possibly one that is fairly recent.[41]

3 Inchoatives

Inchoatives are eventive predicates that denote the beginning of a process or the beginning of a resulting state. For example, an inchoative sentence such as *The pencil broke* means that the pencil *became* broken, or more technically, that a change of state (CoS) has occurred such that the pencil is now in a resulting state of being broken.

In this section, I show that Nsyilxcn inchoative marking can apply to any lexical class.[42] With CoS roots, the inchoative foregrounds the event transition, which culminates in perfective cases

function as an adjectival modifier, then stative *c-* should be able to apply to a bare CoS root prior to that root taking an internal argument (cf. Kratzer's 2000:8 'lexical case'). It is important to consider that CNP modifier uses of statives are likely not *v*Ps, which implies that stative *c-* may occur in different head positions. A CNP derivation is not included here for the sake of space.

[41] Cognate *es-* in St'át'imcets derives a resultant state (Davis et al. 2020), and it is possible that Nsyilxcn *c-* once also derived resultant states. A shift to target states may have conditioned its use as an imperfective.

[42] N. Mattina (1996:112, 147-8) notes that activity predicates (a.k.a. 'processes') are the only verb types which do not have inchoative alternates (e.g. *t̓uxʷt* 'fly' but **t̓ʔuxʷt,* **t̓əxʷəxʷt* 'get flown'; or *pulx* 'to camp'

and receives an in-progress or habitual reading in the imperfective. With adjectival and nominal predicates, which do not themselves encode any event transition (Parsons 1990), the inchoative introduces a CoS. Like CoS inchoatives, adjectival inchoatives receive in-progress or habitual readings in the imperfective. In the absence of an imperfective, however, adjectival inchoatives only imply rather than entail an event culmination, making them different from inchoatives built from CoS roots. The reason for this, I suggest, is that unprefixed homogenous and inchoative adjectives are in a *neutral* viewpoint aspect (Smith 1991), rather than being perfective.

3.1 (Perfective/neutral) inchoatives

In Nsyilxcn, inchoatives may be formed from any lexical category. They are derived by *-ʔ-* infixation (for strong roots), *-p* suffixation (for weak roots)[43] (A. Mattina 1989), or else by C2 'resultative' reduplication of a root consonant (A. Mattina 1973; van Eijk 1990; N. Mattina 1996).[44,45] In some cases a zero-inchoative derivation is motivated, as discussed earlier in the paper (e.g., *ʔilxʷt* 'be/get hungry' or *sult* 'be/get frozen').[46]

Inchoative marking applies to I-levels, nouns, and S-level adjectives (52).[47,48] This is interesting since I-level adjectives do not occur with imperfective *c-*, and is important since it indicates that the presence of an event transition in an inchoative predicate is not dependent on there being an

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but **pʔulx, *pulxwílx* 'get camped'), attributing this to the lack of any change-of-state. By this criterea, however, adjectives should also be excluded from inchoativization, which they are clearly not. The issue, I suspect, is that basic inchoative predicates denote an unaccusative change-of-state, while activity predicates are specified as agentive and atelic.

[43] Sometimes either *-ʔ-* or *-p* is available, especially in roots with pharyngeals, e.g. *cn̓ʔʕás* or *cn̓sʕáp,* 'getting hard (as when cream solidifies).' This could be due to some ambiguity in the perception of whether the root is strong (with an /a/ vowel) or weak (with an /ə/ vowel, which is lowered by the pharyngeal into a vowel resembling /a/).

[44] "According to Watkins 1970, which describes the northern (Head of the Lake) dialect, VC [i.e. C2] reduplication indicates a 'completed process,' which indicates that the climax has been reached, a sort of perfective" (van Eijk 1990). A. Mattina (1973) describes VC reduplication as 'resultive'.

[45] I have so far found no semantic difference between C2 reduplication and *-ʔ-*/*-p*. It is possible that there is an additional 'out-of-control' meaning component with C2 inchoatives, however.

[46] The four ways of marking the inchoative (i.e., null, C2 reduplication, *-ʔ-* infixation, or the *-p* suffix) are generally but not always in complementary distribution: *x̌ʷupt* 'weak', for example, has an inchoative interpretation both with and without C2 reduplication.

[47] N. Mattina (1996) refers to inchoatives as *anti-causative,* a grouping which includes developmental *-wilx* forms. *-wilx* applies to nouns, adjectives, and inchoative CoS roots, yielding an eventive predicate which can then undergo sentential aspect inflection: **kn ksqəltmíxʷaʔx* 'I am going to become a man' versus *kn ksqəltmxʷwílxaʔx* 'I am going to be a man' (N. Mattina 1996:178). Since *-wilx* co-occurs with inchoative marking, and ambiguously allows process readings, it must differ semantically from the inchoatives discussed in this paper.

[48] Not all adjectives express inchoative alternates using *-ʔ-, -p,* or C2 reduplication, for example: **s<ʔ>ílxʷaʔ* 'It got big' ← *sílxʷaʔ* 'It is big'; *ʔnḵəw•əwpíl̓s istəmt̓íməʔ* 'My grandmother got lonesome' ← *nḵəwpíl̓s ist̓əmt̓íməʔ* 'My grandmother is lonesome'; **kʷəc•əcḵʷáct / *kʷʔact iʔ sqəltmíxʷ* 'The man got strong' ← *kʷəcḵʷáct iʔ sqəltmíxʷ* 'The man is strong' (Comment: "*kʷəcəcḵʷáct,* that's plural, 'The men are strong.'") These adjectives may take *-wilx,* however. Other cases like *ʔilxʷt* 'hungry' have zero rather than overt inchoative morphology: **ʔil•əlxʷt iʔ kəkwáp* 'The dog got hungry' ← *ʔilxʷt iʔ kəkwáp* '*The dog is hungry/got hungry*' (Delphine Derickson Armstrong).

event variable pre-specified in the base. This also indicates that while the inchoative can introduce an event variable, imperfective *c-* cannot. Adjectival inchoatives are by default interpreted as having culminated, with a past-tense interpretation.

(52) a. **t̓íkʷ•əkʷlqʷ** i-łsísənca ʔ.
tall•C2.INCH 1SG.POSS-little.brother
'My little brother ended up growing tall.' (Delphine Derickson Armstrong)

b. **təł•áł** iʔ s-c-qʷəlqʷílt-s.
straight•C2.INCH DET NMLZ-STAT-speak-3POSS
'His talk straightened out.' (Delphine Derickson Armstrong)

c. **x̌ʷúp•əpt** iʔ pəptwína ʔ xʷ ła ʔ q̓ilt.
weak•C2.INCH DET old.woman when sick(INCH)
'She got weak when she got sick.' (Delphine Derickson Armstrong)

d. kn **k̓iw•əwəlx**.
1SG.SUBJ old•C2.INCH
'I got old.' (Delphine Derickson Armstrong)

e. **p<ʔ>iq** iʔ citxʷ.
white<INCH> DET house
'The house got white (after you painted it).' (Delphine Derickson Armstrong)

f. cmay kʷ **ylmíxʷ•əxʷm**.
EPIS 2SG.SUBJ chief•C2.INCH
'Maybe you will become a chief.' (VF | Delphine Derickson Armstrong)

g. **n<ʔ>ʕas**.
heavy<INCH>
'It got heavy.' (Delphine Derickson Armstrong)

h. **c̓<ʔ>uy**.
dark<INCH>
'It got dark.' (Delphine Derickson Armstrong)

i. **ł<ʔ>ʕat̓**.
wet<INCH>
'It got wet.' (Delphine Derickson Armstrong)

j. iʔ sqʔim **c̓<ʔ>aq**, uł **t̓<ʔ>ʕas**.
DET cream sour<INCH> and hard<INCH>
'The cream got sour, and then it got hard.' (Delphine Derickson Armstrong)

k. **ham-áp** i-snsíysuxn.
damp-INCH 1SG.POSS-socks
'My socks got damp.' (VF | Delphine Derickson Armstrong)

l. way̓ kn **n-sl̓-ip**.
already 1SG.SUBJ LOC-lose-INCH
'I got lost.' (*twi*-Lottie Lindley, Sarah McLeod)

Some adjectives are ambiguous between homogenous and inchoative interpretations, in what I refer to as zero-inchoatives. The inchoative readings emerge in the presence of a punctual adverb (53; see Section 2 above).[49]

(53) a. **x̌ʷupt** iʔ pəptwínaʔxʷ łaʔ q̓ilt.
weak(INCH) DET old.woman when sick(INCH)
'She got weak when she got sick.' (Delphine Derickson Armstrong)

b. c-łwin k̓l tk̓əmkn̓iłxʷ uł **sult**.
STAT-leave to outside and frozen(INCH)
'When it got left outside, it got frozen.' (VF | Delphine Derickson Armstrong)

c. **ʔilxʷt** iʔ kəkwáp łaʔ k̓aw-st-s iʔ scʔiłən-s.
hungry(INCH) DET dog when finish-CAUS-3ERG DET food-3POSS
'The dog got hungry when he finished his food.' (Delphine Derickson Armstrong)

CoS roots also occur in the inchoative (N. Mattina 1996:112).[50]

(54) a. **q̓əy̓•áy̓** mnímłtət iʔ stəłtáłt-(t)ət iʔ k̓l scəcn̓álaʔ-tət.
get.written•C2.INCH 1PL.INDP DET rights-1PL.POSS DET to children-1PL.POSS
'Our Family Declaration got written.' (Delphine Derickson Armstrong)

b. in-kəwáp **náq̓ʷ•əq̓ʷ**.
1SG.POSS-horse get.stolen•C2.INCH
'My horse got stolen.' (Delphine Derickson Armstrong)

[49] What I am calling "zero inchoatives" appear similar to Bar-el's (2005:126) and Kiyota's (2008) "inchoative states", though I am led to posit a zero-inchoativization operation on an otherwise homogenous adjective, rather than posit a separate class of inchoative states as a primitive. If Bar-el's analysis of inchoative states were to apply to Nsyilxcn 'zero inchoative' adjectives like *ʔilxʷt*, it must hold for both its homogenous reading 'be hungry', as well as its inchoative reading 'get hungry'. This predicts, however, that a CoS is involved even with the homogenous reading, but this seems counter to test results shown in the previous section.

[50] Inchoative roots occur in morphologically more complex eventive predicates as well, e.g.: *kn tqəcəcnáʔm* 'I got run over', *kɬnk̓ʷəƛ̓əƛ̓íp* 'It got closed', *kn cəq̓əq̓mín* 'I got hit' (N. Mattina 1996:125). *kn tqəcəcnáʔm* seems to show middle *-m* and inchoativity co-occurring, which might argue against a little *v* analysis of inchoative marking. Note, however, that the subject *kn* is a patient, as expected under an inchoative interpretation. *-m* in this case may be a case of the 'grooming middle', noted above in passing, rather than an agent-introducing variant, and so we might also expect these two *-m* suffixes to occur in different syntactic positions.

c. kn **níḵ•əḵ**.
1SG.SUBJ get.cut•C2.INCH
'I got cut.' (Delphine Derickson Armstrong)

d. **ṯḵʷ•aḵʷ** iʔ tətwít.
get.layed.down•C2.INCH DET boy
'The boy fell down.' (VF | Sarah McLeod)

e. way̓ **ṯl-ap** iʔ q̓əy̓mín.
already get.torn-INCH DET paper
'The paper got torn.' (Delphine Derickson Armstrong)

f. kn **x̌áq̓•əq̓**.
1SG.SUBJ get.paid•C2.INCH
'I got paid.' (VF | Delphine Derickson Armstrong)

g. kn **ɬw•win**.
1SG.SUBJ get.abandoned•C2.INCH
'I got left behind.' (VF | Delphine Derickson Armstrong)

Like statives, the inchoative removes the possibility of a zero (55) or overt (56) middle, as well as the possibility of an agentive interpretation. This suggests that like stative *c-*, inchoativity may occur in *v* position.

(55) a. # kn **náq̓ʷ•əq̓ʷ**.
1SG.SUBJ get.stolen•C2.INCH
'I got stolen.'
* 'I steal.' (Delphine Derickson Armstrong)

b. kn **níḵ•əḵ** iʔ t níḵmən.
1SG.SUBJ get.cut•C2.INCH DET OBL knife
'I got cut by a knife.'
* 'I cut things with a knife.' (Delphine Derickson Armstrong)

c. kn **x̌áq̓•əq̓**.
1SG.SUBJ get.paid•C2.INCH
'I got paid.'
* 'I paid someone.' (VF | Delphine Derickson Armstrong)

d. wa̓y̓ kn **klíq̓•əq̓naʔ**.
already 1SG.SUBJ get.buried•C2.INCH
'I got buried.' (VF | Sarah McLeod)
* 'I buried someone.' (Delphine Derickson Armstrong)

(56) a. *waɣ̓ kn **t̓l-p-am** t q̓əɣ̓mín.
already 1SG.SUBJ get.torn-INCH-MID OBL paper
'I ripped some paper.'
Comment: "I'd say *kn t̓lám t q̓əɣ̓mín* [no inchoative]."
(Delphine Derickson Armstrong)

b. *kn **x̌áq̓•əq̓-m**.
1SG.SUBJ get.paid•C2.INCH-MID
'I paid someone.' (Delphine Derickson Armstrong)

Inchoative transitions are typically interpreted as having culminated in the past, but may easily be interpreted in the future, and are much preferred and always volunteered over future statives.

(57) a. łaʔ ks-qiłt-s, waɣ̓ **náq̓ʷ•əq̓ʷ** iʔ kəwáp-s.
when PROS-wake-3POSS already get.stolen•C2.INCH DET horse-3POSS
'His horse will be stolen before he wakes up.' (Delphine Derickson Armstrong)

b. yaʕt iʔ skʷ̓anłq cəm̓ **x̌əẃ•áẃ** t̓x̌iyutwilx.
all DET plants EPIS get.dried•C2.INCH next.year
'Next summer, all the plants will get dry.' (VF | Delphine Derickson Armstrong)

c. łaʔ q̓it łaʔ x̌lap, i-snsísuxən cəm̓ **ham-áp**.
when rain when tomorrow 1SG.POSS-sock EPIS damp-INCH
'Tomorrow when it rains, my socks will get damp.'
(VF | Delphine Derickson Armstrong)

d. x̌lap łaʔ q̓it, kn **ɬ<ʔ>ʕat̓**.
tomorrow when rain 1SG.SUBJ wet<INCH>
'Tomorrow when it rains, I'll get wet.' (VF | Delphine Derickson Armstrong)

As discussed in Section 2, punctual adverbs anchor to the event culmination in inchoatives (58): There is no temporal overlap, as there is with statives (59) and homogenous adjectives (Section 2). This shows how punctual adverbs modify events with inchoatives, and target states in statives.

(58) a. iʔ snkłc̓aʔsqáx̌aʔ **náq̓ʷ•əq̓ʷ** l sntəx̌ʷəx̌ʷqín.
DET horse get.stolen•C2.INCH at noon
'The horse got stolen at noon.' (VF | Delphine Derickson Armstrong)

b. łaʔ k̓łnk̓ahk̓ʷíp-s iʔ k̓łnk̓míp John, uł **c̓xʷ•axʷ**
when open.door-(DIR)-3ERG DET door John and get.spilled•C2.INCH
iʔ siwłkʷ aʔ c-kłcaq iʔ sx̌lilp.
DET water DET IPFV-container.facing.up DET floor.
'When John opened the door, the water that was sitting on the floor spilled.'
(VF | Delphine Derickson Armstrong)

c. **x̌ʷúp•əpt** iʔ pəptwínaʔxʷ ɬaʔ q̓ilt.
weak•C2.INCH DET old.woman when sick(INCH)
'She got weak when she got sick.' (Delphine Derickson Armstrong)

(59) a. iʔ snkɬc̓aʔsqáx̌aʔ **c-naq̓ʷ** l sntəx̌ʷəx̌ʷqín.
DET horse STAT-stolen at noon
'The horse was (already) stolen at noon.'
Comment: "It was *already* gone by noon." (VF | Delphine Derickson Armstrong)

b. ɬaʔ k̓ɬnk̓ahk̓ʷíps iʔ k̓ɬnk̓míp John, uɬ **c-c̓ax̌ʷ**
when open.door-(DIR)-3ERG DET door John and STAT-get.spilled
iʔ siwɬkʷ aʔ c-kɬcaq iʔ sx̌lilp.
DET water DET IPFV-container.facing.up DET floor
'When John opened the door, the water setting on the floor was spilled.'
Comment: 'That means it was *already* spilled, when he opened the door.'
(Delphine Derickson Armstrong)

Inchoative transitions are by definition temporary, and therefore cannot be extended indefinitely (60–62, a cases), although the state resulting from the inchoative event *can* be extended indefinitely (60–62, b cases).[51] Inchoatives pattern with achievements, like inchoative *súxʷəxʷ* 'get recognized' (63) or non-inchoative *ckicx* 'arrive' (64), in this respect.[52]

(60) *Context*: *I accidentally knocked a glass of water on the floor.*

a. *iʔ siwɬkʷ **c̓xʷ•axʷ**, uɬ púti ʔ **c̓xʷ•axʷ**.
DET water get.spilled•C2.INCH and still get.spilled•C2.INCH
*'The water got spilled and it still got spilled.' (Delphine Derickson Armstrong)

[51] Bar-el (2005:94) cites data parallel to the (b) examples in (60–62) to argue that inchoative states in Squamish are non-culminating, without any final points. I agree that the *stative* portion of an inchoative is atelic, and so non-culminating, but the eventive portion must culminate relative to some possible world.
[52] There are few exceptions where inchoatives appear to be ambiguously synonymous with result states.

(i) a. in-kəwáp **náq̓ʷ•əq̓ʷ**, uɬ púti ʔ **náq̓ʷ•əq̓ʷ**.
1SG.POSS-horse get.stolen•C2.INCH and still get.stolen•C2.INCH
'My horse got stolen and it is still stolen.'

b. inkəwáp **naq̓ʷ•əq̓ʷ**, uɬ púti ʔ **c-naq̓ʷ**.
1SG.POSS-horse get.stolen•C2.INCH and still STAT-get.stolen
'My horse got stolen and it is still stolen.'
Comment: "They mean the same thing." (Delphine Derickson Armstrong)

This may be related to the ability of roots like *naq̓ʷ* 'get stolen' to occur as an imperfective zero-derived middles, as described above. This requires further work.

b. iʔ siwɬkʷ **c̓xʷax**ʷ, uɬ púti ʔ **c-c̓ax**ʷ,
DET water get.spilled•C2.INCH and still STAT-get.spilled
lut swit t̓ kɬ-ʔip̓-əs.
NEG who NEG.FAC on-wipe-(DIR)-3ERG
'The water got spilled, and is still spilled, nobody wiped it up.'
(VF | Delphine Derickson Armstrong)

(61) a. * snk̓lip **t̓k̓ʷ•ak̓ʷ** uɬ púti ʔ **t̓k̓ʷ•ak̓ʷ**.
coyote get.layed.down•C2.INCH and still get.layed.down•C2.INCH
* 'Coyote fell down and he's still falling down.' (Delphine Derickson Armstrong)

b. snk̓lip **t̓k̓ʷak̓ʷ** uɬ púti ʔ **c-t̓ak̓ʷ**.
coyote get.layed.down•C2.INCH and still STAT-get.layed.down
'Coyote fell down and he's still down.' (VF | Delphine Derickson Armstrong)

(62) a. * iʔ słiqʷ **x̌əw̓•áw̓**, uɬ púti ʔ **x̌əw̓•áw̓**.
DET meat get.dried•C2.INCH and still get.dried•C2.INCH
* 'The meat got dried and it still got dried.' (Delphine Derickson Armstrong)

b. iʔ słiqʷ **x̌əw̓́•áw̓**, uɬ púti ʔ **c-x̌aw̓**.
DET meat get.dried•C2.INCH and still STAT-get.dried
'The meat got dried and it is still dry.' (VF | Delphine Derickson Armstrong)

(63) a. * iʔ sqəltmíxʷ **suxʷ•xʷ**, uɬ púti ʔ **suxʷ•xʷ**.
DET man get.recognized•C2.INCH and still get.recognized•C2.INCH
* 'The man got recognized and he still got recognized.'
(Delphine Derickson Armstrong)

b. iʔ sqəltmíxʷ **suxʷ•xʷ**, uɬ púti ʔ **c-suxʷ**.
DET man get.recognized•C2.INCH and still STAT-get.recognized
'The man got recognized and he is still recognizable.'
(VF | Delphine Derickson Armstrong)

(64) a. #l sntəx̌ʷəx̌ʷqín **c-kicx** John, uɬ cəm̓ púti ʔ **c-kicx**.
at noon CISL-arrive John and EPIS still CISL-arrive
'John arrived at noon and maybe he is still arriving.' (Delphine Derickson Armstrong)

b. l sntəx̌ʷəx̌ʷqín **c-kicx** John, uɬ cəm̓ púti ʔ **alá ʔ**.
at noon CISL-arrive John and EPIS still here
'John arrived at noon, and maybe he is still here.' (VF | Delphine Derickson Armstrong)

The examples below in (65) confirm that CoS inchoatives in Nsyilxcn always have *resultive* readings, never *in-progress.* If in-progress readings were available, the prediction is that (65b), for

example, should have an available reading such that *The meat is drying but it isn't dry yet*. I conclude that inchoatives entail a result state (Parsons 1990).[53,54]

(65) a. snk̓lip **t̓k̓ʷ•ak̓ʷ** náx̌əmɬ lut t̓a **c-t̓ak̓ʷ**
coyote get.layed.down•C2.INCH but NEG NEG.FAC STAT-get.layed.down
#(áɬiʔ s-málx̌aʔ-s **tk̓ʷ•ak̓ʷ**).
because NMLZ-false-3POSS get.layed.down•C2.INCH
'Coyote fell down but he didn't go down, because he was pretending to fall.'
Comment: "You have to say the end part or it doesn't make sense."
(Delphine Derickson Armstrong)

b. #iʔ słiqʷ **x̌əw̓•áw̓** náx̌əmɬ lut t̓a **c-x̌aw̓**.
DET meat get.dried•C2.INCH but NEG NEG.FAC STAT-get.dried
'The meat got dry but it isn't dry.'
Comment: "Okay, how can it dry and not be dry?!" (Delphine Derickson Armstrong)

c. #iʔ siwɬkʷ **c̓xʷ•axʷ**, nax̌əmɬ lut t̓a **c-c̓axʷ**.
DET water get.spilled•C2.INCH but NEG NEG.FAC STAT-get.spilled
'The water got spilled but it isn't spilled.'
Comment: "How can it spill and not really spill, unless it's in a *captikʷɬ*?"
(Delphine Derickson Armstrong)

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[53] Target states entailed by inchoative predicates are in principle reversable (see Section 2.2.3), and so (65b) for example should be felicitous with further explanation about how the meat got wet again, perhaps being exposed to rain, and as a result is no longer dry. In this case, the inchoative is evaluated at a different reference time than the stative, crucially. The problem with the examples in (65), as shown by Delphine's comments, is that the inchoative and stative cannot be evaluated at the same reference time without resulting in a contradiction, which follows if inchoatives entail result states.

[54] For mass nouns such as *siwɬkʷ* 'water', an imperfective inchoative can extend the event transition of a perfective inchoative (ii), as long as some amount of water has already been spilled. In other words, *getting spilled* doesn't necessarily entail *getting completely spilled*, only that some spillage has occurred.

(ii) a. *Context: A large barrel of water has sprung a leak, some has spilled already.*
iʔ siwɬkʷ **c̓xʷ•axʷ**, uɬ púti ʔ **c-c̓xʷ•axʷ**.
DET water get.spilled•C2.INCH and still IPFV-get.spilled•C2.INCH
'The water got spilled, and it is still spilling.'
Delphine's comment: "It's still spilling…. it never stopped."

b. iʔ siwɬkʷ **qʷ<ʔ>in**, uɬ púti ʔ **c-qʷ<ʔ>in**.
DET water green<INCH> and still IPFV-green<INCH>
'The water turned green and it is still turning green.' (Delphine Derickson Armstrong)

Example (iii) illustrates a related but different phenomenon: Because *recognize* is an inchoative achievement, and has an instantaneous transition, imperfective *c-* forces a plural subject reading. This is likely technically a habitual reading.

(iii) iʔ sqəltmíxʷ **suxʷ•xʷ**, uɬ púti ʔ **c-suxʷ•xʷ**.
DET man get.recognized•C2.INCH and still IPFV-get.recognized•C2.INCH
'The man got recognized, and he is still being recognized.'
Delphine's comment: "He is recognized by many." (Delphine Derickson Armstrong)

Adjectival inchoatives are also culminative in unmarked circumstances, but differ from CoS inchoatives in the sense that they also allow non-culminative, in-progress readings, as shown in the following examples (66). Unlike the CoS inchoative examples in (65), those in (66) are not contradictory.

(66) a. **n<ʔ>ʕas** iʔ knəxnáx t kʼəkʼalíʔ náx̌əmɬ lut talíʔ tʼa **c-nʕas**.
heavy<INCH> DET box OBL slow but NEG very NEG.FAC IPFV-heavy
'The box is getting heavy slowly, but it isn't really heavy.'
(VF | Delphine Derickson Armstrong)

b. kn **ɬ<ʔ>ʕaʼ** náx̌əmɬ lútiʔ kn tʼa **c-ɬʕaʼ**.
1SG.SUBJ wet<INCH> but not.yet 1SG.SUBJ NEG.FAC IPFV-wet
'I'm getting wet, but I'm not wet yet.' (Delphine Derickson Armstrong)

c. kn **ʔilxʷt** náx̌əmɬ lut talíʔ kn tʼ **ʔilxʷt**.
1SG.SUBJ hungry(INCH) but NEG very 1SG.SUBJ NEG.FAC hungry
'I'm getting hungry, but I'm not hungry yet.' (VF | Delphine Derickson Armstrong)

The reason for this difference between CoS and adjectival inchoatives is not due to any difference in inchoativity, I suggest, but rather to a difference in viewpoint aspect. While unprefixed CoS inchoatives are formally perfective, a hypothesis which is consistent with their culminative interpretations, unprefixed homogenous adjectives and adjectival inchoatives are formally neutral (Smith 1991).

In support of a (null) neutral viewpoint aspect, consider that the homogenous adjectives in (67, cf. 16) do not display sequential readings in the presence of a punctual adverb, as would be expected under a (null) perfective analysis, but rather show temporal overlap effects more characteristic of an imperfective.

(67) a. #c-ɬwin kʼl tkʼəmkniɬxʷ uɬ talíʔ **ɬʕaʼ**.
IPFV-abandon to outside and very wet
'When it got left outside, it was (already) really wet.' (Delphine Derickson Armstrong)

b. #ixíʔ ɬaʔ n-wt-nt-ixʷ iʔ l knəxnáx, uɬ **nʕast**.
that when LOC-put.in-DIR-2SG.ERG DET in box and heavy
'When you put that in the box, it was (already) really heavy.'
(Delphine Derickson Armstrong)

Further, the adjectival inchoatives in (66), if anything, appear to display imperfective readings, despite the absence of any imperfective marker. Assuming that the absence of culminative / sequential readings in (66) and (67) are linked, and that viewpoint aspect is necessary for converting predicates of events to predicates of times (Rullmann & Matthewson 2018), there may be a null, neutral aspect marker in complementary distribution with the (im)perfective (Smith 1991) which selects for adjectival predicates, and encompasses both perfective and imperfective interpretations.

An advantage of this analysis is that it allows for a unified treatment of inchoativity across adjectival and CoS roots. I return to this in Section 3.3.

Next, consider that inchoatives, like statives but in contrast to homogenous adjectives, may occur with instrumental adjuncts which reference a causing event (N. Mattina 1996; Davis & Demirdache 1997:108).[55] In (68a), for example, the knife makes reference to the event that causes the speaker to get cut, and in (68b) the sun makes reference to the event that causes the object to get thawed.[56] The sentence in (68f) is an example from one of Delphine's narratives, and involves an aspectually prospective predicate built on an inchoative root.

(68) a. kn **níḵ̓•əḵ̓** iʔ t níḵ̓mən.
1SG.SUBJ get.cut•C2.INCH DET OBL knife
'I got cut by a knife.' (Delphine Derickson Armstrong, cf. N. Mattina 1996:91)

b. **ʕam-áp** iʔ t x̌yáɬnəx̌ʷ.
thaw-INCH DET OBL sun
'It was thawed by the sun.' (N. Mattina 1996:91)

c. kn **ṗiċ̓•əċ̓** iʔ t ċíṗmən.
1SG.SUBJ get.pinched•C2.INCH DET OBL pliers
'I got pinched by the pliers.' (Delphine Derickson Armstrong)

d. **míƛ̓•əƛ̓** iʔ ṗuyxən iʔ t míƛ̓mən.
get.painted•C2.INCH DET car DET OBL paintbrush
'The car got painted by the paintbrush.' (Delphine Derickson Armstrong)

e. **ɬ<ʔ>ʕaṫ̓** iʔ lasmíst iʔ t sq̓it.
wet<INCH> DET shirt DET OBL rain
'The shirt got wet by the rain.' (Delphine Derickson Armstrong)

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[55] Though human agents are not permitted with inchoatives.

(iv) a. * **míƛ̓•əƛ̓** iʔ ṗuyxən iʔ t səxʷmiƛ̓əm.
get.painted•C2.INCH DET car DET OBL painter
'The car got painted by the painter.'

b. * iʔ sxʷuynt **ʕam-áp** iʔ t sqəltmíxʷ.
DET ice get.melted-INCH DET OBL man
'The ice got melted by the man.'
Comment: "If he's using something!" (Delphine Derickson Armstrong)

[56] N. Mattina (1996:140) represents inchoatives (a.k.a. 'anti-causatives') and their instruments as *BECOME[P(y)] by means of x*, which may be construed as an informal rendering of CAUSE. N. Mattina (1996) and Davis and Demirdache (1997) both agree that there is no reference to any eventive agent in the semantic structure of an inchoative.

f. way̓ **ks-n-cək^{w}•k^{w}-ítk^{w}-aʔx-əlx** iʔ t sx^{w}x^{w}l̓ik^{w}
already PROS-LOC-get.pulled•C2.INCH-water-INCP-3PL DET OBL whirlwind
iʔ l siwłk^{w}.
DET in water
'They were about to get pulled into water by the whirlpool.'
(Delphine Derickson Armstrong)

Examples like (68) show that inchoatives, like statives, are semantically causative (Davis & Demirdache 1997), regardless of whether they are built from adjectival or CoS roots. As such, they must have a CAUSE predicate as part of their event structure, whose event argument may be modified by an instrument. In Section 2.1.2, I showed that homogenous adjectives cannot host an instrumental adjunct, which means that the inchoative must be introducing CAUSE to an adjective (Parsons 1990; cf. Piñón 2001). Given also that stative *c-* does not introduce CAUSE to a CoS root, which instead contains CAUSE as a primitive (Sections 2.2.2 and 2.3.1 above), Nsyilxcn provides an argument against the *Bifurcation Thesis* (Embick 2009).

Lastly, inchoatives (including zero-inchoatives) can be modified by manner adverbs (69), in contrast to homogenous adjectives, as discussed in the previous section.

(69) a. **c̓x^{w}•ax^{w}** iʔ siwłk^{w} t k̓ək̓alíʔ.
get.spilled•C2.INCH DET water OBL slow
'The water was poured slowly.' (Delphine Derickson Armstrong)

b. kn **ník̓•ək̓** t x^{w}us.
1SG.SUBJ get.cut•C2.INCH OBL quick
'I got cut quickly.' (Delphine Derickson Armstrong)

c. **kla<ʔ>ʕ** iʔ c̓ik̓^{w}sxn t k̓ək̓alíʔ.
turned.on<INCH> DET light OBL slow
'The light came on slowly.' (Delphine Derickson Armstrong)

d. **t̓<ʔ>ʕas** iʔ tiłmən t x^{w}us.
hard<INCH> DET glue OBL quick
'The glue got hard quickly.' (Delphine Derickson Armstrong)

e. kn **ʔilx^{w}t** t k̓ək̓alíʔ.
1SG.SUBJ hungry(INCH) OBL slow
'I'm getting hungry slowly (right now)' / 'I got hungry slowly.' (because I didn't have breakfast.) (Delphine Derickson Armstrong)

f. kn **ɬ<ʔ>ʕat̓** t k̓ək̓alíʔ.
1SG.SUBJ wet<INCH> OBL slow
'I'm getting wet slowly from the rain.' (Delphine Derickson Armstrong)

g. **n<ʔ>ʕas** iʔ knəxnax t k̓ək̓alíʔ.
heavy<INCH> DET box OBL slow
'The box got heavy slowly.'
Comment: "I'm carrying a box and it is slowly getting heavy, like with my groceries, before I get to the door." (Delphine Derickson Armstrong)

This confirms that while inchoatives and bare CoS roots have *change-of-state* event variables that are open to manner modification, derived stativs and homogenous adjectives do not, highlighting an important difference between inchoatives and statives, which otherwise often seem to have surface similar interpretations.

3.2 Imperfective inchoative states

I-level adjectives cannot be prefixed by imperfective *c-* (70) unless they have first been inchoativized (71). This follows if the inchoative introduces an event variable and CoS to predicates which do not already have one. Compositionally speaking, this also shows that inchoativity applies before imperfective *c-*.

(70) a. *t̓i **c-piq** iʔ smik̓ʷt.
EMPH IPFV-white DET snow
'The snow is white.' (Delphine Derickson Armstrong)

b. ***c-t̓íkʷəlqʷ** iʔ sqəltmíxʷ.
IPFV-tall DET man
'The man is tall.' (Delphine Derickson Armstrong)

c. *iʔ siwłkʷ qʷ<ʔ>in uł púti ʔ **c-qʷin**.
DET water green<INCH> and still IPFV-green
'The water turned green, and it is still green.' (Delphine Derickson Armstrong)

(71) a. **c-p<ʔ>iq** iʔ citxʷ ʕapnáʔ łaʔ **c-miƛ̓•əƛ̓**.
IPFV-white<INCH> DET house now when IPFV-get.painted•C2.INCH
'The house is turning white as it is painted.'
#'The house got white.' (Delphine Derickson Armstrong)

b. ? lut pənʔkín kn t̓ c-ntils kn **c-t̓íkʷ•əkʷəlqʷ**.
NEG when 1SG.SUBJ NEG.FAC IPFV-think 1SG.SUBJ IPFV-tall•C2.INCH
'I never thought I'd be getting tall.'
Comment: "I guess you could say that." (Delphine Derickson Armstrong)

c. iʔ siwłkʷ qʷ<ʔ>in uł púti ʔ **c-qʷ<ʔ>in**.
DET water green<INCH> and still IPFV-green<INCH>
'The water turned green and it is still turning green.' (Delphine Derickson Armstrong)

When imperfective *c-* occurs with an inchoative, it either targets the inchoative transition, yielding an in-progress single event reading (72), or else yields a plurality of culminated events in the habitual (73).[57,58]

(72) a. i-snsiysúʔxən **c-ham-áp**.
1SG.POSS-socks IPFV-damp-INCH
'My socks are getting damp.' (Delphine Derickson Armstrong)

b. iʔ sqʔim c̓<ʔ>aq, uɬ **c-t̓<ʔ>ʕás**.
DET cream sour<INCH> and IPFV-hard<INCH>
'The cream got sour, and it's slowly getting hard.' (Delphine Derickson Armstrong)

c. kn **c-n-sl̓-ip** ʕapnáʔ, lut t̓a c-my-st-in
1SG.POSS IPFV-LOC-lose-INCH now NEG NEG.FAC IPFV-know-CAUS-1SG.ERG
k̓aʔkín kn ks-xʷúy-aʔx.
to.where 1SG.SUBJ PROS-go-INTR
'I'm getting lost right now, I don̓t know which way to go.'
(VF | Delphine Derickson Armstrong)

d. islaxt **c-x̌áq̓•əq̓** ʕapnáʔ.
1SG.POSS-friend IPFV-get.paid•C2.INCH now
'My friend is getting paid right now.' (VF | Delphine Derickson Armstrong)

e. *Context: You're walking through the brush and getting hit by branches as you go.*
kn **c-sp̓•áp̓** ʕapnáʔ.[59]
1SG.SUBJ IPFV-get.hit•C2.INCH now
'I'm getting hit right now.' (Delphine Derickson Armstrong)

[57] It is interesting that single event readings of *c-* inchoatives are in-progress, while habitual readings seem to yield a plurality of complete events, rather than a plurality of in-progress transitions. This requires further work.

[58] The interaction of Nsyilxcn imperfective *c-* and inchoativity is similar to the interaction of Sḵwx̱wú7mesh directional *mi* 'come' and inchoative states (Bar-el 2005:188) in the sense that the event culmination reading (the 'stative' reading under Bar-el's analysis) is ruled out in favor of the event in-progress reading. Similar facts hold for St'át'imcets (Davis in prep.) where the directional auxiliary *ts7as* has a similar effect on inchoatives. This in turn suggests a possible historical connection between a third homophonous *c-* prefix in Nsyilxcn, often termed the *cislocative*, roughly 'come in the direction of the speaker', and *c-* imperfective. If Nsyilxcn imperfectivity has its roots in a cislocative, then the target stative *c-* may have derived from the imperfective, rather than vice versa, a hypothesis which may better accord with cross-linguistic patterns of grammaticization. This in turn implies that Secwepemctsín is in the process of losing its imperfective *c-*, having innovated *w7ec*. St'át'imcets has only *ts7as* as a relic of an earlier imperfective, having innovated *wa7*, or having borrowed it from the coast. This unorthodox hypothesis would require considerable cross-linguistic support, which at present is lacking.

[59] Notice that with (72e,f) the *process* includes multiple hitting events. These might better be classed as habituals since the transition is too brief to easily yield a single event, in-process reading.

f. *Context: You're climbing a hawthorn tree and getting poked as you go.*

kn **c-ƛ̓ǩʷ-p-xán** ʕapnáʔ.
1SG.SUBJ IPFV-get.poked-INCH-foot now
'I'm getting poked right now.' (Delphine Derickson Armstrong)

g. **c-q̓əy̓•áy̓** mnímɬtət iʔ stəɬtáɬt-(t)ət iʔ k̓l scəcm̓álaʔ-tət.
IPFV-get.written•C2.INCH 1PL.INDP DET truth-1PL.POSS DET to children-1PL.POSS
'Our declaration is being written.'
Comment: "It's being written as you're touching the keys."
(VF | Delphine Derickson Armstrong)

(73) a. nyʕip **c-ham-áp** i-snsiysúxən.
always IPFV-damp-INCH 1SG.POSS-socks
'My socks always get wet (whenever I walk in the grass.)'
(Delphine Derickson Armstrong)

b. nyʕip **c-t̓<ʔ>ʕás** iʔ sqʔim.
always IPFV-hard<INCH> DET cream
'The cream always gets hard (after you churn it).' (Delphine Derickson Armstrong)

c. way̓ kn **c-n-sl̓-ip**.
yes 1SG.SUBJ IPFV-LOC-lose-INCH
'I (usually) get lost.' (*twi*-Lottie Lindley, Sarah McLeod)

d. kn **c-x̌áq̓•əq̓**.
1SG.SUBJ IPFV-get.paid•C2.INCH
'I (always) get paid.' (VF | Delphine Derickson Armstrong)

e. kn **c-sp̓•ap̓** kn ɬaʔ c-n-ɬuxʷt.
1SG.SUBJ IPFV-get.hit•C2.INCH 1SG.SUBJ when IPFV-in-brush
'I (always) get hit by branches when I go in the bush.'
(VF | Delphine Derickson Armstrong)

f. kn **c-ƛ̓ǩʷ-p-xán** kn ɬaʔ c-t̓ḵiwəlx iʔ
1SG.SUBJ IPFV-get.poked-INCH-foot 1SG.SUBJ when IPFV-climb DET
sxʷaʔxʷaʔnk-íɬp.
thorn-plant
'I (always) get poked on the foot when I climb hawthorn trees.'
(VF | Delphine Derickson Armstrong)

g. ixiʔ **c-t̓ǩʷ•ak̓ʷ** iʔ tətwit.
DEM IPFV-get.laid.down•C2.INCH DET boy
'That's the boy that (always) falls.' (*twi*-Lottie Lindley)

h. cəm̓ kn **c-níḵ•əḵ** łaʔ c-ḵʷúl̓-m-st-ən iʔ
EPIS 1SG.SUBJ IPFV-get.cut•C2.INCH when IPFV-make-MID-CAUS-1SG.ERG DET
níḵmən.
knife
'I might get cut when I use a knife.' (VF | Delphine Derickson Armstrong)

i. kn **c-niḵ•əḵ-kst**.
1SG.SUBJ IPFV-get.cut•C2.INCH-hand
'I (always) cut my finger.' (*twi*-Lottie Lindley)

j. **c-kʷúm•əm** iʔ ʔaʔískʷ t k(ł)-scʔíłən-s.
IPFV-get.stored.away•C2.INCH DET squirrel OBL IRR.N-food-3POSS
'The squirrel's food (always) gets stored.' (VF | Delphine Derickson Armstrong)

k. nyʕip łaʔ c-q̓it kʷu **c-ł<ʔ>ʕaṯ**.
always when IPFV-rain 1PL.SUBJ IPFV-wet<INCH>
'We always get wet when it rains.' (VF | Delphine Derickson Armstrong)

As expected, imperfective inchoatives pattern with imperfective adjectives in that *c-* is required in habitual contexts (74), and disallowed in single-event (culminative) contexts (75).

(74) a. ny̓ip ***(c)-ṫḵʷ•aḵʷ** łaʔ sḵ̓laxʷ.
always IPFV-get.layed.down•C2.INCH when evening
'Every evening he falls down.' (*twi*-Lottie Lindley)

b. nyʕip kn **ʔ(c)-x̌áq̓•əq̓** iʔ l sʔasil skʕacíẇs.
always 1SG.SUBJ IPFV-get.paid•C2.INCH DET at two week
'I always get paid every 2 weeks.' (VF | Delphine Derickson Armstrong)

(75) a. ṫi naqs kn **(*c)-x̌áq̓•əq̓**.
EMPH one 1SG.SUBJ IPFV-get.paid•C2.INCH
'I only got paid once.' (Delphine Derickson Armstrong)

b. talíʔ kn **(*c)-qʷím̓•əm̓** t spiʔsc̓íłt.
very 1SG.SUBJ IPFV-startled•C2.INCH OBL yesterday
'I got frightened yesterday.' (Sarah McLeod)

c. way̓ kn **(*c)-klíq̓•əq̓naʔ**.
already 1SG.SUBJ IPFV-get.buried•C2.INCH
'I got buried.' (Sarah McLeod)

d. way̓ kn (***c)-n-sl̓-ip**.
yes 1SG.SUBJ IPFV-LOC-lose-INCH
'I got lost.' (*twi*-Lottie Lindley, Sarah McLeod)

Past (76) and future (77) in-progress interpretations of imperfective inchoatives are possible.

(76) a. t spiʔsc̓íɬt i-snsísuxən **c-ham-áp**, ʕapnáʔ x̌əẃ•áẇ.
OBL yesterday 1SG.POSS-socks IPFV-damp-INCH now dry•C2.INCH
'My socks were (getting) damp yesterday, but today they are dry again.'
(VF | Delphine Derickson Armstrong)

b. i-slax̌t **c-x̌áq̓•əq̓** t spiʔsc̓íɬt.
1SG.POSS-friend IPFV-get.paid•C2.INCH OBL yesterday
'My friend was (getting) paid yesterday.' (VF | Delphine Derickson Armstrong)

(77) łaʔ q̓it łaʔ x̌lap, i-snsísuxən cəm̓ **c-ham-áp**.
when rain when tomorrow 1SG.POSS-sock EPIS IPFV-damp-INCH
'Tomorrow when it rains, my socks will be getting damp.'
(VF | Delphine Derickson Armstrong)

For in-progress readings of imperfective inchoatives, the event transition must have begun relative to a reference time (78a), and cannot have already culminated (78b), confirming that imperfective *c-* is targeting a sub-interval of the event which excludes the initial and final points.

(78) a. #i-snsiysúxən **c-ham-áp**, náx̌əmɬ púti ʔ c-x̌aẇ.
1SG.POSS-sock IPFV-damp-INCH but still IPFV-dry
#'My socks are getting damp, but they're still dry.' (Delphine Derickson Armstrong)

b. #way̓ c-q̓ay̓ iʔ s-c-k̓ʷúl̓-təɬ, náx̌əmɬ
already STAT-get.written DET NMLZ-STAT-get.written-1PL.POSS but
púti ʔ **c-q̓əy̓•áy̓**.
still IPFV-get.written•C2.INCH
'Our work is written, but it's still being written.' (Delphine Derickson Armstrong)

Like plain inchoatives, imperfective inchoatives allow modification by manner adverbs (79).

(79) a. **c-c̓x̓ʷ•axʷ** iʔ siwɬkʷ t k̓ək̓alíʔ.
IPFV-get.spilled•C2.INCH DET water OBL slow
'The water is pouring slowly.' (Delphine Derickson Armstrong)

b. ʕapnáʔ **c-qʷ<ʔ>in** iʔ siwɬkʷ t xʷus.
now IPFV-green<INCH> DET water OBL quick
'Now, the water turns green fast.' (Delphine Derickson Armstrong)

c. kn **c-nik̓•ək̓** t xʷus.
1SG.SUBJ IPFV-get.cut•C2.INCH OBL quick
'I always get cut fast.' (Delphine Derickson Armstrong)

d. **c-t̓<ʔ>ʕas** iʔ tiɬmən t xʷus.
IPFV-hard<INCH> DET glue OBL quick
'The glue usually gets hard fast.' (Delphine Derickson Armstrong)

e. kn **c-ʔilxʷt** t k̓ək̓alíʔ.
1SG.SUBJ IPFV-hungry(INCH) OBL slow
'I usually get hungry slowly.' (Delphine Derickson Armstrong)

Before presenting an analysis of inchoatives, consider that an examination of *internal* and *durative* readings in Nsyilxcn provide additional evidence for analyzing inchoatives as properties of events, and statives as properties of states. Internal readings arise in English when a temporal adverbial such as *for two hours* modifies a resulting state, while *durative* readings arise when the adverbial measures the duration of an event transition (Dowty 1979; Yu et al. 2023). In English, CoS roots like *break* allow only durative readings (80a), while verbs built from property concept roots (i.e., adjectival roots) allow both readings (80b).

(80) a. Susan broke the vase for two hours. *CoS root*
* Reading 1: Susan broke the vase and it remained broken for two hours. **(internal)**
\# Reading 2: Susan spent two hours breaking the vase. **(durative)**

b. Susan opened the door for two hours. *property concept*
Reading 1: Susan opened the door and it remained open for two hours. **(internal)**
Reading 2: Susan spent two hours (trying to) open the door. **(durative)**

Nsyilxcn CoS roots themselves allow neither reading, because they are underspecified, but they may derive internal readings as stative predicates (81a), and durative readings as inchoatives (81b) or other eventive predicates.[60] The two readings are mutually exclusive, and show that adverbials modify an open state argument in Nsyilxcn statives, while they modify an open event argument in inchoatives (Section 3).

(81) a. q̓əq̓sápi **s-c-c̓axʷ-s** iʔ siwɬkʷ. **(internal)**
little.while NMLZ-STAT-get.spilled-3POSS DET water
'The water was spilled for a little while.' (VF | Delphine Derickson Armstrong)

b. q̓əq̓sápi **s-c-c̓xʷ•axʷ-s** iʔ siwɬkʷ **(durative)**
little.while NMLZ-IPFV-get.spilled•INCH-3POSS DET water
sic iʔ ƛ̓əl-p-st-ísəlx.
before DET still-INCH-CAUS-3PL.ERG
'The water was pouring out for a while before they stopped it.'
(VF | Delphine Derickson Armstrong)

[60] The nominalizations in (81) and (82) link the predicate to the temporal adverbial. It is not required for internal / durative readings but tends to occur when the adverbial precedes the main predicate.

Internal readings of adjectival predicates do not involve imperfective *c*-, which is marginal to ungrammatical in these environments (82a), for unclear reasons. Durative readings of adjectives require imperfective *c*- and an inchoative in these contexts (82b).

(82) a. ʔasil x̌əx̌yáɬnəx̌^{w} iʔ **s-(*c)-ɬʕaṫ-s** iʔ lasmist. **(internal)**
two hours DET NMLZ-IPFV-wet-3POSS DET shirt
'The shirt was wet for two hours.' (VF | Delphine Derickson Armstrong)

b. q̇əq̇sápi iʔ lasmíst **s-c-ham-áp-x**. **(durative)**
little.while DET shirt NMLZ-IPFV-damp-INCH-CONT
'The shirt was getting damp for a little while.' (Delphine Derickson Armstrong)

Overall, (81) and (82) show that event-modifying, durative readings of unaccusatives utilize imperfectivity and inchoativity, while state-modifying, internal readings of unaccusatives utilize statives or bare adjectives. The morphological difference between internal readings of CoS roots versus adjectives provides additional evidence for a distinction between stative *c*- and imperfective *c*-, and for a semantic difference between property concepts and CoS roots in Nsyilxcn.

3.3 Analysis of inchoatives

Bar-el (2005) and Kiyota (2008) model inchoative states in two Central Salish languages as containing two subevents: a BECOME transition, and a resulting state (Dowty 1979; Smith 1991; Rothstein 2004). Both sub-events are joined by a sum-event variable, which is open to aspectual modification by a perfective or imperfective (83).

(83) $\lambda x \lambda e\ .\ \exists e1 \exists e2[e =^{S} (e1 \cup e2) \wedge (\text{BECOME}(P))(e1)(x) \wedge P(e2)(x)]$ *inchoative state (Bar-el 2005)*

Assuming (83), an imperfective will select a sub-interval of the union of the two sub-events. This predicts an ambiguity: For cases where the imperfective sub-interval is drawn from the e_1 portion of the union, an in-progress reading is predicted, while for cases where the sub-interval includes part of the e_2 portion of the union, a culminative reading is predicted. A perfective will select a super-interval of the union event, which should result only in a culminated reading.

For Nsyilxcn inchoatives, aspectual processes like the imperfective do not target a sum event, rather they only target the BECOME sub-event, as shown by the absence of any ambiguity in these cases. The sub-events of an inchoative cannot therefore both be existentially closed prior to application of viewpoint aspect.

In Section 2.3 I argued that both sub-event arguments are open in CoS roots. This approach is independently supported by the inchoative data. I suggest that the inchoative 'backgrounds' the resulting state portion of a CoS predicate by closing the *s* variable (84a), leaving open the *e* variable for further aspectual modification. The imperfective then yields an on-going or habitual reading of the event transition (84b), and the perfective yields a culminative reading (84c).

(84) a. $\lambda e \lambda w \exists s[\text{BECOME}(P(x)(e)(w)) \wedge \text{CAUSE}(e,s)(w)]$ *base inchoative predicate*

b. $\lambda t \lambda w \exists e \exists s.[\text{BECOME}(P(x)(e)(w)) \wedge \text{CAUSE}(e,s)(w) \wedge t \subseteq \tau(e)]$ *imperfective* c- *inchoative*

c. $\lambda t \lambda w \exists e \exists s.[\text{BECOME}(P(x)(e)(w)) \wedge \text{CAUSE}(e,s)(w) \wedge \tau(e) \subseteq t]$ *perfective CoS inchoative*

I presented evidence in Section 3.2 that unprefixed adjectival inchoatives are not perfective, as shown by the fact that, unlike CoS inchoatives, they imply but do not entail event culmination. I suggest that a null neutral aspect selects for homogenous and inchoative adjectives, and that this explains their interpretative variability. Smith (1991:123) states that the neutral "complements the other viewpoints in the amount of information it makes visible about an event. The neutral viewpoint includes one endpoint, the perfective both endpoints, the imperfective neither. Thus unlike the imperfective the neutral viewpoint allows closed readings by inference." Pending further work, I do not present a formal analysis of neutral aspect at this time.

Under the analysis in (84), all inchoatives entail a result state, and viewpoint aspect functions to situate the reference time with respect to the eventive versus stative portion of the inchoative. The inchoative is therefore essentially the opposite of stative *c-*, which backgrounds the event and foregrounds the resulting state. The opposing semantic effects of the stative and the inchoative reflect their complementary distribution, and predicts that inchoativity cannot apply to a stative or imperfective predicate, since the event variable has already been closed.

Because the Nsyilxcn inchoative introduces a CoS, and an entailed result state, to predicates which do not already encode them, this means that unlike stative *c-* or imperfective *c-*, the inchoative marker must be able to range over different kinds of predicates, including I-level and S-level adjectives, as well as CoS roots. Given that these three predicate types are semantically distinct, this means that the Nsyilxcn inchoative must be ambiguous: For adjectives, it introduces a BECOME event (Parsons 1990), a CAUSE predicate (Alexiadou et al. 2015), and an entailed resulting state (Parsons 1990) (85a). For CoS roots, which come pre-specified with these components under arguments made in Section 2, they simply close the preexisting state variable in an operation essentially opposite that of the target stative (85b). A sample derivation of an imperfective inchoative built on a CoS root is shown in Figure 5.[61]

(85) a. $\lambda P_{\langle s,t\rangle}\lambda e\lambda w\exists s$. [BECOME($P(e)(w)$) ∧ CAUSE(e,s)(w)] *inchoative marker for Adj.*

b. $\lambda R_{\langle s,\langle s,t\rangle\rangle}\lambda e\exists s$. $R(e)(s)$ *inchoative marker for CoS roots*

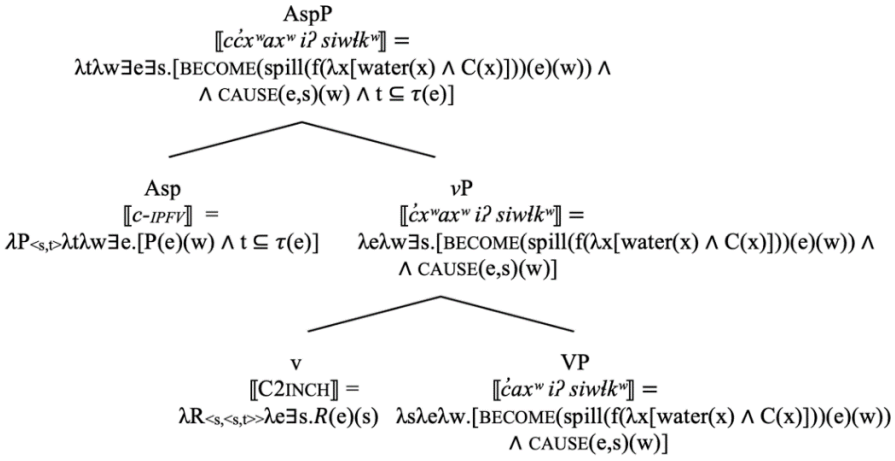

Figure 5: Derivation of an Nsyilxcn imperfective inchoative

[61] Composition below the VP level is identical to that shown in Figure 4, so I do not include it here.

While positing an ambiguity in the inchoative might seem theoretically cumbersome, it may actually represent a confluence in Nsyilxcn of two separate strategies for inchoative marking found across Salish. In ʔayʔaǰuθəm, for example, the inchoative only targets adjectives (Marianne Huijsmans, p.c.). In St'át'imcets, the morphology of inchoative marking is category specific, and the semantics could vary accordingly.[62] In any case, if the semantics of (85a) and (85b) are independently attested in other Salish languages, then Nsyilxcn may be in the process of generalizing separate, category-specific inchoative operations into a single category-neutral operation, which at this stage still retains distinct category-specific semantics. Further work across the Salish family is required to adequately test this hypothesis.

I should briefly mention an issue regarding the existence entailment of the result state in an inchoative predicate. Dowty (1979) describes an imperfective 'paradox', noted as far back as Aristotle. While imperfectives built on telic predicates, e.g., *Mozart was finishing the Requiem,* can be true, it is possible that there is no time such that *Mozart finished the Requiem* is true. In other words, event culmination may fail. This stands in contrast to imperfectives built from atelic predicates, e.g., *John was walking*, where it must be true that *John walked* (see Zucchi 2021 for discussion). Imperfective and neutral inchoatives in Nsyilxcn may likewise fail to culminate, which raises the question of how a result state can be entailed if the event itself does not complete.

I assume that an intensional form of imperfectivity involving inertia worlds (Dowty 1979), event stages (Landman 1992), or modality (Portner 1998), when applied to an inchoative, leads to an event culmination and resulting state which hold not necessarily in the actual world *w*, but in some *w'* which may or may not be equivalent to *w*. Following Dowty's model, for example, an imperfective inchoative event *cx̌áq̓əq̓* 'getting paid' should be true in some world *w* iff there is a super-interval in which for all the *w* inertia worlds (i.e., *w'*), the event culminates (i.e., *x̌áq̓əq̓* 'get paid' is true). Additionally, since *e causes s,* the event culmination world should be identical to the world in which the entailed resulting state exists.[63] The existence entailment of the state in imperfective and non-culminating neutral inchoatives is parallel to problematic existence entailments of entities in cases like *John was building a house*, which does not entail that *John built*

[62] Nsyilxcn suffix *-wilx* acts similarly to an inchoative, but it co-occurs with other types of inchoative-marking, it cannot be used with a bare CoS root (unlike 'true' inchoatives), and ambiguously yields culminating/non-culminating readings. Nsyilxcn *-wilx* may be category-neutral, unlike St'át'imcets *-wil̓x.* For St'át'imcets *-ʔ-/-p,* assuming (85b) would require a causative analysis of CoS roots similar to Davis and Demirdache (1997), and the Nsyilxcn CoS root analysis advanced in this paper. I actually discuss evidence against this approach in Section 4, which if correct, may end up removing this cross-linguistic argument as a plausible motivator for an inchoative ambiguity, pending work on other Salish languages.

[63] The effect of inertia worlds *may possibly* manifest in a preference for habitual rather than in-progress readings of imperfective inchoatives in cases where the expected culmination is cancelled.

(v) a. kn **cx̌áq̓əq̓** t spiʔsc̓íɬt, náx̌əmɬ lut kn t̓ **x̌áq̓əq̓**.
Target: 'I was getting paid yesterday, but then I didn't.'
Actual: 'I get paid yesterday (e.g., on Fridays), but I didn't get paid.'
(Delphine Derickson Armstrong)

b. iʔ siwɬkʷ **cc̓xʷ•axʷ**, nax̌əmɬ lutiʔ t̓a **cc̓axʷ**.
Target: 'The water is spilling but it isn't spilled yet.'
Actual: 'Water spills, but it isn't spilled yet.' (Delphine Derickson Armstrong)

a house, and thus does not entail that the house exists, at least relative to the actual world. Since the problem rests more generally with the analysis of imperfectives, I assume the semantics in (85).

In sum, Nsyilxcn inchoative predicates derived from adjectives and CoS roots are semantically causative, as evidenced by their co-occurrence with instrumental adjuncts. Given that homogenous S-level adjectives are not causative, and do not encode a CoS, the inchoative marker must be introducing a BECOME and a CAUSE predicate to the adjectival base, which accords with Alexiadou et al.'s (2015) analysis of inchoative predicates as semantically causative, and also supports the general idea that inchoative verbs may be derived from stative adjectives (Parsons 1990; cf. Piñón 2001:361). Assuming that lexical categories in Nsyilxcn are semantically distinct from one another in the manner that I suggest (Section 2), and that inchoativity is a category-neutral operation, it follows that a semantic ambiguity is necessary for the inchoative. I have argued that the inchoative existentially closes the state argument in a CoS root, in an operation essentially opposite that of a target stativizer.

4 Cross-linguistic and historical considerations: comparing Nsyilxcn and St'át'imcets

St'át'imcets (Northern Interior Salish) differs from Nsyilxcn in several important ways: First, unaccusative CoS roots can be used in bare form (86a). Second, these co-occur with imperfective *wa7* (86b), yielding an in-progress reading of the event. Neither of these are possibilities in Nsyilxcn, as discussed in detail above.[64]

(86) a. mays ta=káoh=a.
get.fixed DET=car=EXIS
'The car got fixed.' (Carl Alexander, Henry Davis, p.c.)

b. wa7 mays ta=káoh=a.
IPFV get.fixed DET=car=EXIS
'The car is being fixed.' (Carl Alexander, Henry Davis, p.c.)

Contrasting the interpretations of (86a) and (86b), it seems possible that bare CoS roots in St'át'imcets only encode an event transition, not a result state (87).[65] With only one open event variable, there is no ambiguity as there is in Nsyilxcn, which predicts correctly that CoS roots can be used in bare form. Further, if CoS roots in St'át'imcets also contained state variables, the prediction is that (86b) might have a secondary, internal reading in addition to a durative reading, such that *The car has been fixed (temporarily)*, but this seems to be absent.

[64] Note that the interpretation of (86b) is equivalent to an imperfective inchoative in Nsyilxcn.

[65] Davis (2021) states that (87) "by default treats the core event argument *e* as a transition". By ruling out non-transitional and non-culminating eventualities from (87), this approach assumes an ontological distinction between *transitional* events and *non-transitional* eventualities/states without however instantiating this distinction within the type theory. In other words, (87) does not necessarily make any type-theoretic distinction between CoS roots and adjectives.

(87) $\lambda x \lambda e \lambda w$. [BECOME($P(x)(e)(w)$)] *St'át'imcets CoS root (Davis 2021)*[66]

Under this approach, the completive reading in (86a) is the result of a null perfective (88a), and the in-progress reading in (86b) results from imperfective *wa7* (88b).

(88) a. $[\![mays]\!] = \lambda t \lambda w.\exists e[\text{BECOME}(\text{fixed}(x)(e)(w)) \wedge \tau(e) \subseteq t]$

b. $[\![wa7\ mays]\!] = \lambda t \lambda w.\exists e[\text{BECOME}(\text{fixed}(x)(e)(w)) \wedge t \subseteq \tau(e)]$

Next, the St'át'imcets stative marker *es-* (89a), which although cognate with Nsyilxcn stative *c-*, has been claimed by Davis et al. (2020) to derive a resultant state, rather than a target state (Kratzer 2000). Unlike Nsyilxcn imperfective *c-*, St'át'imcets imperfective *wa7* is compatible with stative *es-*, yielding an in-progress reading of the resulting state (89b), including habitual readings (not shown). Note that (89b) includes the 'internal' reading missing from (86b).

(89) a. es-máys ta=káoh=a.
STAT-get.fixed DET=car=EXIS
'The car has been fixed.' (Carl Alexander, Henry Davis, p.c.)

b. wa7 es-máys ta=káoh=a.
IPFV STAT-get.fixed DET=car=EXIS
'The car has been fixed.' (temporarily, at least) (Carl Alexander, Henry Davis, p.c.)

Stative *es-* forms clearly involve a stative component. If a stative argument is not part of the event structure of a bare CoS root in St'át'imcets, then it must be introduced by the stative marker.[67] Kratzer's resultant stativizer could be modified to *introduce* a stative argument via CAUSE to an eventive predicate (90). Applied to a bare root like *mays*, *es-* yields (91a). Imperfective *wa7* then targets the stative variable yielding an internal reading (91b).[68]

(90) $[\![es\text{-}]\!] = \lambda P_{\langle s,t \rangle} \lambda t \lambda s \exists e[P(e)(w) \wedge \text{CAUSE}(e,s)(w) \wedge \tau(e) < t]$ *resultant stativizer*

(91) a. $[\![esmays]\!] = \lambda t \lambda s \lambda w \exists e$ [BECOME(fixed(x)(e)(w)) $\wedge$ CAUSE(e,s)(w) $\wedge$ $\tau(e) < t$]

b. $[\![wa7\ esmays]\!] = \lambda t \lambda w \exists s \exists e$ [BECOME(fixed(x)(e)(w)) $\wedge$ CAUSE(e,s)(w) $\wedge$ $\tau(e) < t$ $\wedge$ $t \subseteq \tau(s)$]

St'át'imcets shows that there is no inherent incompatibility between imperfectivity and statives in Salish languages, although Nsyilxcn and St'át'imcets differ in this respect.

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[66] Davis (2021) does not explicitly utilize a BECOME predicate, representing the CoS root *mays* instead as *λxλeλw.[get.fixed(x)(e)(w)]*, but I understand this to be a notational variant of *λxλeλw.[BECOME(fix(x)(e)(w))]*, which I instead use for the sake of consistency.

[67] It is critical to include a separate stative argument to derive the difference between (86b) and (89b): An alternate to (91b) which included *only* an event variable would result in contradictory $\tau(e) < t \wedge t \subseteq \tau(e)$.

[68] Example (89a) may also involve a null perfective, parallel to (86a), though I abstract away from this for brevity.

Next, consider that imperfective *wa7* can also occur with adjectives (92), similarly to Nsyilxcn imperfective *c-*.

(92) wa7 uqw7ál'men ta=máw=a.
IPFV thirsty DET=cat=EXIS
'The cat is thirsty.' (Carl Alexander, Henry Davis, p.c.)

The fact that imperfective *wa7* occurs with both resultant states (89b) and adjectives (92) is evidence for treating adjectives ontologically as states (93a,b), especially considering that an ambiguity with imperfective *wa7* (94) is independently motivated by (86b, 89b).

(93) a. $[\![uqw7ál'men]\!] = \lambda x \lambda s \lambda w\ .\ [thirsty(x)(s)(w)]$

b. $[\![wa7\ uqw7ál'men]\!] = \lambda x \lambda s \lambda w\ .\ [thirsty(x)(s)(w)\ \&\ t \subseteq \tau(s)]$

(94) a. $[\![wa7_1]\!] = \lambda P \lambda t \lambda w \exists s\ .\ [P(x)(s)(w) \wedge t \subseteq \tau(s)]$ *imperfective states*

b. $[\![wa7_2]\!] = \lambda P \lambda t \lambda w \exists e\ .\ [P(x)(e)(w) \wedge t \subseteq \tau(e)]$ *imperfective events*

Interpretively, such an analysis seems close to the mark, and accurately characterizes the difference between St'át'imcets and Nsyilxcn with regards to statives and imperfectivity. For now, I do not address possible differences in inchoativity between the two languages.[69]

A question arises: why can *wa7* give imperfective readings of result states in St'át'imcets, but imperfective *c-* cannot in Nsyilxcn? It is possible that imperfectives only apply to *resultant* states, not *target* states. ʔayʔaǰuθəm target states, for example, resemble Nsyilxcn in that they are not compatible with imperfectivity (Marianne Huijsmans, p.c.). Consider that across Salish, imperfective states carry a sense of being 'temporary': this holds for imperfective S-level adjectives and imperfective resultant states in languages like St'át'imcets, and accounts for the infelicity of imperfective I-level states. Given that a target state is only true if it continues to affect its argument relative to a reference time, these may also be construed as temporary. The addition of an imperfective to a target state, therefore, contributes nothing new in the way of a basic in-progress reading, though there nevertheless remains a distinct absence of a habitual reading.

Given the semantic similarity between target stativity and imperfectivity, as well as the cognacy between St'át'imcets *es-* and Nsyilxcn *c-*, it is possible that historically **c-* shifted from deriving a resultant state to deriving a target state, and that this conditioned the eventual use of *c-* as an imperfective marker.[70] At the same time, stative event structure originally contributed by the stative prefix in St'át'imcets may over time have become reanalyzed as part of the lexical meaning of

[69] St'át'imcets inchoatives, unlike Nsyilxcn CoS inchoatives, appear to allow both culminated and non-culminated readings in the absence of imperfective *wa7* (Davis, p.c., 2023). For example, the CoS inchoative *ʕʷəlp*, which is presumably perfective, can mean either 'It burned' or 'It is burning'. (This ambiguity is removed in imperfective *waʔ ʕʷəlp*, which means 'It is/was burning'.) As such St'át'imcets inchoatives seem more similar to Nsyilxcn adjectival inchoatives, specifically. It is unclear to what extent, if any, the ambiguous interpretation of St'át'imcets CoS inchoatives may be due to the semantics of CoS roots in the language, or perhaps a category-neutral, neutral aspect marker.

[70] Though see an alternative possibility above in fn. 58.

unaccusative CoS roots in Nsyilxcn, accounting for the difference between CoS roots in St'át'imcets and Nsyilxcn: Since target states have both an event and a state variable, a shift in the semantics of the stativizer from target state-denoting to resultant state-denoting would require a concomitant shift in the semantics of CoS roots. Alternatively, and ultimately equivalently in terms of its semantic effect, a reanalysis of CoS roots as containing a stative argument may have forced a shift in the semantics of the stativizer.

Further comparative work on other Salish languages may help illuminate synchronic relations between imperfectivity and target versus resultant states, and diachronic shifts in the semantics of stativizers across the Salish language family.

5 Discussion and conclusion

5.1 Relevance for Salish linguistics

This paper has found that change-of state (CoS) roots can be distinguished from adjectives in Nsyilxcn by examining the distribution of two homophonous, yet semantically distinct, *c-* prefixes. Imperfective *c-* attaches to eventive predicates (excluding nouns and I-level adjectives): these all show tense-independent in-progress and habitual readings. A separate target stative *c-* prefix attaches to bare CoS roots. CoS roots in Nsyilxcn are bound: they cannot occur without some form of derivation, in contrast to equivalent unaccusative roots found in other Salish languages. In order to be used, CoS roots typically derive into either a target stative form (with stative *c-*) or else into an inchoative (through four possible morphological processes). There is likely a historical connection between the two *c-* prefixes, a connection which I have suggested may be reflected by the semantic similarity between imperfectivity and target stativity: the predicate must be true of an argument relative to a reference time.

There are implications here for our understanding of how the semantics of lexical classes and event structure root templates might vary across Salish languages. In particular, **(i)** for languages like Nsyilxcn, a causing event and event transition must be part of the templatic structure of a CoS root, in possible contrast to other Salish languages such as St'át'imcets, and **(ii)** adjectives in Nsyilxcn are best treated as denoting eventualities, an ontological class encompassing both events proper and states, rather than states specifically, as evidenced by the distribution of imperfectivity. This, again, is in possible contrast to other Salish languages. I review both of these points below.

Concerning (i), because both the inchoative and the imperfective require predicates with open event arguments in Nsyilxcn, neither will co-occur with a target state, whose event variable has been closed. In contrast, given that inchoativity closes the state argument of a CoS predicate, imperfectivity can then apply to the remaining event variable. Overall then, stative *c-* bleeds inchoativity and imperfectivity, while inchoativity bleeds stativity, paving the way for (im)perfectivity. The fact that CoS roots cannot take an imperfective without first being inchoativized strongly suggests that the event variable in the CoS root must first be *foregrounded in contrast* to an underlying stative argument: Many eventive predicates in Nsyilxcn take imperfectivity without needing their event variable to first be foregrounded, and so CoS roots should be no exception if this were the case, since if *e* is the only variable, it is by default foregrounded. Further evidence for an underlying stative argument, and an encoded CoS, comes from data showing that CoS roots, unlike adjectives, can occur with instrumental adjuncts in both stative and inchoative forms. Lastly, including both unbound event and state variables in the

template structure of Nsyilxcn CoS roots gives a plausible explanation for why they cannot be used in bare form: they are underspecified. This means that a simplex *e* analysis of CoS roots (87), similar to that advanced in Davis (2021) for St'át'imcets, will not suffice for Nsyilxcn. Overall, this means that while the Unaccusativity Hypothesis is upheld for Salish languages, Nsyilxcn being no exception, the semantics of bare unaccusative roots can vary across Salish languages. There are historical questions relating to this variation which I discussed in Section 4.

A distinction is therefore to be made between predicates over event(ualities), as a broad class which includes adjectives, and predicates over CoS events leading up to a resulting state, which includes CoS roots but excludes adjectives. I suggest that this distinction should be reflected straightforwardly in the semantic structure of adjectival and CoS root templates, and that a purely categorial analysis of the distribution of stative *c-* is insufficient. Although both CoS roots and inchoativized CoS roots are presumably verbal, the former take stative *c-* but not imperfective *c-*, while the latter take imperfective *c-* but not stative *c-*. The distribution of stative *c-* instead has a semantic explanation: it is sensitive to the presence of an underlying state argument (Kratzer 2000).

Concerning (ii), plain S-level adjectives in Nsyilxcn are best treated as ranging over ontological event(ualitie)s, which include states as a special sub-case. This approach is supported by the ability of S-levels to occur in the imperfective, in contrast to target statives, and accounts for their 'mutability', or ability to be construed as eventive in some contexts (N. Mattina 1996). S-level adjectives in St'át'imcets might, in contrast, best be analyzed as ontologically stative, especially given that both adjectives and resultant states can occur in the imperfective (see Section 4 above). Despite being eventive, S-level adjectives in Nsyilxcn do not encode any CoS, as shown in particular by their inability to take instrumental adjuncts which reference a causing event or manner adverbs which require a CoS. Additionally, there may be cross-Salishan differences in imperfectivity: while Nsyilxcn imperfective *c-* seems to apply only to eventive predicates, St'át'imcets *wa7* can also apply to stative predicates.

Last, I have proposed that the inchoative marker introduces a CoS semantic template to predicates which do not have them, entailing a result state, while for CoS roots which come prespecified with this template, the inchoative marker foregrounds the event variable by closing the state variable. I have suggested that this ambiguity may reflect a historical confluence of two separate inchoativizing strategies found across Salish languages.

5.2 Relevance for theory

The meaning and distribution of stativity and inchoativity in Nsyilxcn can be semantically accounted for by positing both *e* "event" and *s* "state" variables in the representations of CoS roots, following work by Kratzer (2000), Beavers and Koontz-Garboden (2020), and Yu et al. (2023). Kratzer (2000) analyzes some verbal stems in German as encoding both event and state arguments, and posits a target stativizer which closes the event variable, foregrounding a resulting state. Beavers and Koontz-Garboden (2020) analyze result roots in English as *underlyingly* stative, with their event variables existentially closed.[71] Yu et al. (2023) take a different approach, analyzing

[71] Their analysis is motivated by the absence of 'purely restitutive' state readings in the context of the presupposition trigger *again*: rather, the entire causing event is interpreted as having occurred twice (e.g., *John broke the plate again* entails that the event of breaking has occurred twice). In contrast, property concepts such as *enlarge* allow restitutive readings (e.g., *John enlarged the picture again* can be true if the original picture was shrunken, and then made large: i.e., there is only one event of enlarging, but two states

CoS roots in English as underlyingly eventive, with their state variables are existentially closed.[72]

I have argued that neither *e* nor *s* argument is underlyingly closed in an Nsyilxcn CoS root, making them similar to *underived* target state participle stems in German (Kratzer 2000). Being thus semantically underspecified, this accounts for their inability to be used in bare form. CoS roots themselves neither entail a CoS or a resulting state (95): these are dependent upon further derivation by the stative-marker, or by the inchoative.

(95) $\lambda x \lambda s \lambda e \lambda w$. [BECOME($P(x)(e)(w)$) ∧ CAUSE(e,s)(w)] *CoS root*

I claim that target stative *c-* requires an argument with both variables open, and it closes the event variable of a CoS root, foregrounding the target state (96a) (Kratzer 2000), yielding a predicate similar to an English CoS root under Beavers and Koontz-Garboden's (2020) analysis (97a). Nsyilxcn statives entail a culminated event, and consistently show internal readings. Inchoativity, which introduces event and state variables to predicates which do not already have them, existentially closes the state variable in a CoS root, foregrounding the event (96b), and yielding the equivalent of an English CoS root under Yu et al.'s (2023) analysis (97b). Inchoatives entail a resulting state, and consistently show durative readings.

(96) a. $\lambda R_{\langle s\langle s,t\rangle\rangle} \lambda s \exists e$. $R(s)(e)$ *target stativizer (Kratzer 2000)*
b. $\lambda R_{\langle s\langle s,t\rangle\rangle} \lambda e \exists s$. $R(e)(s)$ *inchoativizer (CoS roots)*

(97) a. $\lambda s \lambda w \exists e$. [BECOME($P(x)(e)(w)$) ∧ CAUSE(e,s)(w)] *target state*
b. $\lambda e \lambda w \exists s$. [BECOME($P(x)(e)(w)$) ∧ CAUSE(e,s)(w)] *inchoative*

This approach reflects the fact that inchoative and stative operations in Nsyilxcn are in complementary distribution, yet both operate on bare CoS roots.

Yu et al. (2023) divide English 'result roots' into two classes, property concept roots and CoS roots, which are distinguished by whether they can occur in the manner position of an English resultative construction. Nsyilxcn resembles English in the sense that adjectives (i.e., property concepts) and CoS roots are formally distinct, and that both adjectives and CoS roots allow 'result' readings, although the empirical facts which motivate the relevant arguments are different in the two languages, since Nsyilxcn lacks English-style resultative constructions (e.g., *John wiped the table clean*), and does not clearly show restitutive readings.

Overall, Nsyilxcn shows that the English data might be better explained by a more abstract analysis of English CoS roots than that profferred by Yu et al. (2023) or Beavers and Koontz-Garboden (2020): If English CoS roots can be analyzed similarly to underspecified Nsyilxcn CoS roots or underived German target state participle stems (Kratzer 2000), then they may have zero

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of being large). Initial tests indicate that the Nsyilxcn equivalent of English 'again', *nix*^{w}, may be non-presuppositional (see Davis & Matthewson 2022 on St'át'imcets *múta7* 'again'), which invalidates this as a test for restitutive readings.

[72] Their approach is motivated by data showing that temporal *for* PPs target the event (i.e., durative) component of a CoS root, rather than the stative (i.e., internal) component (e.g., *Susan broke the vase for 5 minutes* targets the duration of the breaking event, not the resulting state). See discussion on durative versus internal readings in Nsyilxcn in Section 3.2.

derivations into stative and eventive forms, supporting an analysis similar to Lieber (1980) who proposes that English and German adjectival participles contain a zero-stativizer.

Nsyilxcn provides support for an *ontological approach* to root distribution (Rappaport Hovav & Levin 1998), which holds that roots fall into different semantic classes and that this accounts for their distribution. Nsyilxcn also provides evidence against the *Bifurcation Thesis for Roots* (Embick 2009), which holds that event templates may not introduce event structural components which are independently found in roots: the adjectival version of the inchoative marker must introduce CoS semantics, which nevertheless exist independently in underived CoS roots.

Though many questions remain concerning the Nsyilxcn aspectual system, I have attempted in this paper to resolve some of the gaps in existing language documentation relating to imperfectivity, inchoativity, and the stative, and their semantic relations to the various lexical classes. The Nsyilxcn facts converge in interesting ways with existing work on other Salish languages, as well as wider theories of lexical aspect, states, and CoS roots.

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