Result state holds! Stative aspect and non-control morphology in ʔayʔaǰuθəm[1*]

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Abstract: Watanabe (2003) describes a very marginal co-occurrence of the non-control transitivizer (NTR) with the stative in ʔaẏaǰuθəm, attested with only one root and marked by an epenthetic vowel. However, stativity can also be expressed by a suprasegmental rather than a segmental contrast. In this paper, we present phonetic and semantic evidence for a productive non-control stative construction that is marked by contrastive pitch. The apparent scarcity of stative non-control forms is not due to semantic incompatibility, but simply reflects the fact that stativity is marked on non-control transitives by contrastive pitch, rather than /i/-infixation, as previously described. Semantically, the non-control stative highlights the result state of a process. We conclude that the non-control stative can be found with any root, in appropriate contexts.

Keywords: Stative, Aspect, Control, Contrastive Pitch, Comox

1 Introduction

Stress assignment in ʔayʔaǰuθəm (also known as Comox-Sliammon) is exceptional when compared with the rest of the Salish language family. ʔayʔaǰuθəm is a Coast Salish language spoken in British Columbia. It is critically endangered with 36 native speakers and 705 semi-speakers reported in 2014 (FPCC, 2014). While other Salish languages have complex, morphologically-governed, prosodic patterns, ʔayʔaǰuθəm stress is phonologically regular and primary stress falls, in most cases, on the initial syllable (Blake, 2000). However, like the other languages, ʔayʔaǰuθəm has retained a rich morphological system that expresses a range of grammatical properties, including overt morphology to indicate the valence of a predicate. These transitivizers also encode the property of AGENT CONTROL (Davis & Matthewson, 2009): the control transitivizer (CTR) asserts that the agent acts in full volition and capacity, while the non-control transitivizer (NTR) asserts that the event was accidental, or only accomplished after some difficulty (Thompson, 1985). The control system also interacts with aspect, and has even been proposed to be purely aspectual, where the control transitivizer asserts event

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initiation and the non-control transitivizer asserts event culmination (Jacobs, 2011). Though it is unclear if it can fully account for control in ʔayʔaǰuθəm (Andreotti, 2017), we adopt the purely aspectual analysis of AGENT CONTROL, as it is sufficient to understand the distribution of non-control morphology described in this paper.

ʔayʔaǰuθəm also has a morphological marker of stative aspect which, when it co-occurs with the control transitivizer on a strong root, can be expressed by an exceptional stress pattern (Watanabe, 2003: 433). Watanabe (2003: 442) also mentions that stative morphology co-occurs with the non-control transitivizer on a single root (təχʷ-), where it is marked by an epenthetic vowel as well as raised pitch. In the present paper, we compare suprasegmental qualities of the NTR in a variety of contexts, to evaluate whether the non-control stative is truly marginal or if it is marked systematically by higher pitch. In Section 2, we describe the regular suprasegmental patterns in ʔayʔaǰuθəm and outline exceptional behavior related to stativity and the NTR morpheme. Section 3 argues for the semantic compatibility of stativity and non-control, while Section 4 presents phonetic evidence for their co-occurrence. Finally, we explore the semantic properties of the non-control stative. Overall, a combination of phonetic and semantic evidence proves the existence of a productive non-control stative in ʔaẏaǰuθəm, marked most clearly by contrastive pitch.

2 Regular and Exceptional Suprasegmental Patterns

Stress assignment in ʔayʔaǰuθəm is phonologically regular, with only a few exceptions. It has a fixed initial pattern, with primary stress falling on the initial syllable and secondary stress on subsequent odd syllables (Blake, 2000). This yields a predictable trochaic pattern, as shown in (1). While this generalization holds across most of the language, there are certain lexical and grammatical suffixes which disrupt the pattern by "attracting stress", including certain reduplicants, the non-control transitivizer, and the indirective suffix (Watanabe, 2003: 22). There are even some minimal pairs where only suprasegmental features associated with stress, particularly pitch, distinguish between stative and non-stative aspectual readings (Watanabe, 2003: 23–29). However, despite the role of stress in these suprasegmental contrasts, little is known about the characteristics of exceptional stress in ʔayʔaǰuθəm or how it is used contrastively.

(1) Basic Stress Pattern (Adapted from Watanabe, 2003: 21)

a. [ˈqʌm.č’oˌθɛn] [HLH/HLM]
/qəmč̇-uθin/
shut-mouth
'He has his mouth closed.'

b. [ˈqʌm.č’oˌθɛ.nəm] [HLML]
/qəmč̓-uθin-əm/
shut-mouth-MD
‘He closed his mouth.’

c. [ˈyɑ.łɑˌtʌ.soł] [HLML]
/yał-at-as-uł/
call-CTR-3ERG-PST
‘He called her.’

Contrastive stress, with raised pitch as the main acoustic correlate, is used in ʔayʔaǰuθəm to distinguish between the stative and non-stative aspect with strong roots when combined with the CTR morpheme (Watanabe, 2003: 433).[2] This is demonstrated by the minimal pair in (2), where the surface forms are segmentally identical, despite expressing different meanings. (2a) means ‘put it in mouth’, whereas (2b) means ‘keep it in mouth’. The only difference between these forms is in the placement of stress. In (2a), stress assignment follows the regular trochaic pattern shown in (1). In (2b), secondary stress falls on the second syllable, on the full vowel, which yields stress clash with two adjacent prosodic heads.

(2) STV and CTR Data (Adapted from Watanabe, 2003: 433)

a. [qʷoˑmotʰ] [HL]
qʷum-ut
put.in.mouth-CTR
‘put it in mouth’

b. [qʷoːmótʰ] [HH]
qʷum-[ˊ]-ut
put.in.mouth-[STV]-CTR
‘keep it in mouth’

Watanabe (2003: 22–23) also claims that the NTR suffix “attracts stress”, which interrupts the regular trochaic pattern. An example of this is shown in (3), where raised pitch occurs on the non-control transitivizer. Though he provides data illustrating this phenomenon, he does not give any further analysis or conclusions regarding its nature. Furthermore, it is unclear, based on the data he gives, whether the stressed variant is found in free variation with an unstressed variant or only in specific environments. There is also no indication whether this stress-attracting property is encoded in the lexicon as a property of the NTR morpheme or if it is indicative of something else in the grammar, aside from

[2] Strong roots are of the shape CVC, where V is a full (moraic) vowel.

control or transitivity. Finally, there are two indications that the stress-attracting property is not categorical. It can sometimes receive primary stress and it is less stressed when the root vowel is a schwa (Watanabe, 2003: 22). In both situations, regardless of purported degree of stress, the NTR morpheme is described as having raised pitch. This suggests that raised pitch can occur independently of stress, despite being the main acoustic correlate of stress (Watanabe, 2003: 22).

(3) Raised Pitch on NTR Suffix (Adapted from Watanabe, 2003: 22)

[wutúxʷas] [HHL]
wut-ng-as
bend-NTR-3ERG
'He has bent it.'

While the raised pitch on the NTR morpheme resembles the suprasegmental pattern used to mark stativity, contrastive pitch is only attested for the combination of a strong root with the CTR morpheme. Stative aspect is marked on the intransitive suffixes and the CTR suffix with a weak root by /i/-infixation, which is also accompanied by raised pitch (2003: 430). This is productive across a range of intransitive and transitive suffixes, not including the NTR morpheme. Watanabe (2003: 442) suggests that non-control stative is marked by /i/-epenthesis, rather than contrastive stress, yielding the form *-n[i]xʷ*. However, he only identifies one root marked for both non-control and stativity, *təχʷ-*, 'to know'. This highlights an unexpected gap in the transitive-stative paradigm, whereby almost any control and causative verbs can be made stative, depending on the context, while the non-control ones cannot.

3 Semantic Compatibility Between Non-Control and Stative Aspect

The stative expresses a predicate which is "durative but not progressive" (Watanabe, 2003: 413). However, progressive and stative morphology may not co-occur (p. 414). Like progressive predicates, stative predicates can be complements of durative auxiliaries, such as *χuχmut* ('for a long time'). Unlike progressive predicates, they cannot be complements of auxiliaries of rate, such as *ƛiʔmut* ('quickly'). There is nothing inherent to the traditional semantics of either control or stativity that would suggest incompatibility between non-control and the stative aspect.

Under Jacobs' (2011) aspectual analysis of AGENT CONTROL, the NTR asserts event culmination. Jacobs cites observations made by Watanabe (2003) that, while the result state of a control predicate can be denied felicitously, as in (3a), denying the result state of a non-control predicate yields a contradiction, as in (3b).

(3) Control and Culmination Entailments (adapted from Watanabe, 2003: 205)

a. kə̓p-t-uɬ=čən ʔiy xʷaʔ kə̓p=as
cut-CTR-PST-1SG.IND and not cut= 3CONJ
'I (tried to) cut it but it did not get cut.'

b. #kə̓p-əxʷ-an-uɬ ʔiy xʷaʔ kə̓p=as
cut-NTR-1SG.ERG-PST and not cut=3CONJ
('I cut it but it did not get cut.')

The reportedly limited co-occurrence of the stative aspect with the non-control transitivizer could be the result of an aspectual incompatibility between the durative, atelic nature of the stative and the culmination requirement of the non-control transitivizer. However, Bar-el, Davis, and Matthewson (2005) point out that unaccusative roots in St'at'imcets and Sḵwx̱wú7mesh have culmination entailments, and Andreotti (2017) treats the culmination entailment of the non-control transitivizer as inherited from the unaccusative root, as opposed to part of the semantics of the transitivizer itself. If the non-control transitivizer inherits the aspectual properties of its complement, the combination of STV with NTR should be unproblematic.

Given the reported tendency for the NTR morpheme to have increased pitch and the unexpected marginal nature of the non-control stative, there is reason to revisit the assumption that the non-control stative is derived through /i/-infixation. It is possible that the varying pitch on the NTR suffix is analogous to the contrastive stress pattern found for the strong root control stative. If this is the case, raised pitch should be present when elicited in stative contexts and absent in non-stative ones. We hypothesize that stativity is productively marked on the NTR morpheme by contrastive pitch, not /i/-insertion.

4 Contrastive Pitch and the Non-Control Stative

The raised pitch on the NTR suffix described in Watanabe (2003) is far from categorical. A preliminary examination of elicited sentences without a specific context demonstrated that the pitch, or prominence, of the vowel in the NTR morpheme was raised at some points and not at others. This generalization also held across predicates with the same combination or root and subject suffix, yielding the same segmental structure but varying suprasegmental features. This eliminates the possibility that the raised pitch on the NTR is a lexically-specified property of the morpheme, some kind of root-controlled phenomenon, or phonologically conditioned. This results in two plausible alternatives: the alternation is either grammatical or in free variation. If the former is true, this predicts there should be contrastive minimal pairs that differ only by the F0 on the transitivizer vowel and that it should be possible to force raised pitch, or block it, by modifying the context.

Minimal pairs, distinguished exclusively by pitch, are given in (4). In these cases, the two forms have the same morphological composition and segmental

realization. The only apparent difference is the fundamental frequency of the transitivizer vowel. The forms with raised pitch were offered most often in situations where the action had been completed very recently. For example, in (4a), the raised pitch variant was elicited in a context of "just" having broken a cup. The variant without raised pitch, in (4b), was used to refer to the same action, but it was completed at a different time, such as earlier in the morning or the day before. Further, forms with raised pitch were consistently absent when elicited as part of a sequential narrative, where the action was subsequently undone.[3] This is shown in (4c), where the raised pitch variant occurs when a ball has just been dropped. However, if the ball has been dropped and someone has just picked it up, the vowel in the NTR morpheme does not have raised pitch (4d).

(4) Minimal Pairs with Contrastive Pitch

a. yəp̓-[ˊ]-əxʷ-as kʷasta
break-[STV]-NTR-3ERG cup
'He (just) broke the cup.'

b. yəp̓-əxʷ-as kʷasta
break-NTR-3ERG cup
'He broke the cup.'

c. xʷətm-[ˊ]-əxʷ-an ball
drop-[STV]-NTR-1SG-ERG ball
'I (just) dropped the ball.' (Still on the floor)

d. xʷətm-əxʷ-an ball
drop-NTR-1SG.ERG ball
'I dropped the ball.' (Subsequently picked up)

The examples above demonstrate that pitch on the vowel of the NTR morpheme represents a semantic contrast. In order to confirm that this contrast truly corresponds to stativity, we tested whether raised pitch was present on non-control predicates when paired with auxiliaries of rate, which do not occur with stative predicates.[4] We found that the transitivizer in the non-control predicate never had raised pitch when paired with an auxiliary of rate, such as *hahays* ('slowly'). The contrast is shown in (5), where the presence of a word associated with a judgment of rate does not correspond to raised pitch on the transitivizer.

[3] Our consultant described the difference between the two as "just did it" and "did it later".

[4] Though stative aspect also does not occur with progressive, it is challenging to test this as it is marked with CV- reduplication and this means that secondary stress would fall normally on the transitivizer with any mono-syllabic root.

This follows from the generalizations described for stative by Watanabe (2003), who claims that statives are not accepted with auxiliaries of rate because the stative 'expresses a durative (possibly imperfective) situation that is not ongoing' (p. 413). Therefore, it appears that the distribution of raised pitch on the NTR morpheme corresponds, semantically, to the stative.

(5) Auxiliaries of Rate with NTR[5]

a. hahays paχ-əx^{w}-as yiwp
slowly rip-NTR-3ERG cloth
'He slowly ripped the cloth.'

b. #hahays paχ-[ˊ]-əx^{w}-as yiwp
slowly rip-[STV]-NTR-3ERG cloth
('He slowly ripped the cloth.')

c. ƛ̓iʔ-mut nam-əx^{w}-an puk^{w}
fast-INT write-NTR-1SG.ERG book
'I wrote the book quickly.'

d. #ƛ̓iʔ-mut nam-[ˊ]-əx^{w}-an puk^{w}
fast-INT write-[STV]-NTR-1SG.ERG book
('I wrote the book quickly.')

The evidence so far suggests that raised pitch reflects stativity on the non-control predicates. As the stative is marked on control predicates with a strong root in a suprasegmental fashion analogous to the non-control stative proposed in this paper, it is relevant to compare pitch patterns between the two. Figure 1 and Figure 2 show a non-stative and stative alternation, where the former has a [HL] pitch pattern and the latter a [HH] one. Otherwise, the two are segmentally identical, with the combination of *yał-* ('call') and *-at* (CTR). The higher pitch on the transitivizer vowel is the realization of the stative morpheme. A similar pattern is reflected for the non-control predicates in Figure 3 and Figure 4. The predicate, *niyəx^{w}an*, is segmentally identical in the two cases, formed by the combination of *niy-* ('forget'), *-əx^{w}* (NTR), and *-an* (1SG.ERG). The difference between having "just" forgot something and having forgotten something earlier is reflected by different suprasegmental patterns. Figure 3 shows the HLH pitch associated with the action completed at an earlier time, which adheres to the

[5] An issue we ran into gathering data was that due to the subtlety of this distinction both phonetically and semantically, the consultant would often repair our prompts before giving a judgement. Thus, we were unable to gather negative data directly. However, we addressed the issue by asking her to repeat the sentences to us, at which point we would observe the intonation of the returned form. In those contexts where the consultant consistently repaired our prompt, we assumed it to not be accepted.

expected trochaic pattern. In contrast, there is higher pitch on the NTR morpheme and lower pitch on the ergative subject suffix in Figure 4, which reflects a recently completed action.

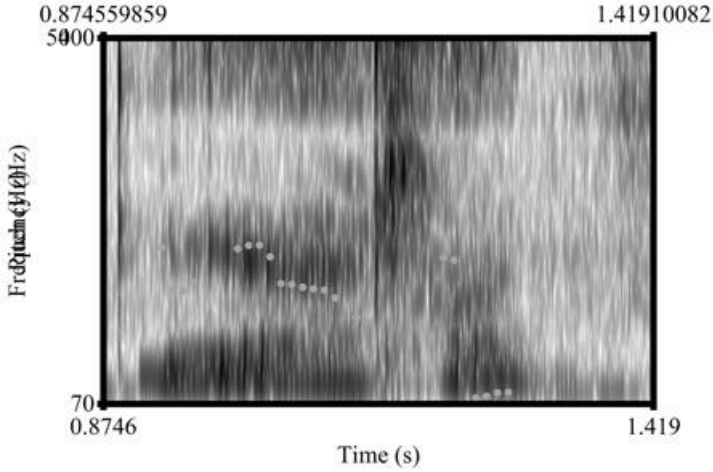

Figure 1: [yéɬʌt] from *hahays yɛɬʌt piš*, 'I slowly called Pish (cat)' [HL]

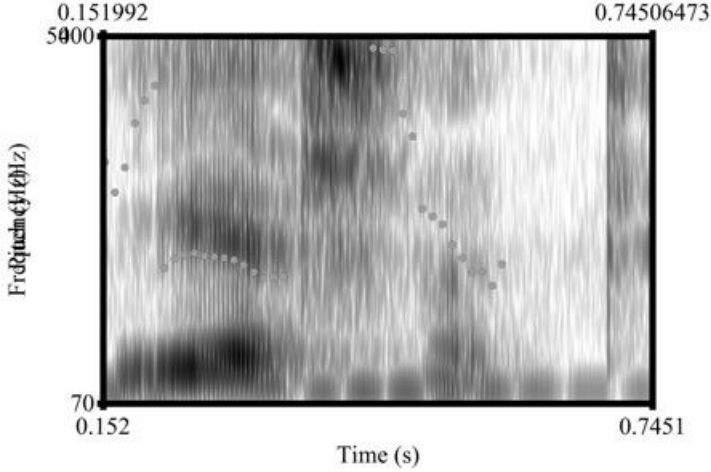

Figure 2: [yéɬʌ̀t] from *čɪč yɛɬʌt piš*, 'I am calling Pish' (cat) [HH]

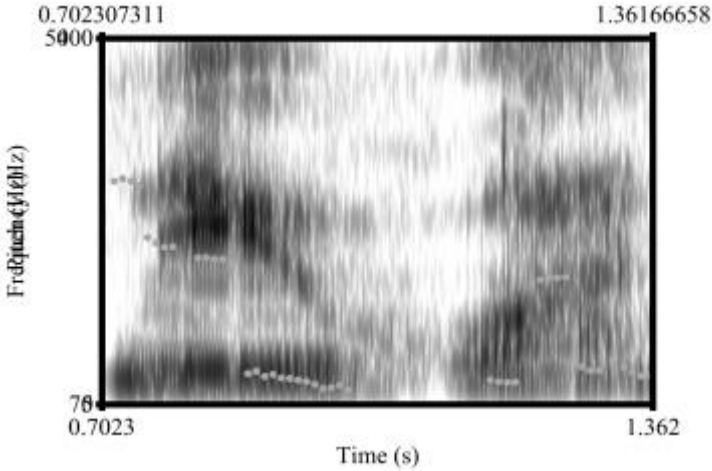

Figure 3: [níyoxʷàn] from *niyəxʷan sǰɛsoł*, 'I forgot yesterday' [HLH]

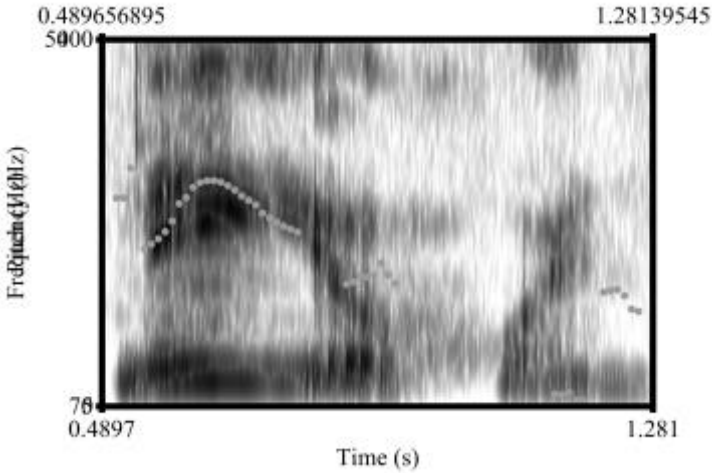

Figure 4. [níyòxʷan] from *niyəxʷan*, 'I just (now) forgot' [HHL]

Contrastive pitch marks the stative on control predicates when the root has a full vowel. The minimal pairs presented in this section provide evidence that a similar strategy is used with non-control predicates, regardless of root type. The distribution of raised pitch on the NTR suffix across different contexts also fits with stative interpretation, where suprasegmental features represent an aspectual contrast. The implications of this are that there is a productive non-control stative construction in ʔayʔaǰuθəm that is marked by contrastive pitch, rather than /i/-epenthesis as previous description has suggested. Brown and Thompson (2005: 49) describe Upriver Halkomelem as the only dialect of a Salish language to "have developed a pitch accent or tonal system", with the possible exception

of ʔayʔaǰuθəm. The important role of contrastive pitch in denoting stative aspect provides preliminary evidence that ʔayʔaǰuθəm may have developed a sensitivity to pitch. However, we leave the overall status of pitch in ʔayʔaǰuθəm as an avenue for future research.

5 Semantic Properties of the Non-Control Stative

The non-control stative is marked by contrastive pitch in ʔayʔaǰuθəm and formed productively where contextually appropriate. As discussed in **Section 3**, raised pitch is found most often when an action has been recently completed and the result state still holds, while lower pitch occurs when the result state no longer applies. Though this distinction can be created using context alone, it is more reliably forced with the use of certain adverbials. For example, stative marking is rarely offered with time adverbials that diminish the likelihood of a result state holding. This is shown in (6), where the inclusion of a word like *sǰisuł* (yesterday) generally forces a lower pitch on the NTR morpheme if it occurs in a context where the result state is pragmatically unlikely to hold.[6]

(6) Time Adverbials with NTR Stative

a. qʷaqʷ-əxʷ-an θukʷnačtən sǰisuł
bump-NTR-1SG.ERG chair yesterday
'I bumped into the chair yesterday.'

(b) ??qʷaqʷ-[ˊ]-əxʷ-an θukʷnačtən sǰisuł
bump-[STV]-NTR-1SG.ERG chair yesterday
('I bumped into the chair yesterday.')

c. qams-əxʷ-an saplin skʷiǰuł
put.away-NTR-1SG.ERG bread this.morning
'I put the bread away this morning.'

d. ??qams-[ˊ]-əxʷ-an saplin skʷiǰuł
put.away-[STV]-NTR-1SG.ERG bread this.morning
('I put the bread away this morning.')

Unlike time adverbials, which trigger non-stative aspect by default, the inclusion of the auxiliary *čəgitəm* ('almost') is generally associated with raised pitch if the context suggests that an action or event is about to happen. Again, this preference directly relates to the status of the result state. Without further

[6] This adverbial restriction is not entirely consistent, as there are some cases where high pitch is offered on the NTR vowel. We have not been able to consistently replicate these forms. It may be due to a pragmatics of the predicate or how likely the result state is to hold at utterance time.

context, the use of *čəgitəm* suggests something durative where the result state applies. An example of this is given in (8a), where the combination of *čəgitəm* and a non-control predicate produces an 'about to' reading. Without explicit context that counteracts this reading, this is translated as something about to be completed, such as planting a flower. In this scenario, a gardener has been planting a flower and is asked if they are finished. However, in contrast, (8b) has *čəgitəm* without raised pitch on the NTR morpheme. This is associated with something that has come close to happening but has not happened, such as if a cup fell into the hole dug for the flower, and the gardener notices it before burying it. This contrast is further exemplified in (8c), where the difference between stative and non-stative pitch patterns denotes a very fine difference in meaning. In (8d), with the raised pitch on the NTR morpheme, *čəgitəm* indicates that Henry is about to catch Bruno. However, if this same sentence is produced with the regular trochaic pitch pattern, it means that Henry almost caught Bruno but, for some reason, he did not succeed.

(8) *čəgitəm* with NTR and NTR Stative

a. čəgitəm=č pan-[ˊ]-əx^{w} q^{w}asəm
almost= 1SG.IND bury-[STV]-NTR flower
'I have almost planted the flower.'

b. čəgitəm=č pan-əx^{w} k^{w}asta
almost=1SG.IND bury-NTR cup
'I almost (accidentally) buried a cup.'

c. Henry čəgitəm ʔaq̓-[ˊ]-əx^{w}-as Bruno
Henry almost catch-[STV]-NTR-3ERG Bruno
'Henry has almost caught Bruno.'

d. Henry čəgitəm ʔaq̓-əx^{w}-as Bruno
Henry almost catch- NTR-3ERG Bruno
'Henry almost caught Bruno.'

The data presented in this paper suggest that the semantic function of the non-control stative, marked by raised pitch, is to denote a result state. Conversely, the non-stative NTR suffix, with regular pitch, is used to mark the culminative transition of an event. This can be visualized on a timeline of a prototypical event, such as in Figure 5.

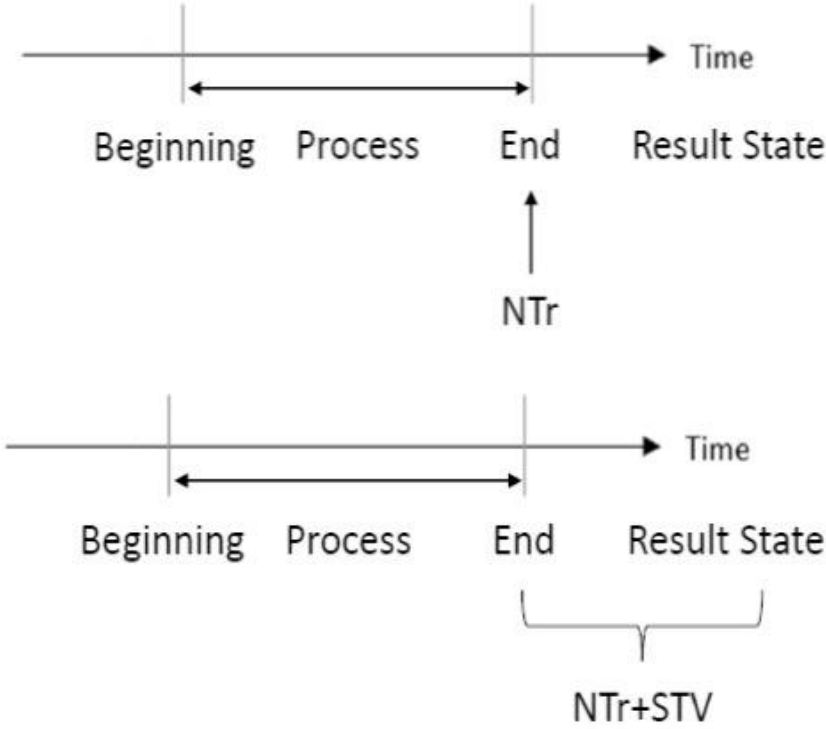

Figure 5: Event Timelines for Non-Control and Non-Control Statives

The non-control stative refers to the result state of a process, which holds until it is (potentially) subsequently reversed by another event. If the result state has not been reversed by the time the event is mentioned, the non-control stative can be used. This explicates why it is commonly translated as "just did it"; the result state has just begun and nothing has reversed it. With *čəgitəm*, the reading is that the result state came close to beginning. This is similar to the English sentence "Henry has almost caught Bruno"; the implication is that it is about to happen. Non-control without stative only denotes the transition from the process to the result state. If the result state has been reversed, or it is likely to have been reversed, stative is not used. With *čəgitəm*, the reading is that the transition came close to happening but did not happen. This corresponds to the English sentence "Henry almost caught Bruno"; the implication is that the event came close to happening but did not. While we can conclude that the non-control stative refers to the result state of a process, there are still remaining questions beyond the scope of this paper about the interaction between control and stative aspect and how to best formally represent it.

6 Conclusion

The combination of the stative aspect and the non-control transitivizer is productive in ʔayʔaǰuθəm. Its apparent absence, as reported by Watanabe (2003), is not due to semantic incompatibility, but to the fact that it has a different morphological signature. Instead of /i/-infixation, as previously described, the non-control stative is formed by raised pitch on the transitivizer. This applies almost categorically, with the only known exception being *təχʷ-*, which receives an -i- infix like the active intransitive, middle, and the control transitivizer with weak roots.[7] Otherwise, the non-control stative behaves like the combination of the stative and a strong root control predicate, where contrastive pitch marks aspect. The data presented in this paper raise three important questions for future analysis. These include exploring the role of pitch in ʔayʔaǰuθəm, the formal semantic properties of the control-stative interaction, and the reasons why the non-control predicate, which has no full vowel underlyingly, behaves unexpectedly like the control predicates with a full vowel. Overall though, counter to previous accounts, we conclude that the non-control stative is formed productively in ʔayʔaǰuθəm via contrastive pitch with any semantically appropriate root in the right discourse context.

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[7] An issue with this example as an instance of stative marking is that *təχʷ-* is a stative root. These roots form a class which are compatible with auxiliaries of duration but not rate, and can take inceptive morphology (Watanabe, 2003: 415). While some of these roots can take stative morphology, *təχʷ-* is the only one among them attested with *-i-* infixation in the non-control transitivizer.

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