

Imperfective, Nominalization (& Irrealis) in Okanagan (SULA 6)

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1 Goals

- Identify the aspectual morphology of (Nicola Lake) Okanagan
- Posit an explicit formal semantics for this aspectual morphology

2 *Nsɣlxcən* - the Okanagan Language

2.1 Okanagan and the Salish language family

A Southern Interior Salish language, *Nsɣlxcən* (also *Nsəlxcín*, Okanagan, Colville) (ISO 639-3: *oka*) is spoken by approximately 500 people (Ethonologue, 1977) in Washington and British Columbia.

file[106]

Novel data in this presentation come from field work with speakers of the Nicola Lake dialect (Quilchena & Douglas Lake, B.C.)

file[107]

2.2 Agreement

Okanagan has three predicative agreement paradigms, two of which are binary, i.e., they reference two arguments (N. Mattina, 1996; cf. [Appendix — Agreement Paradigms](#)).

Label	Arity	Transitivity
ergative	binary	transitive
genitive	binary	transitive/intransitive?
absolute	unary	intransitive

2.3 Transitivization

Like other Salish languages, Okanagan has suffixes affecting argument structure: transitivizers — *-nt*, *-t*, *-xt*, *-st*, *-(á)m* — which license one of the two binary agree-

ment paradigms and intransitivizers — *-m*, *-(mí)x*, *-(míx)aʔx*, *-p*, *-t* — which license the unary absolutive paradigm (cf. A. Mattina, 1973; N. Mattina, 1996; Davis, p.c.).

2.4 Nominalization

The nominalizing prefix *s-* (with cognates across Salish) derives nouns from verbs: compare *ʔitən* 'cat' to *səʔitən* 'food' (A. Mattina, 1973: 73).

2.5 Word order

The preferred word order is SVO, though VSO is also possible (Lyon, 2010).

3 The Problem

In Okanagan, putative modo-aspectual morphology exhibits puzzling co-occurrence restrictions with morphology that is normally identified with transitivization, nominalization and agreement.

The result is a tendency to identify modo-aspectual constructions not as individual dedicated morphemes but as particular *combinations* of the aforementioned morphemes (cf. the analyses of A. Mattina, 1993 and N. Mattina, 1996).

A satisfying morpho-semantic analysis of Okanagan aspect is further obstructed by what appears to be a high degree of functional overlap between the posited modo-aspectual constructions.

4 The Proposal

I argue that the numerous so-called aspectual distinctions of N. Mattina (1996) and A. Mattina (1993) should be reanalyzed by positing a highly underspecified tense \emptyset , a perfective/imperfective \emptyset/c - aspectual contrast, a nominalizer *s-* and an irrealis prefix *kʔ-*.

Nominalization via *s*-prefixation is argued to be the source of the alternations in binary agreement paradigms, i.e., ergative vs. genitive.

I argue that there is a high degree of functional overlap between *c*-prefixed and *s(ə)c*-prefixed predicates and that this can be explained by positing an imperfective marker *c-* that is common to both.

Assuming nominalizer *s* to be present in all prefixes containing [s] permits identification of *ks* (= *kʔ-s*) irrealis with the semantically similar nominal prefix *kʔ* 'N-to-be'.

4.1 Mattina (1993) & reanalysis of Dunham (2011)

Form	Label	Paradigm	Reanalysis
<i>-\emptyset/m</i>	completive	absolutive	perfective
<i>(a)c-...-\emptyset/m</i>	customary	absolutive	imperfective
<i>s-...-(mí)x</i>	perfect	absolutive	(nominalized perfective)

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Form	Label	Paradigm	Reanalysis
<i>səc-...-(mí)x</i>	imperfective	absolutive	nominalized imperfective
<i>ks-...-(míx)a?x</i>	inceptive	absolutive	irrealis nominalized
<i>ksc-</i>	past perfect	absolutive	(‘have’ + nom. impf.)
<i>s-...-∅/m</i>	completive	genitive	(nominalized perfective)
<i>sc-...-∅/m</i>	perfective	genitive	nominalized imperfective
<i>ks-...-∅/m</i>	future	genitive	irrealis nominalized
<i>ks-sc-...-∅/m</i>	future perfect	genitive	(irr. nom. impf.)
<i>k-c-...-∅/m</i>	future impera- tive	genitive	
<i>(a)c-...-st</i>	customary	ergative	imperfective

5 Data & Generalizations

I restrict my sphere of investigation to 4 classes of predicate, defined by prefixal shape:

- unmarked predicates (no prefixal material)
- *c*-prefixed predicates
- *s(ə)c*-prefixed predicates
- *ks*-prefixed predicates

I argue that the data to be presented support the following generalizations:

- the suffixes and agreement morphology are orthogonal to the semantic generalizations, such generalizations being attributable to prefixal morphology
- prefixes containing [s] pattern together in taking genitive agreement when transitive, supporting the positing of an *s*- prefix
- unmarked, *c*- and *s(ə)c*-prefixed forms have largely unconstrained temporal interpretations (past, present & future), supporting the idea that there is a highly underspecified covert tense
- *c*- and *s(ə)c*-prefixed forms exhibit readings characteristic of imperfectivity

5.1 Unmarked predicates

Morphologically, unmarked predicates have absolutive agreement when intransitive and ergative when transitive. Transitivity is marked by one of *-nt*, *-st*, *-t* or *-xt*.

Semantically, unmarked predicates have a wide range of temporo-aspectual meaning. With eventives a past occurrence is the preferred interpretation while with states speakers prefer reference to a present holding. However, also possible are reference to past, presently ongoing/holding, present habitual or future events/states. Interestingly, transitives appear to tolerate these less salient readings more than intransitives.

When modified by a subordinate temporal clause denoting a punctual event, the state or event of the matrix clause must be understood to begin at, but not before, the subordinate event.

Finally, the data indicate that unmarked accomplishments do not entail culmination (cf. Bar-el et al. 2005).

Test	Result
event at past time	√ (preferred)
state at past time	√
event at speech time	√ tr./ √/? intr.
state at speech time	√ (preferred)
event at explicit past time	√ inceptive/ X long telic
state at explicit past time	√ inceptive
event at future time	√ tr./ X? intr.
habitual event	√ tr./ X? intr.
accomplishment must culm.	X

5.1.1 Event at past time

The preferred interpretation of unmarked eventive predicates is reference to a past event (ref[742], ref[1065], ref[1049]).

- (1) *kən* *q̣^wiy?ilx*
kn q̣^wy-ilx
1SG.ABS dance-PR.TO
‘I danced’
- (2) *k^wu* *kiləntx^w*
k^wu kl-nt-x^w
1SG.ABS chase-CTR-2SG.ERG
‘You chased me’
- (3) *k^wulntəm* *i?* *citx^w*
k^wl-nt-m i? citx^w
make-CTR-1PL.ERG DET house
‘We built the house’

5.1.2 State at past time

Both unmarked individual-level (ref[912]) and unmarked stage-level (ref[877]) states can refer to past states of affairs.

- (4) *tiq^wəlq^w* *in^kikwa?*
tiq^wəlq^w in-k-kw?
tall 1SG.POSS-RED-grandfather
‘My grandfather was tall’
- (5) *kən* *ʕimt*
kn ʕim-t
1SG.ABS angry-STAT
‘I’m mad’
‘I was mad’

5.1.3 Event at speech time

Unmarked transitive predicates — be they activities (ref[762], ref[678]) or accomplishments (ref[915]) — are readily used refer to an event that is ongoing at the time of speech.

- (6) *caʔəntin* *John*
caʔ-nt-n John
hit-CTR-1SG.ERG John
‘I hit John’
‘I am hitting John’
- (7) *John maʔs* *iʔ* *lpot*
John maʔ-nt-s iʔ lpot
John break-CTR-3SG.ERG DET cup
‘John is breaking a cup’
- (8) *kʷu* *ʔiʔts* *inʔápəl*
kʷu ʔiʔ-t-s in-apəl
1SG.ABS eat-POSS-3SG.ERG 1SG.POSS-apple
‘He ate my apple’
‘He is eating my apple’

Present in-progress interpretation with unmarked intransitives, however, seems more variable: it is sometimes accepted (ref[300], ref[805]) and sometimes the judgment is unclear (ref[265]).

- (9) *John mánxʷum*
John maŋxʷ-m
John smoke-MID
‘John is smoking’
- (10) *kʷu* *ʔiʔn ta* *ʔapəl*
kʷu ʔiʔn t-iʔ apəl
1PL.ABS eat OBL-DET apple
‘We’re eatin’ apple’
‘We ate the apple’
- (11) *John ǵʷiyʔilx*
John ǵʷy-ilx
John dance-PR.TO
‘John danced’
‘?John is dancing’

5.1.4 State at speech time

The preferred interpretation of unmarked states is reference to a state that holds at the speech time (ref[255], ref[1142], ref[1294]).

- (12) *kʷ* *ʔiqʷəlqʷ*
kʷ ʔiqʷəlqʷ
2SG.ABS tall
‘you are tall’

- (13) *kən citx^w*
 kn citx^w
 1SG.ABS house
 ‘I am a house’
- (14) *k^wu anx̄mink*
 k^wu an-x̄m-ink
 1SG.ABS 2SG.POSS-like-stomach
 ‘You like me’

5.1.5 Event at explicit past time

When a temporal subordinate clause locates the event referred to by the matrix clause in the past, the matrix event can be understood as beginning *at* the subordinate event but not *before* it (ref[1162], ref[528]).

- (15) *ʔ cənʔuʔx^w Mary, kən ɔ̄^wyʔilx*
 ʔ c-n-ʔuʔx^w Mary kn ɔ̄^wy-ilx
 SUB CIS-LOC-enter Mary 1SG.ABS dance-PR.TO
 ‘When Mary came in, I danced’
 ‘When Mary came in, I started to dance’
 ‘*When Mary came in, I was already dancing’
- (16) *ʔ cinʔuʔx^w Mary, John k^wu ʔiʔts*
 ʔ c-n-ʔuʔx^w Mary John k^wu ʔi-ʔt-s
 SUB CIS-LOC-enter Mary John 1SG.ABS eat-POSS-3SG.ERG
inápəl
 in-apəl
 1SG.POSS-apple
 ‘When Mary come in, John ate my apple’
 ‘Mary came in and John ate the apple’

Interestingly, accomplishments denoting events with an inherently long process portion (ref[1185]) are infelicitous as matrix clause predicates in these constructions.

- (17) *#ʔ cənʔuʔx^w Mary, John k^wuʔs iʔ citx^w*
 ʔ c-n-ʔuʔx^w Mary John k^wʔ-nt-s iʔ citx^w
 SUB CIS-LOC-enter Mary John make-CTR-3SG.ERG DET house
 ‘When Mary came in, John built the house’
 ‘When Mary came in, John was building the house’

Speaker’s comment: *No that wouldn’t be a sentence because it ... the house won’t be built as fast as ... you know, it takes time to build a house so that wouldn’t be a ... a sentence.*

5.1.6 State at explicit past time

Parallel to the eventives above, states (at least stage-level ones) in matrix clauses modified by punctual temporal subordinate clauses also receive an inceptive interpretation (ref[1192]).

- (18) *uł ł cən?ułx^w John, ǰast i?*
uł ł c-n-?ułx^w John ǰs-t i?
 and SUB CIS-LOC-enter John good-STAT DET
spu?úsc
 s-pu?=us-s
 NOM-heart=eye-3SG.POSS
 ‘When John came in, she became happy’

One way to force the “was already happy” reading is via the auxiliary *way* ‘already’.

- (19) *way* *ti* *ǰast* *i?* *spu?úsc* *Mary*
way *ti* *ǰs-t* *i?* *s-pu?=us-s* *Mary*
 already EMPH good-STAT DET NOM-heart=eye-3SG.POSS Mary
ł cən?ułx^w John
ł c-n-?ułx^w John
 SUB CIS-LOC-enter John
 ‘Mary was happy before John came in’
 ‘Mary was already happy when John came in’

5.1.7 Event at future time

Unmarked transitive predicates can be used to express future events (ref[698], ref[1176]).

- (20) *iłtəmən* *anápəl*
 ?ł-łt-m-n an-apəl
 eat-POSS-2SG.ABS-1SG.ERG 2SG.POSS-apple
 ‘I ate your apple’
 ‘I’m gonna eat your apple’
- (21) *ǰáqəntsən*
 ǰq-nt-s-n
 pay-CTR-2SG.ABS-1SG.ERG
 ‘I’ll pay you’

However, when an unmarked intransitive predicate was offered with a future adverbial (ref[1137]; cp. *kn q^wc=qn-m* ‘I put on my hat’), the speaker corrected me with a *ks*-prefixed form (ref[1136]).

- (22) **ǰlap* *kn* *q^wacqnəm*
 ǰl=p kn q^wc=qn-m
 clear=base 1SG.ABS hat=head-MID
 ‘I will put on my hat tomorrow’
- (23) *ǰlap* *kn* *ksq^wacqna?x*
 ǰl=p kn kł-s-q^wc=qn-a?x
 clear=base 1SG.ABS IRR-NOM-hat=head-CON
 ‘I am gonna wear a hat tomorrow’

5.1.8 Habitual event

Unmarked intransitive predicates have variable results with respect to present habitual readings. An example from Mattina (1993) with a quantificational adverbial *niʕip* 'always' exhibits the reading (ref[601]) while examples I have elicited seem to disallow it (ref[633], ref[456]).

- (24) *niʕip* *i?* *l* *ʔasil* *scalkstásqət* *ki?* *kʷu*
 n-yʕip i? l ʔasil s-cl=kst=asqt ki? kʷu
 LOC-always DET LOC two NOM-five=hand=day that 1PL.ABS
ʕaḳ-əḳ
ʕḳ-ḳ
 pay-RED
 'We always get paid every second Friday'

- (25) *ki*, *John* *kʷulʔxʷ*
 kiy John kʷl-ʔxʷ
 yes John make-house
 'John built a house'
 '*John builds houses'

- (26) *kn* *ḳʷiyʔilx*
 kn ḳʷy-ilx
 1SG.ABS dance-PR.TO
 'I danced'
 '*I dance'

However, with transitive predicates the habitual reading appears to be available (ref[763], ref[523]).

- (27) *caʔəntin* *inkəkwap*
 caʔ-nt-n in-k-kwap
 hit-CTR-1SG.ERG 1SG.POSS-RED-dog
 'I hit my dog'
 '*I'm gonna hit my dog'
 'I always hit my dog'
 'I already hit my dog'

- (28) *itəmən* *anápəl*
 ʔt-ʔt-m-n an-apəl
 eat-POSS-2SG.ABS-1SG.ERG 2SG.POSS-apple
 'I ate your apple'
 'I eat your apple'
 'I'm gonna eat your apple'

5.1.9 Non-culminating accomplishments

Unmarked accomplishment predicates can refer to past events which never reach their inherent endpoint (ref[1298], ref[1299]).

(ref[1242], ref[639]).

- (31) *ixi? acq^wy?ilx*
ixi? ac-*q^wy*-ilx
that CUST-dance-PR.TO
'He dances'
- (32) *way[?] kn cpəxəm tə sʎa?cinəm*
way[?] kn c-pi^x-m t sʎa?cinm
yes 1SG.ABS CUST-hunt-MID OBL deer
'yes I hunt deer'
- (33) *ha k^w cnʎʎamcn*
ha? k^w c-n-*ʎʎ*m-cn
INTER 2SG.ABS CUST-LOC-thirsty-mouth
'Do you get thirsty?'
- (34) *kən cəy^{xwt} kən ʎa? cma?yám*
kn c-*?ay^{xwt}* kn ʎ-i? c-*m^y?-m*
1SG.ABS CUST-tired 1SG.ABS SUB-DET CUST-tell-MID
'I get tired when I tell stories'

With transitive forms the present habitual reading is also available and, as expected (cf. N. Mattina, 1996), the causative transitivizer *-st* is used (ref[918], ref[432]) where the control (or “directive”) transitivizer *-nt* is otherwise attested (cp. *?ʎ-nt-x^w* ‘you ate it’, *k^{wu} pič-nt-x^w* ‘you pinched me’).

- (35) *k^{wu} c?iʎsts in?ápəl*
k^{wu} c-*?iʎ*-st-s in-apəl
1SG.ABS CUST-eat-CAUS-3SG.ERG 1SG.POSS-apple
'He eats my apple'
- (36) *John pintk acpičists Mary*
John pintk ac-pi^č-st-s Mary
John always CUST-squeeze-CAUS-3SG.ERG Mary
'John always pinched Mary'
'John's always pinching Mary'
'John always pinches Mary'

5.2.1.2 Past habituals *c*-prefixed forms can also denote events characteristic of an individual at a *past* interval (ref[1301], ref[625]).

- (37) *ʎ q^sápi? tali? kn cəxəcám*
ʎ q^sápi? ta?li? kn c-*xəc*-m
SUB long.time very.much 1SG.ABS CUST-RED-gamble-MID
'Long ago I played a lot of bingo'
- (38) *ack^wálstən*
ac-k^wl-st-n
CUST-warm-CAUS-1SG.ERG
'I used to warm him up (all the time)'

5.2.2 Event at past time

c-prefixed predicates can be used to talk about past events (ref[274]).

- (39) *stīm ackīsc John tīspīscītt?*
 s-tīm ac-kīsc John s-pi?scītt
 NOM-what CUST-do? John NOM-yesterday
 ‘What was John doing yesterday?’

5.2.3 State at past time

States that held in the past can also be expressed via *c*-prefixed forms (ref[830]).

- (40) *q̇sápi? ċxmīnkstmən*
 q̇sápi? c-ḫm-īnk-st-m-n
 long.time CUST-like-stomach-CAUS-2SG.ABS-1SG.ERG
 ‘I used to like you’

5.2.4 Event at speech time

Predicates prefixed with *c* can express events that are in-progress at the time uttered (ref[862], ref[511]).

- (41) *kən cmaḫx^wm*
 kn c-maḫx^w-m
 1SG.ABS CUST-smoke-MID
 ‘I am smoking’
 ‘I smoke’
- (42) *kn cpiḫəm ti ṡl̇a?cīnəm*
 kn c-piḫ-m t-i? ṡl̇a?cīnm
 1SG.ABS CUST-hunt-MID OBL-DET deer
 ‘I’m hunting for deer’

5.2.5 State at speech time

c-prefixed stage-level stative predicates can locate the state at the speech time (ref[896]; cp. *kn ṡəc-ḡīm-t-x* ‘I’m mad’, *kn ḡīm-t* ‘I’m mad; I was mad’).

- (43) *kən cḡīm-t*
 kn c-ḡīm-t
 1SG.ABS CUST-angry-STAT
 ‘I’m mad’

Certain individual-level stative predicates with *c*-prefixation permit locating the state at the speech time (ref[1013]).

- (44) *cməystīn ask^wīst*
 c-my-st-n an-s-k^wīst
 CUST-know-CAUS-1SG.ERG 2SG.POSS-NOM-name
 ‘I know your name’

However, sometimes seemingly parallel constructions are rejected (ref[908]).

- (45) **kən* *ac-tiq^wəlq^w*
kn ac-tiq^wəlq^w
1SG.ABS CUST-tall
‘I am tall’
- (46) **kən* *acsqəl-tm̄x^w*
kn ac-s-qlt-tm̄x^w
1SG.ABS CUST-NOM-go.over-land
‘I am a man’
‘I am being a man’

5.2.6 Event at explicit past time

Modified by a subordinate punctual when-clause, clauses with *c*-prefixed predicates allow the *before* reading (ref[635], ref[529]).

- (47) *t* *cin?ułx^w* *Mary, ack^wułx^wum* *John*
t c-n-?ułx^w Mary ac-k^wł-łx^w-m John
SUB CIS-LOC-enter Mary CUST-make-house-MID John
‘When Mary came in, John was working on the house’
- (48) *Mary łicin?ułx^w,* *John k^wu* *ciłts*
Mary ł-c-n-?ułx^w John k^wu c-?ł-łt-s
Mary SUB-CIS-LOC-enter John 1SG.ABS CUST-cat-POSS-3SG.ERG
inápəl
in-apəl
1SG.POSS-apple
‘When Mary came in, John was already eating my apple’

5.3 *s(ə)c*-marked predicates

Morphologically, transitive *s(ə)c*-prefixed predicates have an *-(á)m* suffix where the *-nt* control transitivizer would otherwise be expected. The *-łt* possessional transitivizer is compatible with this aspectual construction, however it is always *followed* by the *-(á)m* suffix. Transitive *s(ə)c*-prefixed predicates agree with their two arguments via genitive paradigm morphology. The transitivity of genitive *s(ə)c*-prefixed forms is supported by DP objects (cf. (ref[675]) below).

Intransitive *s(ə)c*-prefixed predicates take the intransitivizing suffix *-(m)łx*, the alternation being conditioned phonologically by the strength of the root, i.e., the presence of an underlying full vowel. Agreement is with the absolutive paradigm.

Semantically, *s(ə)c*-prefixed predicates have interpretation patterns very similar to *c*-prefixed ones. However, while the present habitual reading is available, *s(ə)c*-prefixed eventive predicates are most readily employed in the expression of events ongoing at the utterance time. These forms can also be used to refer to events already in progress at a past reference time. The readings with stative predicates are parallel: presently holding and holding already at a past interval.

Test	Result
event at past time	√ (Eng Prog)
state at past time	√
event at speech time	√ (preferred)
state at speech time	√ S-level/ X I-level/nom
event at explicit past time	√ before
state at explicit past time	√ already/before
event at future time	? (futate imperfective?)
habitual event	√

5.3.1 Event at past time

sc-prefixed eventive predicates can refer to a past event (ref[1160]).

- (49) *kən səcqʷyʔilxəx t skeklaxʷ*
 kn s-c-ǰʷy-ilx-x t s-k-klaxʷ
 1SG.ABS NOM-CUST-dance-PR.TO-CON OBL NOM-RED-late
 ‘I was dancing last night’

5.3.2 State at past time

sc-prefixed stage-level predicates can refer to states that held in the past, as in (ref[343]) where the state provides contextual “background” information for the events to come.

- (50) *iʔ tətʷit səcʔaymtx ut*
 iʔ tətʷit s-c-ʔim-t-x ut
 DET boy NOM-CUST-angry-STAT-CON and
cəqamis iʔ lpot, ut maʔs
 cǰ-m-nt-s iʔ lpot ut maʔ-nt-s
 hit.throw-ST.FO-CTR-3SG.ERG DET cup and break-CTR-3SG.ERG
 ‘The boy was mad and he threw the cup and he broke it’

5.3.3 Event at speech time

sc-prefixed predicates, whether intransitive or transitive, are most often used to express events in progress at the speech time.

- (51) *kən scmañxʷəx*
 kn s-c-mañxʷ-x
 1SG.ABS NOM-CUST-smoke-CON
 ‘I am smoking right now’

- (52) *wayʔ ixíʔ səcxʷuyx*
 wayʔ ixíʔ s-c-xʷuy-x
 yes that NOM-CUST-go-CON
 ‘He’s going’

- (53) *kən səcpəǎx tə sʰaʔcínəm*
 kn s-c-piǎ-x t sʰaʔcínm
 1SG.ABS NOM-CUST-hunt-CON OBL deer
 ‘I am hunting deer’
 ‘I am hunting a deer’
- (54) *kʷ isccʔám*
 kʷ in-s-c-ʔ-m
 2SG.ABS 1SG.POSS-NOM-CUST-hit-MID
 ‘I am hitting you’
- (55) *kʷu scʔitəms inʔápəl*
 kʷu s-c-ʔit-m-s in-apəl
 1SG.ABS NOM-CUST-cat-POSS-MID-3SG.POSS 1SG.POSS-apple
 ‘He is eating my apple’

5.3.4 State at speech time

Stage-level stative predicates prefixed by *s(ə)c-* reference a state that holds at the speech time.

- (56) *kən səcʔimtx*
 kn s-c-ʔim-t-x
 1SG.ABS NOM-CUST-angry-STAT-CON
 ‘I’m mad’
- (57) *kən səcʔimtx ʔapnáʔ*
 kn s-c-ʔim-t-x ʔapnáʔ
 1SG.ABS NOM-CUST-angry-STAT-CON now
 ‘I’m mad right now’

Individual-level stative predicates are ungrammatical with *sc-*prefixation (ref[259], ref[884]).

- (58) **John sectiqʷəlqʷx*
 john s-c-ʔiqʷəlqʷ-x
 john NOM-CUST-tall-CON
 ‘John is being tall’
 ‘John is tall’
- (59) **kən səcqeltmixʷəx*
 kn s-c-qlt-tmxʷ-x
 1SG.ABS NOM-CUST-go.over-land-CON
 ‘I am a man’
 ‘I am being a man’

5.3.5 Event at explicit past time

When modified by a subordinate temporal clause denoting a punctual event, *s(ə)c-*prefixed eventives have a *before* interpretation (ref[1183], ref[935]).

- (60) *t cənʔuɫx^w Mary, scq^wyʔilxəx John*
‡ c-n-ʔuɫx^w Mary s-c-ǰ^wy-ilx-x John
 SUB CIS-LOC-enter Mary NOM-CUST-dance-PR.TO-CON John
 ‘When Mary came in, John was dancing’
- (61) *kən †a? cənʔuɫx^w k^wu*
kn †a? c-n-ʔuɫx^w k^wu
 1SG.ABS when CIS-LOC-enter 1SG.ABS
ascʔittəm inʔápəl
an-s-c-ʔ†-t-m in-apəl
 2SG.POSS-NOM-CUST-cat-POSS-MID 1SG.POSS-apple
 ‘When I came in, you were eating my apple’

5.3.6 Event at future time

Future events appear expressible via *s(ə)c*-prefixed forms (ref[1159]).

- (62) *kən səcǰ^wyʔilxəx*
kn s-c-ǰ^wy-ilx-x
 1SG.ABS NOM-CUST-dance-PR.TO-CON
 ‘I’m dancing’
 ‘?I’m dancing (tomorrow night)’
 ‘I was dancing (last night)’

Speaker’s comment: *Even talking about it the night before, say.*

5.3.7 Habitual event

As with *c*-prefixed forms, *sc*-prefixed predicates can have a present habitual interpretation (ref[634]).

- (63) *ki, John səck^wuɫx^wəx*
ki John s-c-k^w†-ɫx^w-x
 yes John NOM-CUST-make-house-CON
 ‘Yes, John makes houses’

5.4 *ks*-marked predicates

Morphologically, *ks*-prefixed predicates pattern almost exactly as *s(ə)c*-prefixed ones. The sole difference is that intransitives take the *-(mix)aʔx* suffix, whose alternations are phonologically conditioned in the same way as the *(mi)x* suffix of *s(ə)c*-prefixed forms.

Semantically, *ks*-prefixed predicates are used primarily to express future events. However, a variety of unrealized event types in the past or future are also expressed via this construction: conatives, desideratives, obligations, futurate requests, under the non-factive verb *ǰmink* ‘want’ and as complements of *kiʔkam* ‘almost’.

Test	Result
event/state at future time	√ (preferred)
conative	√
desiderative	√
obligation	√
under non-factive	√
futurate request	√
under 'almost'	√

5.4.1 Event or state at future time

Intransitive eventive *ks*-prefixed predicates are commonly employed in the expression of future situations (ref[858], ref[1274], ref[1272]).

- (64) *kən ksmánx^waʔx*
kn kʃ-s-mánx^w-aʔx
1SG.ABS IRR-NOM-smoke-CON
‘I’m gonna smoke’
- (65) *ksq^waʔq^w?almíxaʔx iʔ səx^wk^wənk^wíh^wmaʔm iʔ*
kʃ-s-q^wl-q^wl-míxaʔx iʔ sx^w-k^wn-k^wn-maʔ-m iʔ
IRR-NOM-RED-talk-CON DET AG.NOM-RED-try-LS-MID DET
l scəlkstásqət iʔ kəl silmx^wítx^w
l s-cl-kst-asqət iʔ kʃl s-ylmx^w-tx^w
LOC NOM-five-hand-day DET to.where NOM-chief-house
‘There will be a council meeting on Friday at the band office’
- (66) *k^wu ksnʔíysaʔx t*
k^wu kʃ-s-n-ʔys-aʔx t
1PL.ABS IRR-NOM-LOC-buy-CON OBL
nčx^wiwl^wtən iʔ kʃl púyxəntət
n-čx^w-iwl^w-tn iʔ kʃl pʏ-xn-tət
LOC-pour-conveyance-INSTR DET to.where wrinkled-foot-1PL.POSS
‘We are going to buy some gas for our car’

Transitive eventive *ks*-prefixed predicates also regularly exhibit a future interpretation (ref[850], ref[815]).

- (67) *k^w iksíwst^m anlkapí*
k^w in-kʃ-s-síwst-m an-lkapí
2SG.ABS 1SG.POSS-IRR-NOM-drink-MID 2SG.POSS-coffee
‘I’m gonna drink your coffee’
‘I am going to drink your coffee’
- (68) *iksq^yám iʔ puk^w*
in-kʃ-s-q^y-m iʔ puk^w
1SG.POSS-IRR-NOM-write-MID DET book
‘I’m gonna write a book’
‘I’m gonna write that book’

ks-prefixed stative predicates can refer to future states of affairs (ref[914]).

- (69) *i?* *sn?ima?t* *ks?iq^wəlq^wa?x*
i? *s-n-?m?t* *kł-s-tiq^wəlq^w-a?x*
 DET NOM-LOC-grandchild IRR-NOM-tall-CON
 ‘My grandson is gonna be tall’

5.4.2 Other uses of *ks*-prefixed predicates

ks-prefixed predicates have various other functions. The semantic core of all these uses (including the futurate uses above) seems to be probability or possibility, suggesting a modal analysis is appropriate.

5.4.2.1 Conative A *ks*-prefixed predicate can refer to a past, unsuccessful attempt at a P event (ref[1229]).

- (70) *way?* *ks?ácqa?x*
way? *kł-s-?ácqa?-x*
 yes IRR-NOM-go.out-CON
 ‘He tried to get out’

5.4.2.2 Deontic modality Sometimes *ks* is used to express deontic necessity (ref[1177]).

- (71) *uł* *lut* *k^wu* *íə* *ks?áqəntp,* *uł* *way?*
uł *lut* *k^wu* *íə* *kł-s-?áq-nt-p* *uł* *way?*
 and NEG 1SG.ABS EMPH IRR-NOM-pay-CTR-2PL.ERG and yes
ixí? *k^wu* *?áqəntp*
ixí? *k^wu* *?áq-nt-p*
 that 1SG.ABS pay-CTR-2PL.ERG
 ‘You don’t have to pay me, you have paid me already’

5.4.2.3 Embedded under non-factives *ks*-prefixed predicates can be complements of the non-factive verb *šmink* ‘want’ (ref[1123]).

- (72) *lut* *inšmink* *iks?áq^wy?ilx*
lut *in-šm-ink* *in-kł-s-?áq^wy-ilx*
 NEG 1SG.POSS-like-stomach 1SG.POSS-IRR-NOM-dance-PR.TO
 ‘I don’t want to dance’

5.4.2.4 Desideratives *ks*-prefixed predicates can express a desired state of affairs (ref[1303]).

- (73) *lut* *íə* *cmystin* *uł* *kən*
lut *íə* *c-my-st-n* *uł* *kən*
 NEG EMPH CUST-know-CAUS-1SG.ERG and 1SG.ABS
ksmí?m^ya?ncúta?x
kł-s-m^y?-m^y?-ncut-a?x
 IRR-NOM-RED-teach-REFL-CON
 ‘I don’t know anything, but I would like to teach myself’

5.4.2.5 Future with the force of a request The *ks*-prefixed predicates in (ref[1303]) have desiderative meaning.

- (74) *uc kwu ksq^wiy?il?xa?x?*
 uc kwu kł-s-q^wy-ilx-a?x
 DUB 1PL.ABS IRR-NOM-dance-PR.TO-CON
 ‘Can we dance?’

5.4.2.6 Counterfactuals Example (ref[1300]) shows an apparent counterfactual conditional where the consequent is *ks*-prefixed but the antecedent is not.

- (75) *k^w t ?ilən t stim, naǰəmł lut i*
 k^w t ?łn t s-trm naǰmł lut tō
 2SG.ABS SUB eat OBL NOM-what but NEG EMPH
aks?ilx^wt
 an-kł-s-?ilx^w-t
 2SG.POSS-IRR-NOM-hungry-STAT
 ‘If you ate something you wouldn’t be hungry’

5.5 Summary of the Morphological Generalizations

Unmarked and *c*-prefixed predicates pattern together morphologically in contrast to *s(ə)c*- and *ks*-prefixed predicates.

Test	∅	<i>c</i> -	<i>s(ə)c</i> -	<i>ks</i> -
contains [s]	X	X	√	√
unary agreement	abs	abs	abs	abs
unary suffixes	∅, <i>m</i>	∅, <i>m</i>	(<i>m</i>) <i>x</i>	(<i>m</i>) <i>x</i> <i>a</i> ? <i>x</i>
binary agreement	erg	erg	gen	gen
binary suffixes	<i>nt</i> , <i>st</i>	<i>st</i>	(<i>á</i>) <i>m</i>	(<i>á</i>) <i>m</i>
binary patient argument	DP	DP	DP	DP

5.6 Summary of the Semantic Generalizations

Test	∅	<i>c</i> -	<i>s(ə)c</i> -	<i>ks</i> -
event at past time	√ (p)	√	√	
state at past time	√	√	√	
event at speech time	√ (tra)	√	√ (p)	√ (fut)
state at speech time	√ (p)	√	√ (s-l)	
event at explicit past time	√ (inc)	√ (bef)	√ (bef)	
state at explicit past time	√ (inc)		√ (bef)	
event at future time	√ (tra)			√ (p)

... continued on next page

Test	∅	c-	s(ə)c-	ks-
habitual event	√ (tra)	√ (p)	√	
accomplishment must culm.	X			

6 Analysis

6.1 Null underspecified tense

In order to account for the past, present and future interpretations available to unmarked predicates, I posit a null, indexical, highly underspecified tense (cf. Kratzer, 1998; Matthewson, 2003).

$\emptyset.tns\ g,c$ is only defined if c provides an interval t ; if defined, then $\emptyset.tns\ g,c = t$

The data I have presented are compatible with a more radical “complete vagueness” claim (cf. Matthewson, 2003), i.e., where a clause can refer to an event with temporal location unrestricted by intervals salient in the context. In order to exclude this possibility, I need to test discourses like the following and ensure that B’s second clause cannot refer to a future showering event:

A: *Why are you so wet?*

B: *I just RUN a marathon; I TAKE a shower*

And, of course, for completeness I would also need to rule out a tenseless analysis where existential closure over times would bind the time variable introduced by aspect. That is, I should ensure that an Okanagan analog of *I not TURN OFF the stove* does not express (a) that I have never turned off the stove in my life or (b) that there is some interval in my life where no stove-turning-off events took place (cf. Partee, 1973; Matthewson, 2003).

Provisionally, then, I assume the stated analysis of a null, highly underspecified tense morpheme since it predicts the wide range of interpretations of unmarked predicates.

6.2 Null perfective aspect

I posit a null perfective prefix as a function from sets of events to sets of times, i.e., a standard neo-Reichenbachian denotation (Kratzer, 1998) which situates the runtime of the event within a reference interval:

$\emptyset.pfv = \lambda P.\lambda t.\lambda w. e[(e) t P(e)(w)]$

Assuming that near-instantaneous-event-denoting when-clauses (cf. (ref[1162])) set a maximal duration on the matrix clause reference time, the above denotation accurately predicts the inceptive readings of unmarked activity predicates. That is, assuming some vagueness, it is plausible that some portion of a dancing event occurred during the time it took for Mary to enter. Since dancing events typically last longer than entering ones, the speaker reasons that the dancing continued, hence the inceptive interpretation.

- (76) \ddagger $c\acute{a}n?u\acute{x}^w$ *Mary, k\acute{a}n* $\acute{q}^w y?i\acute{l}x$
 \ddagger $c-n-?u\acute{x}^w$ *Mary kn* $\acute{q}^w y-i\acute{l}x$
SUB CIS-LOC-enter *Mary* 1SG.ABS *dance-PR.TO*
‘When Mary came in, I danced’
‘When Mary came in, I started to dance’
‘*When Mary came in, I was already dancing’

That the *before* reading is not available with these constructions would have to be explained by appealing to a pragmatic blocking principle brought about by the availability of a more appropriate construction, namely the imperfective.

An potentially plausible alternative to the null perfective analysis would be to posit a null neutral aspect (Smith, 1991). That is, a denotation that constrains the reference time to contain the initial point of the event and at least one internal stage (cf. Schilder, 1995). However, a neutral aspect analysis would, unlike the perfective analysis, incorrectly predict the acceptability of accomplishments of inherently long duration in these constructions (ref[1185])

- (77) #*t cən?uɫx^w Mary, John k^wuɫs i? citx^w*
 † *c-n-?uɫx^w Mary John k^wɪ-nt-s i? citx^w*
 SUB CIS-LOC-enter Mary John make-CTR-3SG.ERG DET house
 ‘When Mary came in, John built the house’
 ‘When Mary came in, John was building the house’

6.3 Imperfective *c*

The salient event-in-progress and habitual readings of *s(ə)c-* and *c-*prefixed forms respectively suggest that *c* is a standard imperfective (Comrie, 1976). That is, we might posit a neo-Reichenbachian imperfective denotation for *c* as follows (cf. Kratzer, 1998).

$$c = \lambda P.\lambda t.\lambda w. c[(e) \ t \ P(e)(w)]$$

With this denotation and with reasoning analogous to that spelled out above, we can explain the *before* readings available to *c-* and *s(ə)c-*prefixed predicates in examples like (ref[635], ref[1183]).

- (78) † *cin?uɫx^w Mary, ack^wuɫx^wum John*
 † *c-n-?uɫx^w Mary ac-k^wɪ-ɫx^w-m John*
 SUB CIS-LOC-enter Mary CUST-make-house-MID John
 ‘When Mary came in, John was working on the house’

- (79) † *cən?uɫx^w Mary, scq^wy?ilxəx John*
 † *c-n-?uɫx^w Mary s-c-ɟ^wy-ilx-x John*
 SUB CIS-LOC-enter Mary NOM-CUST-dance-PR.TO-CON John
 ‘When Mary came in, John was dancing’

6.4 Habituality, imperfectivity and nominalization

As is well-known, the above denotation for imperfectivity, while it captures the event-interval ordering facts (i.e., the event-in-progress reading), fails to capture the other salient reading commonly attributed to imperfective constructions, namely the habitual reading.

Deo (2010) proposes a denotation for imperfective designed to capture at least these two readings. Given that Okanagan *s(ə)c-* and *c-* exhibit the habitual reading and the event-in-progress reading, a more sophisticated analysis of imperfectivity along these lines is desirable.

Deo’s (2010) analysis builds on the intuition that the imperfective involves universal quantification (cf. also Bonomi, 1997) and makes use of the branching time semantics of Thomason (1970).

$IMPF = \lambda P.\lambda i. h[h \ H.i.inr \ j[i \ .ini \ j \ k[k \ R.j.c \ COIN(P,k,h)]]]$

where:

- IMPF is a function from properties of events to properties of intervals
- H.i.inr is the set of inertial futures (or histories) of i
- .ini is the initial subinterval relation
- COIN(P,k,h) is the coincidence relation holding between a predicate P of events, an interval k and an inertial history h such that $\exists e[P(e) \ \text{time}(e) \ o \ i \ \text{time}(i) \ h]$
- R.j.c is a regular partition of the interval j: a partition of a set into collectively exhaustive, non-overlapping, equimeasured sub-sets, the length of such subsets being contextually determined; e.g., {12:00-12:05, 12:05-12:10, 12:10-12:15} would be a regular partition of $j = 12:00-12:15$.

In prose, $\square IMPF(P)(i) \square = 1$ iff every (suitably restricted) history h continuing i contains a j where i is an initial subinterval of j and every subinterval k of j that is also a cell of a contextually provided regular partition of j overlaps with a P interval

In general, the longer the interval provided by context, the greater the size of each partition of j and the result is a habitual reading. E.g., if the partition length is 1 week, then *John acq^yilx* will be true if there is an event of John dancing within every week-long partition of every inertial future that begins at the reference time. Deo (2010) argues that the event-in-progress reading arises when the partitions are contextually specified as infinitesimally small.

The denotation of the progressive, according to Deo (2010), is nearly identical to the imperfective except that the partitions are *lexically* specified as infinitesimally small.

6.5 So what?

Observation: *s*(*a*)*c*-prefixed predicates look like progressives while *c*-prefixed predicates look like imperfectives. If an progressive/imperfective-as-involving-universal-quantification approach is on the right track, then we should adopt Deo's analyses of these two constructions for these two constructions. However, if the morphological analysis proposed here is correct and the nominalizer *s* is responsible for the "progressivization" of an imperfective morpheme then we are faced with two difficult consequences:

- a rather ad hoc (Okanagan-specific) semantics for nominalization
- implications for the development of grammatical aspectual morphemes that go against the typological diachronic generalization that progressives generalize to imperfectives and not the other way around, which is what the analysis of Okanagan presented here implies (Dahl, 1985)

7 Thanks

I would like to thank the elders of the Upper Nicola who have graciously shared their knowledge with me and without whom none of this could have been accomplished.

All errors in the data are my own.

8 Appendix — Agreement Paradigms

8.1 Ergative Paradigm

8.1.1 Subject

1	-form(11)(n)	-form(26)(m)
2	-form(12)(x ^w)	-form(27)(p)
3	-form(10)(s/m)	-form(28)(s-lx/m-lx)

- With some verbs the ergative subject suffix is preceded by 'i'.

8.1.2 Object

1	k ^w u _̣	k ^w u _̣
2	-s/-(ú)m	-s/-(ú(l))m
3	∅	-lx

- Note: 2nd person ergative object suffixal alternations apparently conditioned by the transitivizer

8.2 Genitive Paradigm

8.2.1 Subject

1	in-	-tət
2	an-	-əmp
3	-s	-s-lx

8.2.2 Object

1	k ^w u _̣	k ^w u _̣
2	k ^w _̣	p _̣
3	∅	-lx

8.3 Absolute Paradigm

1	kṇ	k ^w ụ
2	k ^w ̣	p̣
3	∅	-lx

8.4 Possessive Paradigm

1	in-	-tət
2	an-	-əmp
3	-s	-s-lx