Statives in ʔayʔaǰuθəm and St'át'imcets

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The puzzle:

Both ʔayʔaǰuθəm and St'át'imcets have a morpheme that has been glossed 'stative' in previous literature.

[morpheme: a unit of sound-meaning correspondence, which may be a word or a part of a word. *cat* is a morpheme and the plural *s* in *cats* is also a morpheme]

- In ʔayʔaǰuθəm, this morpheme may be realized as a suffix *-ét* /-ít/ (1a), an infix *-é-* /-í-/ (1b), or a high tone with no segmental content (1c) (see Blake 2000:111, 174; Watanabe 2003:410; Mellesmoen & Huijsmans 2019).[1]

(1) *ʔayʔaǰuθəm*

	Active		**Stative**	
a.	təq	/təq/	təq**ét**	/təq-**ít**/
	'close'		'closed'	
b.	ƛəpxʷ	/ƛəpxʷ/	ƛəp**é**xʷ	/ƛəp<**í**>xʷ/
	'break'		'broken'	
c.	qʷomot	/qʷumut/	qʷo:mót	/qʷumút/
	'put in one's mouth'		'have/keep in one's mouth'	

- In St'át'imcets, the stative marker is a prefix *(ʔə)s-*.

(2) *St'át'imcets*

Active		**Stative**	
mays	/mays/	**(e)s**mays	/**(ʔə)s-**máys/
'get fixed'		'be fixed'	

[1] We use an accent above a vowel in ʔayʔaǰuθəm to refer to high tone, realized acoustically as raised pitch, following Mellesmoen and Huijsmans (2019). Blake (2000) and Watanabe (2003) describe the same prosodic contrast as involving stress placement or foot structure. In St'át'imcets, an accent above a vowel denotes stress.

In both languages, the stative is often associated with meanings which could be descriptively labeled ‘resultative’, but not always.

(3) a. *ʔayʔaǰuθəm*
Context: Picture of a man pushing on the wall of a shed that’s being built to keep it in place.
ǰu:θ**ótə**s tə laplaš.
ǰuθ-**út**-as tə=laplaš
push-**ctr<stat>**-3erg det=board
‘He’s holding the board up.’ (vf)

b. *St’át’imcets:*
T’ak áta7 saq’w ta haláw’a, **es**xím**s**as ta sts’úqwaz’a.
ƛ̓ak ʔáta7 saq̓ʷ ta=haláẅ=a **ʔəs**-x̣ím-**s**-as ta=sc̓úqʷaż=a
go.by to.there fly det=eagle=exis **stat**-clutch-**caus**-3erg det=fish=exis
‘An eagle went flying by, clutching a fish.’

Our two main research questions are:

1. What is the meaning of the stative morpheme in these languages?
2. Does the stative morpheme have the same contribution in each?

Our answer:

The stative morpheme in ʔayʔaǰuθəm combines with roots involving a change-of-state to denote a **TARGET STATE**: the potentially temporary state brought about by the event (Kratzer 2000:2,6).

- In *The window is closed*, *closed* is the target state participle of the verb *close*.

In St’át’imcets, the stative morpheme combines with bare roots to encode a **RESULT STATE**: the irreversible state of affairs which holds simply by virtue of an event having occurred (Kratzer 2000:2–3).

- In *The guests have been greeted*, *greeted* is the result state participle of the verb *greet*.

In ʔayʔaǰuθəm, the interpretation of the stative morpheme with transitive stems depends on the type of transitive: a **MAINTAINING STATE** reading results with control transitives, while causatives can have **TARGET STATE** or **MAINTAINING STATE** readings.

[transitive: a verb is transitive if it involves both someone/thing doing the action and someone/something the action is done to. *Broke* is transitive in *The child broke the lamp* because it has someone doing the action, *the child*, and something the action is done to, *the lamp*.]

[intransitive: a verb is intransitive if it only involves someone/something affected by the action, or someone/something doing the action, but not both. In *The lamp broke*, *broke* is intransitives because it only involves something affected by the action, *the lamp*, but no one doing the action.]

In St'át'imcets, the stative only combines with causatives and this combination also has a **MAINTAINING STATE** reading.

Outline of the talk: 1) Intransitive statives in ʔayʔaǰuθəm and St'át'imcets, 2) Transitive statives in ʔayʔaǰuθəm and St'át'imcets, and 3) Discussion of findings and future research

Part 1: Intransitive Statives

1.1 ʔayʔaǰuθəm Intransitive Statives

ʔayʔaǰuθəm statives built on bare roots are only possible when the root provides a **TARGET STATE** and this **TARGET STATE** holds at the reference time (the time the sentence is "about").

To test whether the target state had to hold at the reference time, we used short storyboards like that shown in Figures 1–7.

- We asked whether the stative form could be used for:
    1. Figure 4, at which point the target state holds (the cup is broken)
    2. Figure 7, at which point the target state no longer holds (the cup is no longer broken)

- Our results for the Broken Cup storyboard are given in (4). The stative form could be used to describe Figure 4, but not for Figure 7. It could only be used where the cup was still broken.

(4) *ʔayʔaǰuθəm:*

a. *Context: The cup is broken. (Figure 4)*
pi:ɬ**ɛ́t**.
piɬ**-ít**
get.shattered**-stat**
'It's shattered.' (sf)

b. *Context: The cup was broken but has been repaired. Cracks are visible. (Figure 7)*
pi:ɬ**ɛ́t**.
piɬ**-ít**
get.shattered**-stat**
'It's shattered.' (sf)

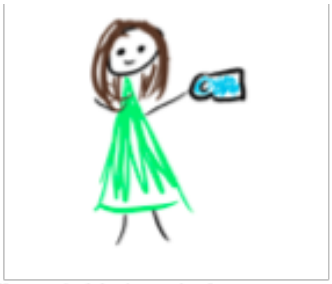

Figure 1: Marianne had a cup.

Figure 2: Marianne dropped her cup.

Figure 3: Marianne's cup broke.

Figure 4: The cup is broken.

Figure 5: Marianne picked up the pieces.

Figure 6: Marianne glued the cup together.

Figure 7: The cup is glued back together. ("Can you use the stative?")

Not all roots are compatible with the stative. The roots it combines with need to have a target state: a change of state or position affecting the argument beyond the completion of the event.

- We tried unsuccessfully to elicit a stative form for the root *ʔɛm-* /ʔim-/ 'to step' using the storyboard shown in Figure 8, for instance.

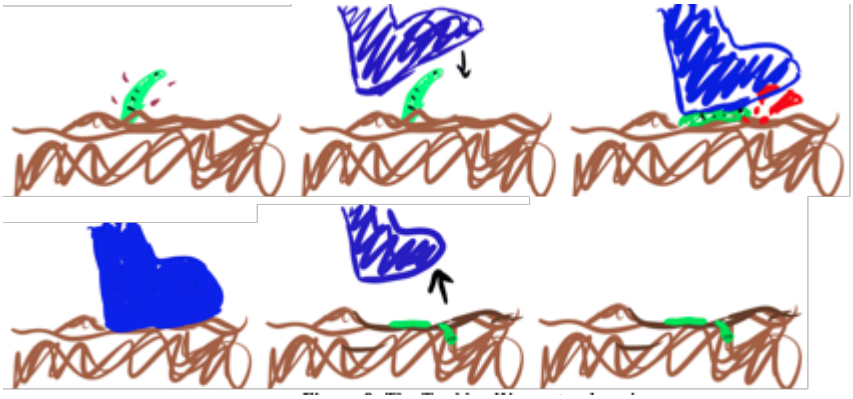

Figure 8: The Trodden Worm storyboard.

- Our results are given in (5). *ʔɛ:mét* /ʔimít/ could not be used to mean the worm was stepped on. Instead, *matɛ́k̓* /məṯ**<i>**k̓/ 'squished' was suggested as a better description.

(5) *ʔayʔaǰuθəm:*

Context: The worm has been squished (final two images in bottom right of The Trodden Worm storyboard in Figure 8)

a. * ʔɛ:m**ét** ṯ$^{\theta}$ɛṯ$^{\theta}$ɛk̓^{w}.
ʔim-**ít** ṯ$^{\theta}$iṯ$^{\theta}$ik̓^{w}
step-**stat** worm
'The worm is stepped on.' (sf)

b. matɛ́k̓ ṯ$^{\theta}$ɛṯ$^{\theta}$ɛk̓^{w}.
məṯ**<i>**k̓ ṯ$^{\theta}$iṯ$^{\theta}$ik̓^{w}
get.squished**<stat>** worm
'The worm is squished.' (vf)

- *ʔɛm-* /ʔim-/ only encodes the action of stepping, not a target state resulting from the event.

We conclude that ʔayʔaǰuθəm statives built on bare roots must be built on bare roots that encode target states and the target state must hold at the reference time for the form to be appropriately used.

1.2 St'át'imcets Intransitive Statives

Our findings for St'át'imcets are different. Using similar methodology, we found that St'át'imcets statives built on bare roots do not require a target state to hold at reference time.

- For instance, the Trodden Worm storyboard shown in Figure 8 was given an alternative ending, as shown in Figure 9.

Figure 9: Trodden worm escapes unscathed in The Trodden Worm Redux.

- In this case, even without any lasting effect of the event, the stative form was appropriate (6).

(6) *St'át'imcets:*

Esk'wwát,	t'u7	wa7 t'u7	áma.
ʔəs-kʷwát,	ƛ̓uʔ	wáʔ=ƛ̓uʔ	ʔáma
stat-get.trodden	but	ipfv=excl	good

'He's been stepped on, but he's still good.' (vf, consultant's translation)

- Figure 10 shows two crucial scenes from a Shooting Gallery storyboard, where two friends are playing and must hit a bottle to win a prize.
  - In the left hand picture, one friend hits a bottle and it shatters. In the right hand picture, the other friend hits a bottle but the bullet ricochets off without breaking the bottle.

Figure 10: The Shooting Gallery Storyboard

  - Even for the right hand picture, the stative form *esqám't /ʔəs-qaḿt/* 'been hit' is appropriate, as in (7).

(7) *St'át'imcets:*

Wenácw t'u7	kwas		**esqám't**,	tsúkw t'u7			
wənáxʷ=ƛ̓uʔ	kʷas		**ʔəs-qaḿt**	cúkʷ=ƛ̓uʔ			
true=excl	d/c+nmlz+ipfv+3poss		**stat-get.hit**	finish=excl			
	kwas	cw7aoz		kwas		**essék'w**.	
	kʷas	xʷʔaz		kʷas		**ʔəs-sák'ʷ**	
	d/c+nmlz+ipfv+3poss	neg		d/c+nmlz+ipfv+3poss		**stat-get.shattered**	

'It's true that it's been hit, it just hasn't been broken.' (sf)

St'át'imcets statives built on bare roots do not encode target states.

- They do not require a target state to hold at the reference time.

- There are not obvious restrictions regarding which roots can co-occur with the stative.

St'át'imcets statives encode **RESULT STATE**: the state of the event having occurred.

Part 2: Transitive statives

2.1 ʔayʔaǰuθəm Transitive Statives

When stative marking and the control transitivizer (*-Vt*) co-occur, the result is a **MAINTAINING STATE** reading.

(8) *ʔayʔaǰuθəm:*

a. *Context: The wind blew papers that Gloria was carrying out of her hands. Henry stopped one with his foot.*
ʔɛ:mɛ́**t**əs tə paʔa.
ʔim-**ít**-as tə=paʔa
step-**ctr<stat>**-3erg det=one
'He is holding one in place with his foot.' (sf)

b. qəpɛ́**t**əs.
qəp-**í-t**-as
get.touched-**stat-ctr**-3erg
'She is feeling, caressing it.' (vf)

c. *Context: Gloria is going on a trip…*
gayɛtəm k̓ʷa səm Gloria Daniel k̓ʷʊnɛ́**t**əs č̓ɛn̓os.
gay-at-əm=k̓ʷa=səm Gloria Daniel k̓ʷən-**í-t**-as č̓an̓u-s
ask-ctr-pass=rpt=fut Gloria Daniel get.seen-stat-ctr-3erg dog-3poss
'Gloria will ask Daniel to watch her dog.' (vf)

- While maintaining state statives are translated into English using the progressive, they have a distinct interpretation from progressive forms in ʔayʔaǰuθəm.

- The left hand picture in Figure 11 shows Henry stepping on papers as he walks across the room, while the right hand picture shows Henry holding a piece of paper in place with his foot.

Figure 11: Stepping on papers while walking versus stepping on a paper to hold it in place.

- The stative form is only compatible with the right hand panel, while the progressive form is only compatible with the left hand panel, as shown in (9).

(9) *ʔayʔaǰuθəm:*

a. **Stative**

i. *Context: There are papers strewn over the floor of Henry's office. To get across his office, he ends up stepping on them*

\# ʔɛ:m**ét**əs šɛ pəppipas.
ʔim-**ít**-as šə=pəp~pipa-s
step-**ctr<stat>**-3erg det=pl~paper-3poss
'He is stepping on his papers.' (sf)

ii. *Context: The wind blew papers that Gloria was carrying out of her hands. Henry stopped one with his foot.*

ʔɛ:m**ét**əs šɛ paʔa.
ʔim-**ít**-as šə=paʔa
step-**ctr<stat>**-3erg det=one
'He is stepping on one.' (sf)

b. **Progressive**

i. *Context: There are papers strewn over the floor of Henry's office. To get across his office, he ends up stepping on them*

ʔɛʔɛm**ɛt**əs šɛ pəppipas.
ʔi~ʔim-**it**-as šə=pəp~pipa-s
prog~step-**ctr**-3erg det=pl~paper-3poss
'He is stepping on his papers.' (sf)

ii. *Context: The wind blew papers that Gloria was carrying out of her hands. Henry stopped one with his foot.*

\# **ʔɛ**ʔɛmɛtəs.
ʔi~ʔim-it-as
prog~step-**ctr**-3erg
'He is stepping on it.' (sf)

Causative stative forms can have either **TARGET STATE** or **MAINTAINING STATE** readings. Figure 12 shows two contrasting contexts involving 'pushing down'.

- The left hand panel shows the target state achieved and the 'doer' no longer exerting effort.
- The right hand panel shows the 'doer' maintaining a state through continued exertion.

Figure 12: Pushed down flat versus keeping pushed down.

- The causative stative form can be used to describe both the target state (10a) and the maintaining state (10b) contexts.
- A stative control transitive can also be used to describe the maintaining state context illustrated in the right hand panel (10c), but not the lefthand panel (10d) illustrated in the lefthand panel.

(10) *ʔayʔaǰuθəm:*

a. *Context: Marianne is holding the lid of an overfilled suitcase down so that Gloria can zip it up.*

ƛ̓ɛ:tθ**ɛ́tstɛxʷ**əs	tə təqamɛns	χʷɛɬɛmawuɬ.
ƛ̓itθ**-ít-st<i>xʷ**-əs	tə=təq-amin-s	x̣ʷiɬimawuɬ
get.pushed.down-**stat-caus<stat>**-3erg	det=close-instrument-3poss	suitcase

'She is keeping the lid of the suitcase down.' (sf)

b. *Context: Picture with a little girl having pressed down one cookie with a fork. She's no longer pressing on it.*
ƛ̓ɛ:t̓$^{\theta}$**ɛ́tstɛx^{w}**əs.
ƛ̓it̓$^{\theta}$**-ít-st<i>x^{w}**-əs
get.pushed.down**-stat-caus<stat>**-3erg
'She has it flattened.' (sf)

c. *Context: Marianne is pushing down on a suitcase so Gloria can zip it up.*
ƛ̓ɛ:t̓$^{\theta}$**ɛ́t**əs tə χ^{w}ɛɬɛmowuɬ.
ƛ̓it̓$^{\theta}$**-ít**-as tə=χ^{w}iɬimuwuɬ
push.down**-ctr<stat>**-3erg det=suitcase
'She's pushing down on the suitcase.' (vf)

d. *Context: Marianne is flattening a batch of cookies with a fork.*
\# ƛ̓ɛ:t̓$^{\theta}$**ɛ́t**əs / ƛ̓ɛ:t̓$^{\theta}$**égat**əs.
ƛ̓it̓$^{\theta}$-í-t-as / ƛ̓it̓$^{\theta}$-**íg-at**-əs
push.down-stat-ctr-3erg / push.down**-pl<stat>-ctr**-3erg
'She's pushing them down.' (sf)
Consultant's comment: That would mean she's keeping her hands on it or her hand on it

- Not all causative statives can have both maintaining state and target state readings. Some causative statives encode only target state or maintaining state, but not both.

2.2 St'át'imcets Transitive Statives

In St'át'imcets, the stative co-occurs with the causative transitivizer with a **MAINTAINING STATE** reading. This is illustrated in (11).

(11) *St'át'imcets:*

a. T'ak áta7 saq'w ta haláw'a, **es**xím**s**as ta sts'úqwaz'a.
ƛ̓ak ʔátaʔ saq̓^{w} ta=haláẇ=a **ʔəs**-x̣ím-**s**-as ta=sc̓úq^{w}az̓=a
go.by to.there fly det=eagle=exis **stat**-clutch**-caus**-3erg det=fish=exis
'An eagle went flying by, clutching a fish.'

b. Stsáqwemaz' ta ts'eqw7íqwa **s**cwáp**s**tal'i ta sts'úqwaz'a.
scáq^{w}əm-az̓ ta=c̓əq^{w}ʔíq^{w}=a **s**-x^{w}áp-**s**-talì ta=sc̓úq^{w}az̓=a
saskatoon-wood det=stretcher=exis **stat**-spread**-caus**-nts det=fish=exis
'The stretcher that held the fish apart was made of saskatoon wood.'

c. Nilh aylh zam’ múta7 sts’ílas ku **s**k’á7**s**as

nił ʔayɬ zaṁ múta ʔ s=c̓íla=s kʷu=**s**-k̓aʔ-**s**-as
cop then well and nmlz=like=3poss d/c=**stat**-get.stuck-**caus**-3erg
láku7 ta smém’lhatsa.
lákʷuʔ ta=smə́ṁɬac=a
there det=girl=exis
‘So then he kind of kept the girl imprisoned.’

- Unlike the statives built on bare roots, which only require the event to have occurred, stative causatives require the state to be ongoing.
  - For instance, in our Biting Dog storyboard, the stative causative for *t’aol̲* /ƛ̓ạl̓/‘bite’ could be used to describe the point in the story where the dog is biting the man (12a).
  - It could not be used after the dog had let go, when the man was saying he was ok (12b).
  - Instead the intransitive stative could be used (12c).

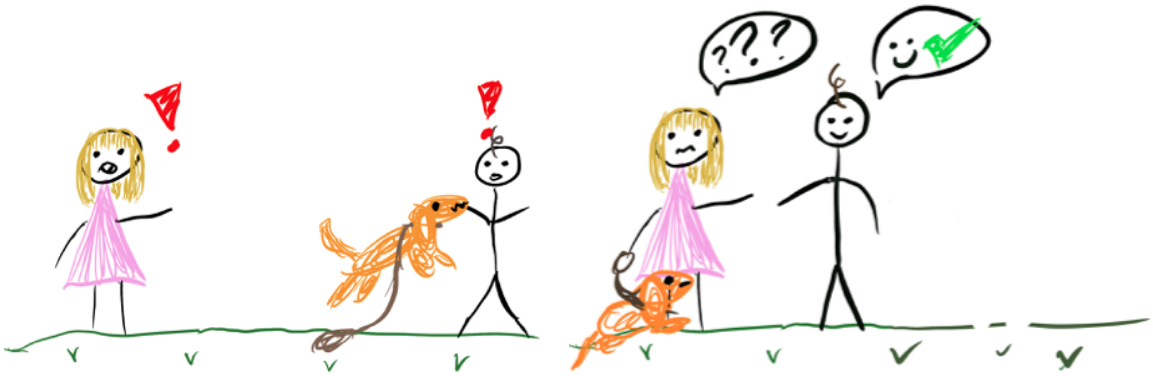

Figure 13: Excerpts from the Biting Dog storyboard

(12) a. *Context: The Biting Dog storyboard. The dog is biting the man and won’t let go (lefthand panel in figure 13).*

Wa7 t’u7 **s**t’aol̲aká7**s**as ta twéww’eta.
wáʔ=ƛ̓uʔ **s**-ƛ̓ạl̓-akáʔ-**s**-as ta=twə́wẇət=a
ipfv=excl **stat**-bite-hand-**caus**-3erg det=boy=exis
Cw7aoz kw skelhtsám’.
xʷʔạz kʷ=s=kəɬ-c-aṁ
neg d/c=nmlz=release-mouth-mid
‘It’s still biting his arm. It won’t release its jaws.’ (vf)

b. Context: *The Biting Dog storyboard. The dog has been shaken off and the girl asks if the man is ok. He replies:*

\# “Iy: **s**t’aol̲aka7**s**tum’cálem séna7, t’u7 cw7aoy t’u7 kw nsxan’.”
ʔiy **s**-ƛ̓ạl̓-akaʔ-**s**-tuṁxáləm sə́naʔ ƛ̓uʔ xʷʔáy=ƛ̓uʔ kʷ=n=s=x̱aṅ
yes **stat**-bite-hand-**caus**-pass cntr but neg=excl d/c=1sg.poss=nmlz=hurt
??‘Yeah, I am being bitten but I never got hurt.’ (sf)
Consultant: He’s still (being) bitten.

c. “Iy: **s**t’aoḻaká7lhkan séna7, t’u7 cw7aoy t’u7 kw nsxan’.”
ʔiy **s**-ƛ̓aḷ-akáʔ=łkan sənaʔ ƛ̓uʔ xʷʔáy=ƛ̓uʔ kʷ=n=s=x̣aṅ
yes **stat**-bite-hand cntr but neg=excl d/c=1sg.poss=nmlz=hurt
‘Yeah, I was bitten but I never got hurt.’ (sf; vg)

- **TARGET STATE** readings are not attested.

3 Conclusion

- ʔayʔaǰuθəm statives can be built on bare roots or control transitives. It is also possible to get causatives of stative forms.
- Statives built on bare roots encode target states, while statives built on control transitives encode maintaining states. Causative statives can encode target or maintaining states.
- St’át’imcets statives can be built on bare roots or causatives.
- Statives built on bare roots encode result states, while statives built on causatives encode maintaining states.

Table 1: ʔayʔaǰuθəm statives.

ʔayʔaǰuθəm	**Attested**	**Reading**
Bare root + Stative	Yes	Target state
CTR stem + Stative	Yes	Maintaining state
Stative + Causative	Yes	Target or maintaining state

Table 2: St’át’imcet statives.

St’át’imcets	**Attested**	**Readings**
Bare root + Stative	Yes	Result state
Causative + Stative	Yes	Maintaining state

- Future research directions:
  - Interpretation of stative with active intransitives and other transitivizers
  - An analysis of maintaining state readings
  - A unified analysis of the different readings of the stative

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