Achievements in Northern Paiute[*]

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Building on earlier work, Vendler (1957) identifies four aktionsart classes for predicates in English: states, activities, accomplishments, and achievements. These classes reflect predicates' shared behavior in various grammatical constructions that are sensitive to certain components of their meaning. This raises a core question in the literature on aspect. "What exactly," as Filip (2011:1192) puts it, "are the aspectually relevant meaning components, how are they related to each other and how do they uniquely determine the relevant Aristotelian [or aktionsart — MT] classes and no other?" Here, I begin to explore an answer to this question for Northern Paiute (Uto-Aztecan, Numic: Western United States).

I focus on a class of predicates that correspond semantically to achievements in English. In Northern Paiute, these predicates do not all behave in the same way. When the verb *mia* 'leave' undergoes the morphological process called 'durative gemination' in the Numic literature (Thornes 2003:413), it can describe either the actual event of leaving or the result state — that is, the ensuing going away (1a). In contrast, the verb *tsibui* 'emerge' in its geminated form describes the process of something emerging before it has completely emerged (1b).

(1)   a.   Su=nana   **mi'a**.
             NOM=man **leave.DUR**
             'The man left.'
             'The man is going away.' (elicitation, EM, BP46-7, 57:40)
             [EM: "The man is walking."]

b. Su=naatsi'i nabagia-na-ggwe **tsibu'i**.
    NOM=boy bathe-NMZ-LOC **emerge.DUR**
    'The boy is getting out of the bathtub.' (elicitation, EM, BP57-1, 0:52)
    [EM: "That means that he just getting out."]

The behavior of these achievement predicates also diverges in the progressive aspect. Again, the verb *tsibui* 'emerge' describes the process of something emerging (2b). But *mia* 'leave' is simply infelicitous with such an in-progress interpretation (2a).

(2) a. #Su=mogo'ni **mia-wɨnnɨ**.
         NOM=woman **leave-PROG**
         Intended: 'The woman is leaving.' (elicitation, EM, BP46-8, 12:41)
     b. Su=naatsi'i nabagia-na-ggwe **tsibui-wɨnnɨ**.
         NOM=boy bathe-NMZ-LOC **emerge-PROG**
         'The boy is getting out of the bathtub.' (elicitation, EM, BP56-4, 2:18)
         [EM: "He's slowly getting out of the tub."]

Finding an explanatory answer to Filip's question is challenging because the grammatical constructions sensitive to the relevant meaning components — sometimes called aktionsart 'diagnostics' — vary across languages. For instance, while *in* and *for* adverbials in English identify the telicity and durativity of a predicate, many languages do not draw the same formal distinction. So, I first identify several grammatical constructions in Northern Paiute that pick up on eventivity — which distinguishes states and activities (Section 1) — and telicity — which distinguishes activities and accomplishments (Section 2).

I have found no diagnostics for durativity itself in Northern Paiute. But in Section 3, I show that achievements pattern together in constructions sensitive to the *initial* and *end* points of an event. For *mia* 'leave' and *tsibui* 'emerge', these pick out the same part of the event, in contrast to both activities and accomplishments. In at least this one way, achievements form a unified class in Northern Paiute, describing events without any duration.

Returning to the contrasts in 1–2, I then argue in Section 4 that achievements must vary along two dimensions. First, in addition to a simple change of state, some encode a result state, a meaning component that is not visible to many grammatical constructions other than durative gemination. Second, other achievements allow for a 'slow motion' interpretation as part of their lexical semantics.

A final caveat. Since Vendler's time, we have learned that verbs do not determine the aktionsart of a sentence by themselves. Arguments, adjuncts, and context, among other things, contribute as well (see Dowty 1979:185). For simplicity, since the meaning of the verb remains a large contributor, I will talk about aktionsart as a property of verbs.

1.   States and activities

States describe static eventualities that are stable. They are not eventive or dynamic like predicates from the other aktionsart classes, which are "continually subject to a new input of energy" (Comrie 1976:49). Since they are durative and have no natural end point, they most closely resemble activities, which differ only in being nonstative. In Northern Paiute, states can be distinguished from activities in a number of different ways.

1. In its geminated form, the state *pisabi* 'like' describes an eventuality that includes the reference time (3a). This is just like an activity, such as *hubiadu* 'sing' (lit. 'make song'), which describes an event that is in progress at the reference time.

    (3)   a.   Su=naatsi'i tɨ=ddogga **pisapi**.
    NOM=boy   REFL=dog **like.DUR**
    'The boy likes his dog.' (elicitation, EM, BP46-2, 30:18)
    [EM: "He likes it now. Well, he likes it all the time, I guess."]   state
    b.   Su=naatsi'i **hubiatu**.
    NOM=boy   **sing.DUR**
    'The boy is singing.' (elicitation, EM, BP46-2, 1:37:25)
    [EM: "He's singing now."]   activity

    With the progressive suffix *-wɨnnɨ*, an activity expresses the same in-progress meaning (4b). But a state describes an eventuality that holds only temporarily for a short period of time (4a), cf. states in the progressive in English (Dowty 1979:173–180).

    (4)   a.   Su=naatsi'i tɨ=ddogga **pisabi-wɨnnɨ**.
    NOM=boy   REFL=dog **like-PROG**
    'The boy is liking his dog.' (elicitation, EM, BP52-4, 9:28)
    [EM: "*Pisabiwɨnnɨ* would be just for a short time, yeah[...]"]   state
    b.   Su=naatsi'i **hubiadu-wɨnnɨ**.
    NOM=boy   **sing-PROG**
    'The boy is singing.' (elicitation, MS, BP46-2, 1:38:13)
    [MT: "Is he singing now?" MS: "Yes, he's singing."]   activity

2. In the perfective aspect, activities describe an event that terminates, though they do not have inherent end points (5b) (Toosarvandani 2014). States do not terminate (5a).

    (5)   a.   Su=naatsi'i tɨ=ddogga **pisabi-hu**.
    NOM=boy   REFL=dog **like-PFV**
    'The boy likes his dog.' (elicitation, EM, BP45-6, 26:48)
    [EM: "He *still* likes his dog."]   state
    b.   Su=naatsi'i **hubiadu-hu**.
    NOM=boy   **sing-PFV**
    'The boy finished singing.' (elicitation, EM, BP44-4-s, 27)
    [EM: "He just got through singing, init?"]   activity

3. Accordingly, when a state occurs in the perfective, it is compatible with the adverb *tɨggwisu* 'still' (6a). Activities are not (6b).

(6)   a.   Su=naatsi'i tɨ=ddoogga **tɨggwisu pisabi-hu**.
           NOM=boy REFL=dog **still** **like-PFV**
           'The boy still likes his dog.' (elicitation, MS, BP47-2, 15:43)   state
       b. #Su=mogo'ni **tɨggwisu hubiadu-hu**.
           NOM=woman **still** **sing-PFV**
           Intended: 'The woman is still singing.' (elicitation, EM, BP47-2, 26:03)
                                                        activity

4. States cannot occur in the imperative (7a), while activities can (7b).

(7)   a. #Tɨ=ddogga **pisabi**!
           REFL=dog **like**
           Intended: 'Like your dog!' (elicitation, EM, BP47-2, 48:18)   state
       b. **Hubiadu**!
           sing
           'Sing!' (elicitation, MS, BP46-2, 1:39:22)   activity

This diagnostic must be used with care, though, since it likely picks up more on agentivity than it does aktionsart, as in English (Dowty 1979:59).

2.   Activities and accomplishments

Activities and accomplishments are both eventive and durative. For the accomplishment verb *madabbui* 'fix', the geminated form (9a) and the progressive (9b) yield an in-progress interpretation, just as with the activity *hubiadu* 'sing' (8a–b). Consequently, in these forms, both verbs are compatible with a continuation that asserts incompletion (Smith 1997:63f.).

(8)   a.   Amamu'a su=naatsi'i **hubiatu**. (Yaisi kaisu hubiadu-maggwɨ-hu.)
           morning NOM=boy **sing.DUR** PTC not.yet sing-COMPL-PFV
           'This morning, the boy was singing. (He hasn't finished singing yet.)' (elicitation, MS, BP47-6, 9:45)
       b.   Amamu'a su=naatsi'i **hubiadu-winnɨ**. (Yaisi kaisu hubiadu-maggwɨ-hu.)
           morning NOM=boy **sing-PROG** PTC not.yet sing-COMPL-PFV
           'This morning, the boy was singing. (He hasn't finished singing yet.)' (elicitation, MS, BP47-6, 12:30)
       c.   Amamu'a su=naatsi'i **hubiadu-hu**. (#Yaisi kaisu hubiadu-maggwɨ-hu.)
           morning NOM=boy **sing-PFV** PTC not.yet sing-COMPL-PFV
           'This morning, the boy finished singing. (He hasn't finished singing yet.)' (elicitation, EM, BP47-6, 11:50)   activity

(9)   a.   Amamu'a su=nana   tɨ=kaadzi **madabbu'i**. (Yaisi kaisu
           morning   NOM=man REFL=car **fix.DUR**   PTC   not.yet
           madabbui-maggwɨ-hu.)
           fix-COMPL-PFV
           'This morning, the boy was fixing his car. (He hasn't finished fixing it yet.)'
           (elicitation, EM, BP47-8, 17:06)

      b.   Amamu'a su=nana   tɨ=kaadzi **madabbui-winnɨ**. (Yaisi kaisu
           morning   NOM=man REFL=car **fix-PROG**   PTC   not.yet
           madabbui-maggwɨ-hu.)
           fix-COMPL-PFV
           'This morning, the boy was fixing his car. (He hasn't finished fixing it yet.)'
           (elicitation, EM, BP47-8, 21:16)

      c.   Amamu'a su=nana   tɨ=kaadzi **madabbui-hu**. (#Yaisi kaisu
           morning   NOM=man REFL=car **fix-PFV**   PTC   not.yet
           madabbui-maggwɨ-hu.)
           fix-COMPL-PFV
           'This morning, the boy fixed his car. (He hasn't finished fixing it yet.)' (elici-
           tation, EM, BP47-8, 19:17)   accomplishment

However, accomplishments are telic — they have an inherent end point — while activities
are atelic. This distinction cannot be seen in the perfective aspect, though, since in Northern
Paiute it entails event termination. Neither an activity (8c) nor an accomplishment (9c) is
compatible with a continuation that asserts incompletion.

      Nonetheless, activities and accomplishments can be distinguished in a couple of
ways in Northern Paiute.

1. The adverb *tu'i* 'almost' entails that the event has not begun when it modifies an
    activity (10a), as in English (Dowty 1979:58). But with accomplishments, it can
    entail that the event began but did not culminate (10b).

    (10)   a.   Context: The boy is singing now.
               #Su=naatsi'i **tu'i   hubiadu-hu**.
               NOM=boy   **almost sing-PFV**
               'The boy almost sang.' (elicitation, EM, BP51-6, 13:00)
               [EM: "*Isaya'e* ['Lying'], I guess."]   activity

          b.   Context: The man is fixing his car now.
               Su=nana   tɨ=kaadzi'i **tu'i   madabbui-hu**.
               NOM=man REFL=car   **almost make-PFV**
               'The man almost fixed his car.' (elicitation, EM, BP51-6, 14:25)
               [EM: "It's probably true, init? Cuz he's still working on it, he's not
               through. Yeah, that would be true."]   accomplishment

The sentence in (10a) is judged false in a context where the boy has started singing.

In contrast, the sentence in (10b) is judged true in the parallel context where the man has started fixing his car.

2. In the perfective aspect, a punctual adverbial that describes a very short time interval, such as *wahaggwe* 'at two o'clock', coerces durative predicates into an instantaneous change of state (a.k.a. achievement). For both activities (11a) and accomplishments (11b), this can be the end point of the original event.

(11)   a.   Context: The boy sang continuously from 9:00 to 2:00.
            Waha-ggwe su=naatsi'i **hubiadu-hu**.
            two-LOC   NOM=boy **sing-PFV**
            'At two o'clock, the boy finished singing.' (elicitation, EM, BP50-2,
            26:40)   activity
       b.   Context: The man started fixing his car at 9:00 and finished at 2:00.
            Waha-ggwe su=nana   tɨ=kaadzi **madabbui-hu**.
            two-LOC   NOM=man REFL=car **fix-PFV**
            'At two o'clock, the man finished fixing his car.' (elicitation, EM, BP50-
            2, 31:14)   accomplishment

For activities (12a), but not accomplishments (12b), it can also be the initial point of the original event.

(12)   a.   Context: The boy sang continuously from 2:00 to 6:00.
            Waha-ggwe su=naatsi'i **hubiadu-hu**.
            two-LOC   NOM=boy **sing-PFV**
            'At two o'clock, the boy started singing.' (elicitation, EM, BP51-6,
            44:00)   activity
       b.   Context: The man started fixing his car at 2:00. He finished fixing it at
            6:00.
            #**Waha-ggwe** su=nana   tɨ=kaadzi **madabbui-hu**.
            two-LOC   NOM=man REFL=car **fix-PFV**
            Intended: 'At two o'clock, the man started fixing his car.' (elicitation,
            EM, BP51-6, 43:20)
            [EM: "Well that's *isaya'e* ['lying'] probably[. . .]because he can't finish
            that fast. Yeah, he started at two."]   accomplishment

Speakers judge the sentence in 12b false in the context given because it entails that the event of the man fixing his car *ends* at two o'clock. This is not compatible, given world knowledge, with him starting to fix his car at two o'clock.

3.   Achievements

While achievements are not durative, they are telic; they describe an instantaneous change of state. But as we saw in 1a–b, achievements do not all behave in a uniform fashion

in Northern Paiute. In their geminated form, some like *mia* 'leave' can describe a result state, which I will call achievements₁. Others like *tsibui* 'emerge', which I will call achievements₂, describe the process of the event culminating.

We can see this in two ways. First, since achievements₁ in their geminated form can describe a result state — after the leaving event has culminated — they are not compatible with an assertion of incompletion (13a); this parallels their behavior in the perfective (13b).

(13)   a.   Amamu'a su=naatsi'i **mi'a**.   #Yaisi kaisu   mia-maggwɨ-hu.
             morning NOM=boy **leave.DUR** PTC not.yet leave-COMPL-PFV
             'This morning, the boy left. He hasn't left yet.' (elicitation, EM, BP51-1, 2:00)
             [EM: "...well, sound like that he's not gone yet[...]It don't make sense."]
        b.   Amamu'a su=mogo'ni **mia-hu**.   #Yaisi kaisu   mia-maggwɨ-hu.
             morning NOM=woman **leave-PFV** PTC not.yet leave-COMPL-PFV
             'This morning, the woman left. She hasn't left yet.' (elicitation, EM, BP57-1, 8:30)
             [EM: "No, it don't [make sense...]She just left this morning."]

In contrast, achievements₂ in their geminated form are compatible with such a continuation (14a). Crucially, this contrasts with the perfective aspect (14b).

(14)   a.   Su=naatsi'i nabagia-na-ggwe **tsibu'i**.   Yaisi kaisu
             NOM=boy bathe-NMZ-LOC **emerge.DUR** PTC not.yet
             tsibui-maggwɨ-hu.
             emerge-COMPL-PFV
             'The boy is getting out of the bathtub. He hasn't gotten out yet.' (elicitation, EM, BP52-5, 48:10)
        b.   Su=naatsi'i nabagia-na-ggwe **tsibui-hu**.   #Yaisi kaisu
             NOM=boy bathe-NMZ-LOC **emerge-PFV** PTC not.yet
             tsibui-maggwɨ-hu.
             emerge-COMPL-PFV
             'The boy got out of the bathtub. He hasn't gotten out yet.' (elicitation, EM, BP53-4, 1:10:45)
             [EM: "You can't say that, init?[...]If he's already *tsibui*, he's already *tsibui*."]

Second, with the temporal adverbial *wahaggwe* 'at two o'clock', the result state of the achievement₁ in 15a — the going away — can include the two o'clock time interval. This differs from achievements₂ (15b), as well as activities (15c) and accomplishments (15d).

(15)   a.   Context: The woman left at 1:00. She reached her destination at 3:00.
Waha-ggwe su=mogo'ni   **mi'a**.
two-LOC   NOM=woman **leave.DUR**
'At two o'clock, the woman was going away.' (elicitation, EM, BP51-5, 10:47)

achievement$_1$

   b.   Context: The old man got out of the bathtub at 1:00.
#Waha-ggwe su=wa'itsi   nabagia-na-ggwe **tsibu'i**.
two-LOC   NOM=old.man bathe-NMZ-LOC **emerge.DUR**
Intended: 'At two o'clock, the old man had gotten out of the bathtub.' (elicitation, EM, BP53-4, 46:20)
[EM: "[…]well I thought he got out at one."]   achievement$_2$

   c.   Context: The boy started singing at 9:00. He finished at 12:00.
#Waha-ggwe su=naatsi'i **hubiatu**.
two-LOC   NOM=boy **sing.DUR**
Intended: 'At two o'clock, the boy had finished singing.' (elicitation, EM, BP51-5, 36:23)
[EM: "Nine to twelve. Yeah, *isaya'e* ['lie'], I guess."]   activity

   d.   Context: The man started fixing his car at 9:00. He finished fixing it at 12:00.
#Waha-ggwe su=nana   tɨ=kaadzi **madabbu'i**.
two-LOC   NOM=man REFL=car **fix.DUR**
Intended: 'At two o'clock, the man had finished fixing his car.' (elicitation, EM, BP51-5, 37:13)
[EM: "Cuz he's through at twelve…"]   accomplishment

In contrast, the sentence containing the achievement$_2$ in 16b is true when the process of culmination overlaps with the two o'clock time interval. This parallels a sentence with an activity (16c) or accomplishment (16d), which have in-progress interpretations.

(16)   a.   Context: The woman started to get ready to leave at 1:30. She did not actually get out the door until 2:30.
#Waha-ggwe su=mogo'ni   **mi'a**.
two-LOC   NOM=woman **leave.DUR**
Intended: 'At two o'clock, the woman was leaving.' (elicitation, EM, BP57-4, 46:14)
[EM: "False, init?[…]she doesn't leave till 2:30."]   achievement$_1$

   b.   Context: The man started getting out of the bathtub at 1:45. He got completely out by 2:15.
Waha-ggwe su=wa'itsi   **tsibu'i**.
two-LOC   NOM=old.man **emerge.DUR**
'At two o'clock, the old man was getting out of the bathtub.' (elicitation, EM, BP56-1, 8:31)
achievement$_2$

   c.   Context: The boy started singing at 1:00 and continued until 3:00.
Waha-ggwe su=naatsi'i **hubiatu**.
two-LOC   NOM=boy **sing.DUR**
'At two o'clock, the boy was singing.' (elicitation, EM, BP51-5, 2:40) activity

   d.   Context: The boy started fixing his car at 1:00; he finished fixing it at 3:00.
Waha-ggwe su=naatsi'i tɨ=kaadzi **madabbu'i**.
two-LOC   NOM=boy REFL=car **fix.DUR**
'At two o'clock, the boy was fixing his car.' (elicitation, EM, BP51-5, 7:02)
accomplishment

Unlike achievements$_2$, the sentence with the achievement$_1$ in 16a is false if the woman has not left by two o'clock. The reference time cannot precede the event's culmination.

3.1 . . . and activities

The pattern above suggests that achievements$_1$ might be ambiguous. The geminated form of *mia* 'leave' in 15a could describe the result state of leaving because it also has an activity meaning. This is not unlikely since posture verbs are all achievements$_1$, including *habi* 'lie down', *kadɨ* 'sit down', and *winɨ* 'stand up'. Crosslinguistically, these are frequently ambiguous between change-of-state and result interpretations. But achievements$_1$ interact with several grammatical constructions differently than canonical activities.

1.   The inceptive suffix *-huka* picks out the initial point of an event. For activities, which are durative, it is compatible with an assertion that the event has not yet terminated (17a). By contrast, for both achievements$_1$ (17b) and achievements$_2$ (17c), such a continuation is contradictory. Since they are not durative, they describe instantaneous events whose initial and end points are the same.

   (17)   a.   Su=mogo'ni **hubiadu-huka**. Yaisi kaisu   hubiadu-maggwɨ-hu.
              NOM=woman **sing-INCEP**   PTC not.yet sing-COMPL-PFV
              'The woman started singing. She hasn't finished singing.' (elicitation, EM and MS, BP53-4, 32:50)   activity

        b.   Su=mogo'ni **mia-huka**.   #Yaisi kaisu   mia-maggwɨ-hu.
              NOM=woman **leave-INCEP** PTC not.yet leave-COMPL-PFV
              'The woman left. She hasn't left yet.' (elicitation, EM, BP53-4, 36:25)
              [EM: "She left already, and then you said that she didn't leave yet."]
                                            achievement$_1$

        c.   Su=wa'itsi   nabagia-na-ggwe **tsibui-huka**.   #Yaisi kaisu
              NOM=old.man bathe-NMZ-LOC **emerge-INCEP** PTC not.yet
              tsibui-maggwɨ-hu.
              emerge-COMPL-PFV
              'The old man got out of the bathtub. He hasn't gotten out yet.' (elicitation, EM and MS, BP53-4, 38:10)
              [EM: "He got out already, and he can't just be getting out."] achievement$_2$

2. As in 9b above, activities give rise to an in-progress interpretation in the progressive aspect. In contrast, achievements₁ do not give rise to the same interpretation (18a); they have a plural event interpretation, distributed across individuals, which remains a mystery to me.

(18)   a.   #Su=mogo'ni **mia-wɨnnɨ**.
            NOM=woman **leave-PROG**
            Intended: 'The woman is leaving.' (elicitation, EM, BP46-8, 12:41)
            [EM: "A lot of people *miawɨnnɨ*, means they are all leaving." MT: "But just one woman?" EM: "No, you don't say that. Cuz she's just one person."]   achievement₁
       b.   Su=naatsi'i **tsibui-wɨnnɨ**. (Yaisi kaisu   tsibui-maggwɨ-hu).
            NOM=boy   **emerge-PROG** PTC   not.yet emerge-COMPL-PFV
            'The boy is getting out. (He hasn't gotten out yet.)' (elicitation, EM, BP53-4, 1:12:00)   achievement₂

In the progressive, achievements₂ have a 'slow motion' in-progress interpretation (18b). I will return to this contrast between the two types of achievements below.

3. In the simultaneous clause of a clause chain, activities give rise to an in-progress interpretation (19a), as can achievements₂ (19c). But achievements₁ do not (19b).

(19)   a.   Su=nana   **hubiadu-na**, yaisi nɨka.
            NOM=man **sing-SIM**   PTC dance.DUR
            'While the man is singing, he is dancing.' (elicitation, EM, BP48-5, 42:08)   activity
       b.   #Su=nana   **mia-na**, hubiatu.
            NOM=man **go-SIM** sing.DUR
            Intended: 'While the man is leaving, he is singing.' (elicitation, EM, BP48-5, 21:08)   achievement₁
       c.   Su=naatsi'i nabagia-na-ggwe **tsibui-na**,   hubiatu.
            NOM=boy   bathe-NMZ-LOC **emerge-SIM** sing.DUR
            'While the boy is getting out of the bathtub, he is singing.' (elicitation, EM, BP49-6, 40:49)   achievement₂

As I argue elsewhere (Toosarvandani 2014), simultaneous clauses contain covert progressive aspect. This is why they are sensitive to the same meaning components of verbs as the (overt) progressive suffix *-wɨnnɨ*.

4. In the perfective aspect, the temporal adverbial *wahaggwe* 'at two o'clock' can pick out the end point of the event described by an activity, as we saw in 11a. But for an achievement₁ like *mia* 'leave', the end point of the result state is not visible (20a).

(20)   a.   Context: The woman left at 9:00. She arrived at 2:00.

            #**Waha-ggwe** su=mogo'ni   **mia-hu**.

            two-LOC   NOM=woman **leave-PFV**

            Intended: 'At two o'clock, the woman finished going away.' (elicitation, EM, BP51-7, 2:25)

            [EM: "That's probably a lie, then, if she left at nine."]   achievement$_1$

    b.   Context: The old man started to get out of the bathtub at 1:30. He didn't completely get out until 2:00.

            Waha-ggwe su=wa'itsi   **tsibui-hu**.

            two-LOC   NOM=old.man **emerge-PFV**

            'At two o'clock, the old man got out of the bathtub.' (elicitation, EM, BP56-1, 17:03)

            [EM: "That'd be true, init?[…]Cuz he got out at two."] achievement$_2$

For achievements$_2$, the temporal adverbial is able to pick up on the end point of the process component, of course, because that is the culmination of the event (20b).

3.2 …and accomplishments

If achievements$_1$ are not ambiguous, what about achievements$_2$? They resemble accomplishments in some ways. In the progressive, they describe a process that terminates in event culmination. However, the grammatical constructions that pick up on the process component of accomplishments do not behave the same with achievements$_2$. When the inceptive suffix occurs on an accomplishment, for instance, it is compatible with an assertion that the event has not culminated (21), just as with activities (17a).

(21)   Su=nana   tɨ=kaadzi **madabbui-huka**. Yaisi kaisu

        NOM=woman REFL=car **fix-INCEP**   PTC not.yet

        u=madabbui-maggwɨ-hu.

        3SG.ACC=fix-COMPL-PFV

        'The man started to fix his car. He hasn't finished fixing it yet.' (elicitation, MS and EM, BP53-4, 33:05)   accomplishment

In contrast, achievements$_2$ bearing the inceptive suffix are *not* compatible with an assertion of incompletion, as in 17c above. The end point of an achievement$_2$ like *tsibui* 'emerge'— the change of state from being inside something to being outside of it—*is* the initial point.

3.3 …and semelfactives

Until now we have been working with a four-way typology of aktionsart. But sometimes a fifth type is added—semelfactives—which like achievements describe an instantaneous event. These are not, however, changes of state (Comrie 1976:42, Smith 1997:29f.). Both achievement$_1$ and achievement$_2$ are distinct from semelfactives in Northern Paiute.

1. In the progressive aspect, semelfactives receive an iterative interpretation, since they do not describe a change-of-state (22). By contrast, achivements$_1$ are only grammatical with a multiple participant interpretation (18a), and achievements$_2$ have an in-progress interpretation (18b).

   (22) Nɨɨ   **akwisiyae-wɨnnɨ**.
         1SG.NOM **sneeze-PROG**
         'I am sneezing (over and over again).' (elicitation, EM, BP45-5, 1:45:04)
         [EM: "*Akiwisiyaewɨnnɨ* means you sneeze a lot of times."]   semelfactive

2. Similarly, in the simultaneous clause of a clause chain, semelfactives also receive an iterative interpretation (23). Again, achievements$_1$ are ungrammatical (19a), while achievements$_2$ have an in-progress interpretation (19b).

   (23) Nɨɨ   **akwisiyae-na**, su=naatsi'i=duadzu akwisiyae-wɨnnɨ.
         1SG.NOM **sneeze-SIM**   NOM=boy=PTC   sneeze-PROG
         'While I am sneezing, the boy is sneezing, too.' (elicitation, EM, BP56-1, 41:03)
         [EM: "More than once."]   semelfactive

4.   The differences between achievements

In Northern Paiute, achievements$_1$ and achievements$_2$ are distinct from the other aktionsart types, in particular from both activities and accomplishments. They describe punctual events in which the initial point of the event is also its end point. Thus, when they take the inceptive suffix, achievements$_1$ and achievements$_2$ entail that the event has culminated. In this respect, both kinds of predicates pattern together. However, as we have seen, when they appear in a construction that *requires* an event to have duration — such as durative gemination or the progressive — they come apart.

In the progressive aspect, achievements$_2$ have an in-progress interpretation in which the otherwise instantaneous culmination is stretched out over a longer duration (18b). This 'slow motion' interpretation could arise in one of two ways. First, achievements$_2$ might really just be very short accomplishments — they would not actually describe an instantaneous event — that only reveal their process component in the appropriate grammatical construction (Verkuyl 1989:55–58). In this case, achievements$_1$ would not occur in the progressive because they woud actually describe an instantaneous change of state. The progressive cannot pick out a proper subpart of punctual events with no internal structure.

Alternately, there might be a type shifting operation that turns an achievement$_2$ into an activity (Rothstein 2004:56–58). This operation would be triggered when a sentence is necessarily false, as a sentence in the progressive would be if achievements$_2$ described a punctual event. Under this possibility, it is perhaps less clear why achievements$_1$ cannot occur in the progressive. Why would the type shifting operation not apply to them, just as

it would to achievements₂? One possibility is that only achievements₂ describe events that are compatible, given world knowledge, with a slow motion interpretation.

For durative gemination, it is more difficult to say why achievements₁ and achievements₂ yield different meanings, since the semantics of the construction is unclear. Thornes (2003:413) takes it to convey "[a]n aspectual distinction typically interpreted as durative[. . .]," which makes it sound like a type of imperfective aspect. Whatever meaning durative gemination has, though, it cannot be responsible for the contrast between the two types of achievement predicates. Besides achievements₁, no other aktionsart class allows for a result state interpretation, including achievements₂ — see the contrast between 15a and 15b–d. This also includes semelfactives, which do not allow the reference time to follow the event time in their geminated form.

(24)   Context: The boy sneezed once at 1:00.

> **#Waha-ggwe** su=naatsi'i **akwisiya'e**.
> **two-LOC**   NOM=boy **sneeze.DUR**
> Intended: 'At two o'clock, the boy had sneezed.' (elicitation, EM, BP54-2, 46:00)
> [EM: "*Isaya'e*['Lie'. . .]he sneezed just once."]

This makes Northern Paiute different from some other languages, in which the imperfective aspect yields a result interpretation—not just for achievements—but for predicates of other aktionsart classes as well, e.g. *-te-iru* in Japanese (Nishiyama 2006, Kiyota 2008:166–213), the factual imperfective in Russian (Grønn 2008), and *-ite* in Totela (Crane 2013).

Instead, the interpretation of achievements₁ in the geminated form must arise from these predicates' lexical semantics. I propose they encode a result state that is not visible to constructions that single out the end of a state or process, such as the completive suffix *-maggwɨ*. It is, however, visible to durative gemination, which can locate the reference time either within this result state (15a) or the instantaneous change of state event itself (25).

(25)   Context: The woman left at 2:00. She arrived at 3:00.

> **Waha-ggwe** su=mogo'ni   **mi'a**.
> **two-LOC**   NOM=woman **leave.DUR**
> 'At two o'clock, the woman left.' (elicitation, EM, BP51-5, 17:27)

How is this compatible with the in-progress interpretation that durative gemination gives rise to for activities and accomplishments? Like imperfective aspect in some languages, durative gemination may allow for a 'perfective viewpoint', as well as an 'imperfective viewpoint', e.g. the Romance narrative imperfective (Arregui et al. 2014). This raises the obvious question of why the result state of achievements₁ is not visible to the progressive aspect. There must be some difference—yet to be identified—between the

	STATE	ACTIVITY	ACCOMPL.	ACHIEVE.$_1$	ACHIEVE.$_2$	SEMELF.
a) geminated form	perm. (3a)	in prog. (8a)	in prog. (9a)	culm. (13a)	in prog. (14a)	noniter. (d.n.s.)
b) in the progressive	temp. (4a)	in prog. (8b)	in prog. (9b)	# (18a)	in prog. (18b)	iter. (22)
c) in the perfective	perm. (5a)	term. (8c)	culm. (9c)	culm. (13b)	culm. (14b)	noniter. (d.n.s.)
d) with *tɨggwisu* 'still'	V-*hu* (6a)	#V-*hu* (6b)	#V-*hu* (d.n.s.)	#V-*hu* (d.n.s.)	#V-*hu* (d.n.s.)	#V-*hu* (d.n.s.)
e) imperative	# (7a)	OK (7b)	OK (d.n.s.)	# (d.n.s.)	OK (d.n.s.)	OK (d.n.s.)
f) with *tu'i* 'almost'	¬V (d.n.s.)	¬V (10a)	V (10b)	¬V (d.n.s.)	¬V (d.n.s.)	¬V (d.n.s.)
g) with punctual adverbial		init. (12a)	#init. (12b)			
		termin. (11a)	culm. (11b)	culm. (20a)	culm. (20b)	
h) V*huka…kaisu* V*maggwɨhu*	OK (d.n.s.)	OK (17a)	OK (21)	# (17b)	# (17c)	OK (d.n.s.)[1]
i) simultaneous clause	temp. (d.n.s.)	in prog. (19a)	in prog. (d.n.s.)	# (19b)	in prog. (19c)	iter. (23)

Table 1: Summary of aktionsart diagnostics in Northern Paiute (culm. = culmination, d.n.s. = data not shown, init. = initial; in prog. = in progress, iter. = iterative, noniter. = noniterative, perm. = permanent, temp. = temporary, term. = termination)

aspectual contributions of durative gemination and the progressive.

5. Conclusion and future prospects

Achievements in Northern Paiute come in two varieties. First, there are achievements$_1$, which encode a result state that is visible to durative gemination (though not to the progressive). Second, there are achievements$_2$, which are compatible with a 'slow motion' interpretation of the culmination event that arises either through a type shifting operation or because they actually describe a very short telic process. While some aspects of the interaction between these meaning components and various grammatical constructions, such as durative gemination and the progressive, remain mysterious, it is clear that achievements$_1$ and achievements$_2$ are distinct from the other aktionsart classes. The relevant diagnostics are summarized in Table 1.

The typology of achievements in Northern Paiute might actually be a bit more complicated than this. In principle, there is no reason that the encoding of a result state and the ability to give rise to slow motion interpretation (whatever its source) are incompatible. We might expect, for instance, to find predicates that are incompatible with the progressive (like achievements$_1$) but that also do not encode a result state (like achievements$_2$).

Indeed, the verb *mayɨ* 'find' — along with *kadoma'e* 'make into nothing', *pidɨ* 'arrive', and *wadzimia* 'escape' — has precisely this combination of properties. It is an achievement because the inceptive suffix entails the culmination of the event, and therefore it is not compatible with a continuation that asserts incompletion.

(26)   Su=naatsi'i tɨ=ddogga **mayɨ-huka**. #Kaisu   u=mayɨ-maggwɨ-hu.
        NOM=boy   REFL=dog **find-INCEP**   not.yet 3SG.ACC=find-COMPL-PFV
        'The boy found his dog. He hasn't found it yet.' (elicitation, MS, BP53-8, 41:00)
        [MS: "Means he thought he found it, and then he didn't find it."]

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[1] We might expect semelfactives to pattern with achievements here. But the inceptive and completive suffixes coerce an iterative — and hence durative — interpretation with semelfactives.

Like an achievement₁, *mayɨ* 'find' entails event culmination both in the geminated form (27a) and with the perfective suffix (27b), and it is infelicitous with the progressive suffix (27c) and in a simultaneous clause (28).

(27)   a.   Su=naatsi'i tɨ=ddogga **ma'yɨ**.   #Yaisi kaisu   u=mayɨ-maggwɨ-hu.
                NOM=boy REFL=dog **find.DUR** PTC not.yet 3SG.ACC=find-COMPL-PFV
                'The boy found his dog. He hasn't found it yet.' (elicitation, EM, BP56-1, 46:52)
                [EM: "Cuz he already found the dog."]
    b.   Su=naatsi'i tɨ=ddogga **mayɨ-hu**. #Yaisi kaisu   u=mayɨ-maggwɨ-hu.
                NOM=boy REFL=dog **find-PFV** PTC not.yet 3SG.ACC=find-COMPL-PFV
                'The boy found his dog. He hasn't found it yet.' (elicitation, EM, BP56-1, 46:03)
    c.   #Nɨɨ   tɨ=ddogga **mayɨ-wɨnnɨ**.
                1SG.NOM REFL=dog **find-PROG**
                Intended: 'I am looking for my dog.' (elicitation, EM and MS, BP49-5, 1:25:29)
                [MS: "That means more than one little dog. . . it's gotta be more than one."]

(28)   #Su=naatsi'i tɨ=ddoogga **mayɨ-na**, hubiadu-wɨnnɨ.
        NOM=boy REFL=dog **find-SIM** sing-PROG
        Intended: 'While the boy is looking for his dog, he is singing.' (elicitation, EM, BP56-1, 45:29)

However, like an achievement₂, *mayɨ* 'find' does not encode a result state; the event of the boy finding his dog in 29 cannot precede the time introduced by a temporal adverbial.

(29)   Context: The boy found his dog at 1:00.

    #Waha-ggwe su=naatsi'i tɨ=ddogga **ma'yɨ**.
    two-LOC   NOM=boy REFL=dog **find.DUR**
    Intended: 'At two o'clock, the boy had found his dog.' (elicitation, MS, BP53-8, 42:40)
    [MS: "*Isaya'e*['Lie'. . .]how could he find it at one o'clock. . ."]

This leaves just the fourth possible combination. Are there any predicates in Northern Paiute that both encode a result state, like an achievement₁, and allow for a slow motion interpretation in the progressive, like an achievement₂? I have not found one yet, but perhaps just further investigation is needed.

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