LEXICAL ASPECT AND ASPECTUALLY UNMARKED PREDICATES IN ATAYAL

Sihwei Chen
University of British Columbia
sw.chen@alumni.ubc.ca

This paper examines the aspectual properties of aspectually unmarked predicates in Atayal, which have been previously characterized as being neutral between perfective and imperfective. By diagnosing lexical aspectual classes in Atayal, I show that the reading of unmarked predicates is not underspecified but conditioned by the lexical aspect, which can be accounted for by proposing a null neutral aspect (Smith 1997). The described event must begin but need not stop/culminate. To formulate the non-culmination effects, I draw on Altshuler’s (2014) analysis of Russian imperfective, but I depart from Altshuler in not reducing neutral aspect, but incorporating it as a partitive operator that includes an initial stage of events inside reference time. This analysis has a typological implication for encoding non-culmination effects in different aspectual operators.

1. Introduction

In many Formosan languages (the Austronesian languages of Taiwan), predicates marked with voice but without any aspectual marker have been dubbed as ‘neutral forms’ in the literature (Ross 1995, Zeitoun et al. 1996). This term is not simply based on morphology, but also reflects the range of meanings: Sentences with neutral verbs can refer to a past or present situation, and they may describe a progressive, non-progressive episodic, or habitual event. This functional view seems to suggest that neutral forms are temporally and aspectually underspecified.

This paper expands on the aspectual properties of neutral forms in Atayal (Squliq dialect, spoken in Hsinchu County, Taiwan). I will rename neutral forms as unmarked predicates for avoiding associating them with a prior assumption. The aim of this paper is to examine the hypothesis that unmarked forms are aspectually neutral. Since lexical aspect and viewpoint aspect are shown to interact with each other cross-linguistically, I first present the basic distinction of lexical aspectual classes in Atayal. Second, I show that the range of meanings of unmarked

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predicates is not free but varies with the lexical aspect. This cannot be accounted for by current theories of (im)perfectivity, but supports Smith’s (1997) neutral aspect. I also review Altshuler’s (2014) partitive analysis of Russian imperfective, which shares many similarities with the Atayal unmarked predicates, but I show that neutral aspect cannot be dispensed with even if viewpoint aspects are analyzed as partitive operators. I then give an analysis modifying Altshuler’s proposal.

The paper is organized as follows. Sections 2 presents diagnostics for five lexical aspectual classes. Section 3 discusses the aspectual reading of unmarked predicates, and discusses potential analyses based on (im)perfectivity. Section 4 reviews Smith’s (1997) neutral aspect and Altshuler’s (2014) analysis of Russian imperfective, and gives a proposal drawing on ideas of both analyses; I also mention a typological implication of this proposal. Section 5 concludes the paper.

2. **Diagnostics for Lexical Aspect in Atayal**

This section is to establish basic Atayal lexical aspectual classes (but not to exhaust differences between them or to identify every possible lexical class). Lexical aspect typically interacts with viewpoint aspect in languages. In Atayal, the readings of unmarked predicates and of predicates marked with the perfect aspect can distinguish between three types of eventive classes, and detect ambiguity between inchoative and homogeneous states. To distinguish between achievements and states, I use a language-specific construction for testing the durativity of events.

2.1. **Readings when combined with unmarked predicates**

Activity and accomplishment events in unmarked forms behave differently from achievements and inchoatives. While the former do not entail final points (i.e., termination points for activities and culmination points for accomplishments, see section 2.2), the latter do. This is evidenced by event continuation and culmination cancellation tests (cf. Smith 1997; Bar-el 2005). Unmarked activity events can be conjoined with an assertion that the event continues without introducing infelicity, as shown in (1); also, the final point of the activity event can be cancelled, as shown in (2).

1. m-ngilis qu tali’ ru ki’a cyuw m-ngilis na’.²
   
   AV-cry ABS Tali’ CONJ may PROG.DIST AV-cry still
   ?’Tali cried, and he may be still crying.’

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¹ Note that non-culmination effects appear to be similar to being able to continue, but I distinguish them because the two criteria do not always coincide in languages; for example, non-culminating accomplishments can be cancelled but cannot continue in Hindi (Singh 1998) and Thai (Koenig and Muansuwan 2000).

² Abbreviations follow the Leipzig Glossing Rules, with the following amendments: AV = actor voice; CONJ = conjunction; LV = locative voice; PRT = particle; PV = patient voice.
Similar facts are observed for accomplishments. Their unmarked uses are compatible with an assertion that the event is continued, as shown in (3), and one that the event is not culminated, as shown in (4):

(3)  kblay-un na yutas qutux lubuw ru cyuw kblay-un na’.  
make-PV ERG grandpa one harmonic CONJ PROG.DIST make-PV still  
?‘Grandpa made a harmonic, and he is still making it.’

(4)  kblay-un ni watan sa kawas wayal ga ini’ tmasuq na’.  
make-PV ERG Watan LOC year past TOP NEG finish,AV still  
?‘Watan built the house last year, but he didn’t finish (building) it yet.’

Conversely, unmarked achievements entail culmination, as exemplified in (5), where the dying event is incompatible with an assertion of non-completion. Note that since the progressive aspect in Atayal gives rise to a result state rather than a preparatory process to an achievement, the test whether the dying event is able to continue using the progressive is not applicable.

(5)  #m-huqil qu mlikuy=nya’ la, ulung ini’ huqil.  
AV-die ABS man=3S.GEN PRT fortunately NEG die,AV  
Intended for #‘Her husband died, but fortunately he didn’t die.’

Stative verbs are ambiguous between inchoative states and homogeneous states. For instance, with a punctual when-clause, the verb mbka’ ‘be/get broken’ can obtain an inceptive reading in (6) or a progressive reading in (7). Note that inceptive readings preferably require the final particle la.  

(6)  m-bka’ qu tubung sa m-zyup=saku’ blihun la.  (Inchoative)  
AV-broken ABS window LOC AV-enter=1S.ABS door PRT  
‘The window got broken when I entered the door.’

(7)  m-bka’ qu tubung sa m-zyup=saku’ blihun.  (Homogeneous)  
AV-broken ABS window LOC AV-enter=1S.ABS door  
‘The window was broken when I entered the door.’

Unmarked inchoative states behave like unmarked achievements in entailing

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3 Since I have not investigated conditions on the presence/absence of la, I have to leave aside the issue whether to attribute states’ inchoativity to la. See Gorbunova’s (2015) proposal that la is a discontinuative/iamitive marker, which locates the focus time after (or at) some change-point.
culmination. Trying to cancel the completion of initial change of state in inchoative states results in infelicity:

(8) Context: Yayut eats a lot. She’s getting fat but fortunately she hasn’t gotten fat (her size is okay).

#qthuy qu yayut lga ini’ kqthuy la.

fat.AV ABS Yayut PRT.TOP NEG fat.AV PRT

Intended for #‘Yayut got fat but she didn’t get fat/is not fat.’

The entailment difference is further confirmed by the interpretation of time adverbial phrases. Time phrases in Atayal, which are marked optionally by locative case, may be interpreted as English at-, in-, or for-phrases, depending on the lexical aspectual class. When co-occurring with an activity or accomplishment predicate, a time phrase is only interpreted as punctual, coinciding with the inception of the event:4

(9) m-nbuw sa cyugal spung qu tali’ la. (Activity)

AV-drink LOC three hour ABS Tali’ PRT

‘Tali’ started drinking at three o’clock.’ ≠ ‘Tali’ drank for three hours.’ ≠ ??‘Tali’ drank in three hours.’

(10) kblay-un=nya’ qutux kawas ngasal qasa. (Accomplishment)

make-PV=3S.ERG one year house that

‘He will start to build that house in one year/one year later.’ ≠ ‘He built that house in one year.’ ≠ ??‘He built that house for one year.’

With an achievement, by contrast, the time phrase can in addition specify the time that elapses before the event, parallel to an in-phase or at-phase:

(11) tayhuk b’bu’ rgyax sa qutux spung la. (Achievement)

arrive.AV top mountain LOC one hour PRT

‘He arrived the summit in one hour.’ or ‘He arrived the summit at one o’clock.’ ≠ ??‘He arrived the summit for one hour.’

Regarding states that are ambiguous between two readings, a time phrase is interpreted as an in-phase if the state is inchoative, but as a for-phase if it is homogeneous:

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4 Note that unlike sentences of actor voice, those of non-actor voice in Atayal allow future interpretation without additional marking so (9) and (10) differ in their temporal interpretation. This should not concern us.
To sum up, time phrases can function as *at*-phrases or *in*-phrases for unmarked achievements and inchoative states, but only as *at*-phrases for unmarked activities and accomplishments. Also, homogeneous states are proved to be different from eventive classes by the availability of *for*-phrases (as shown in (12) above); eventive verbs require a special construction for modifying the event duration (see section 2.3).

2.2. Readings when combined with the perfect

We have seen that activities and accomplishments do not entail culmination, namely, the two classes in unmarked forms lack the usual assumed telicity contrast. However, there is evidence that they do have telicity contrast in Atayal. Atayal has a perfect aspect marked with the preverbal auxiliary *wal*. When combined with *wal*, accomplishment and achievement events must culminate: The culmination cancellation test fails for an accomplishment in (13) and an achievement in (14).

(13) *wal* kblayun ni watan sa kawas wayal (#ga ini’ tmasuq na’).  
PRF make.PV ERG Watan LOC year past TOP NEG finish.AV still  
‘Watan built the house last year (#but he didn’t finish building it).’

(14) Context: You describe to your friend how Rimuy’s husband survived an accident.  
# wal m-huqil qu mlikuy=nya’ la, ulung ini’ huqil.  
PRF AV-die ABS man=3S.GEN PRT fortunately NEG die.AV  
Intended for #‘Her husband died, but fortunately he didn’t die.’  
Consultant’s comment: “No!” “Maybe I haven’t taught you how to say “DIED” and NOT DEAD”?”

Likewise, applying the same test to inchoative states results in infelicity, as shown in (15). (16) shows that homogeneous states are incompatible with *wal*.

(15) *wal* balay m-’uy hiya’ (#ga nyux ini’ k’uy la).  
PRF truly AV-tired 3S.N TOP PROG.PROX NEG tired.AV PRT  
Intended for #‘He got tired but has not gotten tired/is not tired.’

(16) Context: Describe how Wagi’ had a difficult time living in those old days.  
#wal m-’uy sraral qu wagi’.  
PRF AV-tired before ABS Wagi’  
Intended for ‘Wagi’ was tired before.’
By contrast, the entailment cancellation test is not readily applicable to wal-marked activity events; the consultant’s comment in (17) suggests that the event is not inherently telic, as it cannot be “finished” but may be stopped. I take this as a hint that activities do not have an inherent endpoint, i.e., they are atelic.

(17) wal m-ngilis qu tali’ (#ga ini’=nya’ suqi).  
PRF AV-cry ABS Tali’ TOP NEG=3S.ERG finish.PV  
Intended for ‘Tali’ cried but he didn’t finish.’  
Consultant’s comment: “Suqi is not used for crying; you should use ini’ hawh ‘not stop’.”

The reading of time phrases confirms the telicity contrast between wal-marked accomplishments and activities. While a time phrase is interpreted as an in-phrase for the former, as shown in (18), it modifies the duration of an activity event, as shown in (19). Therefore we can conclude that activities and accomplishments constitute different lexical classes.

(18) wal=nya’ kblayun sa qutux kawas qu ngasal qasa la.  
PRF=3S.ERG build.PV LOC one year ABS house that PRT  
‘He built that house in one year.’

(19) wal m-ngilis qutux spung qu tali’.  
PRF AV-cry one hour ABS Tali’  
‘Tali cried for one hour.’

2.3. (Un)availability of ryax-construction ‘spend X-time’

To modify the duration of an event, Atayal can use a pseudo-cleft construction, with a time phrase in the initial predicate position, and the verb ryax ‘spend, take’ in the presupposed nominal position. This construction is available to every aspectual class except achievements, as shown in (20-23). The consultant’s comment in (23) suggests that the sentence would force an unusually lengthy dying event.

(20) cyugal spung ryax m-qwas ni ciwas la. (Activity)  
three hour spend AV-sing ERG Ciwas PRT  
‘Ciwas sang for three hours.’ (lit. ‘What Ciwas spent on singing is three hours.’)

(21) cyugal spung ryax=nya’ m-nbuw qwaw la. (Accomplishment)  
three hour spend=3S.ERG AV-drink wine PRT  
‘He drank wine for three hours.’ (lit. ‘What he spent on drinking wine is three hours.’)
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(22) qutux kawas ryax qthuy ni tali’ la. (State)
one year spend fat ERG Tali’ PRT
‘Tali’ is fat for one year. (lit. ‘What Tali’ spent on being fat is one year.’)

(23) #qutux kawas ryax=nya’ m-huqil la. (Achievement)
one year spend=3S.ERG AV-DIE PRT
#‘He died for one year.’ (lit. ‘What he spent on dying is one year.’)
Consultant’s comment: “(Laughing a lot) You are saying it took him one year from losing his last breath to being buried. Unless there is such a miracle…”

2.4. Summary

The results of the diagnostic tests are summarized in Table 1. We have seen that unmarked forms divide eventualities between (a) activities, accomplishments, (b) achievements and inchoative states, and (c) states. The perfect aspect further singles out activity events. Last, achievements contrast to the others in lacking duration. Therefore I conclude that there are at least five aspectual classes in Atayal.

<table>
<thead>
<tr>
<th></th>
<th>Activity</th>
<th>Accompl.</th>
<th>Achievement</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>unmark.</td>
</tr>
<tr>
<td>unmarked</td>
<td>no culmination</td>
<td>w/ culmination</td>
<td>state</td>
<td></td>
</tr>
<tr>
<td>time phrase</td>
<td>at</td>
<td>at</td>
<td>at/in</td>
<td>at/in</td>
</tr>
<tr>
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<td>termination</td>
<td>culmination</td>
<td>culmination</td>
<td>inchoative</td>
</tr>
<tr>
<td>durativity</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
</tr>
</tbody>
</table>

Table 1: Lexical aspectual classes in Atayal

3. Aspectually-unmarked Predicates

Aspectually unmarked predicates in Atayal have been described as allowing either imperfective or perfective readings (Huang 1993, Zeitoun et al. 1996). For example, the translation given for (24) suggests that the sentence can have a non-progressive, a progressive, or a habitual reading:⁵

(24) m-ihiy=ku’ laqi’. AV-beat=1S.ABS child
‘I beat (past) a child.’ / ‘I am beating a child.’ / ‘I (usually) beat child(ren).’
(Wulai Squliq, Zeitoun et al. 1996: 24; morpheme glosses modified)

⁵ Since this paper is concerned with aspect, I leave issues of temporal interpretation aside.
In this section, I argue that unmarked predicates are not neutral or underspecified, but share uniform aspectual properties.

3.1. No Progressive Readings

There is evidence that unmarked forms lack an event-in-progress interpretation, unlike what is described in the prior literature. In a telephone conversation that forces an interpretation that describes an event ongoing at the speech time (a test adopted from Reis Silva and Matthewson 2007), an unmarked eventive is infelicitous, unless overtly marked with the progressive aspect cyux/nyux, as exemplified in (25).

(25) Context: Your brother is calling to ask you to pick him up. You say, “I can’t come…."
   a. #... yalaw gi mgluw=sami m-nbuw qwaw ki rangi’=mu.
      because together.Av=1PL.EXCL.ABS AV-drink wine COM friend=1S.GEN
      Intended for ‘… because I am drinking with my friends.’
      Consultant’s comment: “It’s a past tense”; “You are explaining you didn’t come because you drank with your friend.”
   b. … yalaw gi nyux=sami mgluw m-nbuw qwaw
      because PROG.PROX=1PL.EXCL.ABS together.Av AV AV-drink wine
      ki rangi’=mu.
      COM friend=1S.GEN
      ‘… because I am drinking with my friends.’

In section 4.5, I will return to the discrepancy between the result here and what is described in the literature.

3.2. Events must begin

As discussed in section 2.1, the event described by unmarked predicates vary with respect to encoding final points (i.e., culmination/termination). Regarding initial points, all the lexical classes, including inchoatives but excluding homogeneous states (see (6-7) above), behave the same in yielding an inceptive reading when modified by a punctual clause:

(26) kt-an=maku’ hiya’ lga, m-ngilis hiya’ la. (Activity)
    see-LV=1S.ERG 3S.N PRT.TOP AV-cry 3S.N PRT
    ‘When I saw him, he cried.’

(27) tayhuk qu tali’ ga, kblay-un=naha qu ngasal la. (Accomplishment)
    arrive.AV ABS Tali’ TOP make-PV=3PL.ERG ABS house PRT
    ‘When Tali’ arrived, they built the house.’
Researcher: “Is that they waited for Tali’ and only started to build the house when he came?” Consultant: “That’s correct!”

(28) m-wah=saku’ lga, m-huqil hiya’ la. (Achievement)
    AV-come=1S.ABS PRT.TOP AV-die 3S.N PRT
   ‘When I came, he died.’

Note that the reading in (28) is not simply inceptive but instantaneous as the punctual clause picks out the entire event. This is expected given that achievements are not durative.

Table 2 summarizes the aspectual properties of eventive predicates in unmarked forms. Viewing from both initial and final points of events, it is evident that achievements and inchoatives differ from activities and accomplishments in being properly included in reference time; I illustrate this in (29), where the former are termed as changes-of-state and the latter non-changes-of-state.

<table>
<thead>
<tr>
<th></th>
<th>inceptive readings w/ punctual clause</th>
<th>failure to terminate/culminate</th>
<th>ability to continue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activities</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Accomplishments</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Achievements</td>
<td>√ (instantaneous)</td>
<td>*</td>
<td>n.a.</td>
</tr>
<tr>
<td>Inchoative states</td>
<td>√ (inchoative)</td>
<td>*</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Table 2: Eventives in unmarked forms


3.3. Perfective, Imperfective, or Neither?

The aspectual properties of unmarked predicates cannot be characterized by either perfective or imperfective aspect, standardly analyzed as reversing the containment relation between the event time and the reference time (e.g., Kratzer 1998):

(30) a. Perfective: Event time included in reference time
    \[ \lambda P_{\text{cl}, \text{sd}} \cdot \lambda t, \lambda w, \exists e [t(e) \subseteq t & P(e)(w) = 1] \]

b. Imperfective: Reference time included in event time
    \[ \lambda P_{\text{cl}, \text{sd}} \cdot \lambda t, \lambda w, \exists e [t \subseteq t(e) & P(e)(w) = 1] \]

As given in (30), unmarked activities and accomplishments do not delineate final points, in contrast to perfective; unlike imperfective, which leaves both initial and final points open, unmarked eventives have an inceptive reading, and unmarked
achievements and inchoatives culminate (rather than being coerced). Similarly, proposing an aspect ambiguous between perfective and imperfective cannot solve the problem.

Another possibility is that the culmination of accomplishments is removed independently, as it is done by an imperfective operator in Thai (Koenig & Muansuwon 2000), or by the control transitiveizer in Salish languages (Bar-el 2005 and Bar-el et al. 2005). Adopting such an approach, Atayal unmarked predicates are best analyzed as having a (null) perfective, by which inceptive readings with every lexical class and culmination of achievements are expected, whereas accomplishments are unusual due to extra semantics. The fact that activities and accomplishments can continue can also be explained if viewing two units of activity events as the same event. This analysis, however, has a difficulty in unifying the entire aspectual system. Recall that Atayal has a perfect form that leads to culmination entailment with accomplishments (see section 2.2). If Atayal accomplishment stems had no final point, the perfect sentence could terminate without entailing that any culmination has been reached, contrary to the fact. The culmination effect cannot be encoded in the perfect aspect wal either as it would force undesired final points for activities.

Alternatively, we may suppose that accomplishment stems are ambiguous between a non-culminating and a culminating reading (e.g., Tatevosov 2008), and wal only applies to the culminating form but not the other, yielding the right results. Such an analysis requires further evidence for the ambiguity of accomplishment stems in the language.6

4. Analysis

4.1. Neutral aspect

Smith (1997) proposes a viewpoint aspect that is neither imperfective nor perfective aspect, dubbed ‘neutral aspect’, which “includes the initial point and at least one internal stage of a situation (where relevant)” (Smith 1997: 81). The precise interpretation of internal stages of an event is conditioned by eventuality type. An achievement is instantaneous and has no internal stages so neutral aspect spans the entire event, whereas for activities and accomplishments, neutral aspect spans only one stage of the event, and thus no final point is ensured. In spite of the misleading name, neutral aspect in Smith’s proposal is not “neutral” at all but a special viewpoint that allows reference to the beginning point of an event and part of its temporal structure, but not to the final point.

The neutral aspect correctly predicts the use of unmarked predicates in Atayal: The event denoted by the neutral aspect must begin within the reference

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6 Technically speaking, the analysis that I propose below can be also seen as extending Bar-el’s and this analysis: Atayal needs a null version of the morpheme that takes away culmination, and wal-marked accomplishments do not contain this null morpheme (p.c., Lisa Matthewson).
time, but need not reach any particular culmination/termination point. The fact that achievements are forced to culminate is due to their unique temporal structure.

4.2. Dispensing with Neutral Aspect?

Altshuler (2014) gives a formal analysis of Russian imperfective, which also exhibits the culmination difference between achievements and non-achievements. Altshuler proposes that the Russian imperfective is a partitive operator STAGE, as given in (31a), which denotes a function that returns VP-event stages. Event stages are defined as less-developed versions of an event by Landman (1992). As given in (31b), the STAGE operator combines with a set of events P and requires an event e’ that is instantiated in the actual world w* to be a non-proper part of a P-event e in a ‘near enough’ world w.

(31)a. \[ [\text{IPF}] = \lambda P \lambda e' \exists e \exists w [\text{STAGE}(e', e, w^*, w, P)] \]

b. \[ [\text{STAGE}(e', e, w^*, w, P)]^{M,g} = 1 \text{ iff } (i)-(iv) \text{ holds:} \]

(i) the history of w is the same as the history of w* up to and including \( \tau(e') \)
(ii) w is a reasonable option for e’ in w*
(iii) \([P]^{M,g}(e, w) = 1 \]
(iv) \( e' \subseteq e \)

(Altshuler 2014: 754)

Altshuler assumes that achievement events are atomic stages. In the application of (31b-iv), an atomic stage trivially develops into itself in the actual world and presumably in every other possible world. Hence an achievement is expected to have culmination entailments. By contrast, accomplishment events comprise at least two stages, and thus any of the event stages will satisfy the truth-conditions of the imperfective, and no culmination is entailed.

Although this analysis is similar in spirit to Smith’s neutral aspect, both leaving the culmination difference to the internal structure of events, Altshuler argues that neutral aspect can be dispensed with once the STAGE operator is parameterized in languages to impose a maximal stage requirement, which is satisfied when a VP-event culminates or ceases to develop in the actual world. For instance, Russian imperfective lacks this requirement, allowing events to go on, as shown in (32), but Hindi perfective appeals to stages that have ceased to develop, as shown in (33):

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7 According to Landman (1992), sets of events can be ordered by a ‘part-of’ relation and a ‘stage-of’ relation, where “to be a stage, a part has to be big enough and share enough with e so that we can call it a less developed version of e” (Landman 1992:23).

8 This is different from proposals (e.g., Rothstein 2004) where achievement events are assumed to have no stages.
Adopting this analysis, Atayal unmarked predicates would be considered to be an imperfective as the described event need not culminate/stop and can continue, exactly like the Russian imperfective. Yet Atayal unmarked predicates and Russian imperfective are not the same regarding the relation of event time to reference time. The Russian imperfective requires the reference time to follow a (sub)part of the event, i.e., the reference time is included inside the result state of an event stage (see Altshuler 2012):

By contrast, the Atayal unmarked predicates have inceptive readings (see section 3.2), which will require the reference time to include the initial part of event stages. This suggests that simply focusing on whether an event reaches final points or not cannot capture relevant differences between aspektual operators (see also Arregui 2014). The difference brings us back to the hybrid behaviour of neutral aspect, which complements perfective and imperfective in terms of how an event is viewed with respect to both initial and final points. Therefore Atayal unmarked forms present as rejection of reducing neutral aspect.

4.3. The Proposal: Initial Stages of Events

I propose that sentences of unmarked predicate in Atayal carry a null neutral aspect in the sense of Smith (1997). Modifying Altshuler’s (2014) idea about the Russian imperfective, the Atayal neutral aspect is analyzed as encoding a partitive operator in (35), which I term I(intial)-STAGE. As given in (35a), the null aspect denotes a function from a set of events to a property of times and it is true of a time \( t \) such that \( t \) includes the running time of an initial stage of the P-event.
(35) a. $[[\text{NEU }]] = \lambda P \lambda t \exists e \exists e' \exists w' [\text{I-STAGE}(e, e', w, w', P) \wedge \tau(e') \subseteq t]$

b. $[[\text{I-STAGE}(e, e', w, w', P)]]^M_8 = 1$ iff (i)–(iv) holds:
(i) the history of $w'$ is the same as the history of $w$ up to and including $\tau(e)$
(ii) $w'$ is a reasonable option for $e$ in $w$
(iii) $[[P]]^M_8(e', w') = 1$
(iv) $e \ll e'$ iff $\tau(e) \ll \tau(e')$ and $e \sim e'$

The notion of ‘initial-stages’ in (35b-iv) is borrowed from Landman (2008) and Landman and Rothstein (2012): $e$ is an initial-stage of $e'$, $e \ll e'$, iff $\tau(e)$ is an initial subinterval of $\tau(e')$, and $e$ and $e'$ are cross-temporally identical. Activities and accomplishments differ in whether initial-stages are incrementally homogeneous with respect to the VP-event; for instance, the initial-stage of an accomplishment like ‘eating a mango’ is big enough to count as eating, but not itself an event of eating a mango (see Landman and Rothstein 2012 for motivating initial-stages to account for subinterval property of activities).

4.4. Explaining the Facts

As with Altshuler, I also assume (a) that an event stage going on in the actual world is a part of the event continued in some possible world, and (b) that achievements denote a set of atomic stages. These explain the contrastive behaviour of accomplishments vs. achievements (as well as inchoatives) in culmination entailments: An achievement (or an inchoative state) has an atomic stage, which trivially develops into itself in every world, yielding culmination entailments, whereas a stage of an accomplishment event that satisfies the null aspect is never identical to the completed event. Within the framework of event stages, this analysis can also explain the possible continuation of a non-achievement event. Without restricting development of an event (which may be required for other languages), any bigger part of that event, which shares the same initial stage, could keep developing beyond the initial stage. Last, the Atayal neutral aspect differs from the Russian imperfective aspect in inceptive readings. The inclusion of the running time of initial stages inside the reference time thus correctly accounts for the inceptive readings for events of every lexical class in Atayal.

4.5. The Discrepancy of Allowing Progressive Readings

Recall that Atayal unmarked forms are reported in the literature to have progressive readings but I showed they are infelicitous in progressive contexts (section 3.1), I suggest two possible reasons for this discrepancy. Dialect variation is one of them. The work in Huang and Zeitoun et al. is based on the variety spoken in Wulai (New Taipei City), while my consultants are from Taoshan (Wufeng, Hsinchu County). Another reason is methodological. In out-of-the-blue translation tasks, were no reference time is given, the translation may simply reflect a reading close to the
speaker’s intended one. My consultants often commented that unmarked predicates are “progressive forms”, “present forms”, or “present progressive forms” when they did translation tasks, but firmly rejected them when targeted sentences are embedded in progressive contexts. My proposal that unmarked predicates encode a neutral aspect can explain this apparent contradiction: The neutral aspect is partially similar to the progressive in allowing the event to continue; yet it doesn’t target the middle of an event (stage) as the progressive aspect does.

4.6. Typological implication

The analysis has a typological implication for encoding non-culmination effects: In addition to perfective (e.g., in Thai and Hindi), imperfective (e.g., in Russian), and progressive aspect (e.g., in English), a modal component can be built into neutral aspect. Within a typology of partitive operators, the language difference can be explained by relating the runtime of event stages to reference time in different ways, as what has been assumed for aspects: RT includes $\tau(e)$ in perfective, $\tau(e)$ is includes RT in imperfective/progressive, and $\tau(e)$ overlaps RT in neutral aspect.

5. Conclusion

For the present paper, I have identified five lexical aspectual classes in Atayal and shown that the reading of unmarked predicates varies with the lexical class, both of which were not previously documented. Based on the finding, I argue that the Atayal unmarked predicates have a null neutral aspect in the sense of Smith (1997). The neutral aspect includes the initial point and one internal stage of an event. The observed culmination entailment for achievements and inchoatives independently follow from the nature of those events that lacks internal stages.

The neutral aspect is in spirit similar to Altshuler’s (2014) analysis of Russian imperfective, but the latter intends to reduce neutral aspect by the parameterized constraints on partitive operators. While my analysis is built on Altshuler’s, I argue that the property of the Atayal unmarked predicates is not captured simply by focusing on final points of the event, but supports neutral aspect. I analyze the Atayal neutral aspect as an Initial-STAGE operator, which yields an initial stage of the event that continues and culminates in a possible world that closely resembles ours, and requires that the initial stage is included in the reference time. This work contributes to uncovering the aspect of so-called neutral forms and it introduces a new typology for encoding non-culmination effects.

References


