A note on how and why
‘state + aorist = achievement’

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In syntactic and semantic studies, there is a debate about the proper definition of ‘achievement’. While some authors consider them pure punctual boundaries without any extension, others treat them as short accomplishments, and propose that they have a process component that happens to be instantaneous. The goal of this article is to discuss an empirical pattern whereby some stative verbs become achievements in the aorist; it is argued that this pattern of data supports the view of achievements as pure boundaries.

**Keywords:** achievements; Aktionsart; grammatical aspect; states.

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1. We are grateful to Rafael Marín, Christopher Piñón, Pier Marco Bertinetto, Hamida Demirdache, Anita Mittwoch and two anonymous reviewers of *Onomázein* for observations and comments to previous versions of this paper. All disclaimers apply. The research that underlies this paper has been partially supported through the project FFI2013-44509-P, funded by the Spanish Ministry of Economy and Competitiveness.
1. On some loose ends of the Vendlerian classification

The Vendler-Dowty classification of predicates into Aktionsart classes is arguably the most influential proposal in contemporary studies of the semantics of verbs; it has been adopted in a wide variety of frameworks, and it has proven useful in the analysis of phenomena apparently as eclectic as argument structure, periphrases and adjunction, among many others. Despite its influence, there are still some loose ends that are being discussed in the current literature. This talk aims to contributing to one of these debates, specifically the nature of achievements inside the Aktionsart system. What is the appropriate consideration of achievements in opposition to accomplishments? We will see that there are two incompatible and distinct views: (i) achievements are ‘short’ accomplishments, structures with an initiation phase, a culmination phase and a defined internal progression that, however, is punctual (cf. Dowty, 1979; Ramchand, 2008); (ii) achievements completely lack a progression component and are better defined as non-extensive boundaries (Piñón, 1997; Martin, 2011).

This paper has two distinct components: on the one hand, we will describe a particular empirical pattern that supports a neoconstructionist view of Aktionsart and a view of achievements as pure boundaries, not as short accomplishments. On the other hand, we will provide an analysis of that pattern which tries to restrict the phenomenon making a minimum of independent assumptions, crucially raising the question of whether it is necessary to mark verbs that undergo this transformation in the lexicon or there are semantic and syntactic principles that can predict it. Hopefully, the description stands independently of the analysis (so the consequences for the status of achievements will stand even if the particular analysis we propose is not accepted by everyone), but we will try to convince the reader of both.

2. The problem

Some stative verbs display an achievement behaviour when they appear combined with a perfective / aorist grammatical aspect. (1), with saber ‘know’ in an imperfective form, displays the following properties: it rejects in-aspectual modifiers and it rejects place modifiers.

(1) Juan sabe (*en el hospital) (*en cinco minutos) que la tierra es redonda.
Juan knows (in the hospital) (in five minutes) that the earth is round
Intended: ‘In the hospital, after five minutes, Juan knows that the earth is round’

But once the same verb appears in aorist (2), the behaviour changes.

(2) Juan supo (en la universidad) (en cinco minutos) que la tierra es redonda.
Juan knew.AOR in the university in 5 minutes that the earth is round
‘In the university, Juan got to know after five minutes that the earth is round’

As it is the case with other non-stative verbs (specifically, non Kimian-states; Maienborn, 2005), the predicate accepts now a place modifier of the event (not a frame adverbial). It does accept also an in-adverbial with the interpretation noted by Piñón (1997) for achievements: the in-adverbial measure the time that went by between an arbitrary point in the past, and the point where the event started happening. Thus, on the surface (and we will go back to this issue) the state has become an achievement when combined with the aorist grammatical aspect.

2 In order to avoid potential confusion between perfective and perfect, we will use aorist as a term in the remainder of this paper.
2.1. Other cases

Some other stative verbs display the behaviour of achievements when combined with aorist, but by all means not all of them. The following examples show a number of verbs that do.

(3) a. Juan conoce la respuesta (*en la universidad) (*en dos horas).
   Juan knows the answer (*in the university) (*in two hours)
   ‘Juan knows the answer in the university in two hours’

b. Juan conoció la respuesta (en la universidad) (en dos horas)
   Juan knew.aor the answer (in the university) (in two hours)
   ‘Juan got to know the answer in the university after two hours’

(4) a. Juan puede ser presidente (#en España) (#en un año)
   Juan can be president (in Spain) (in a year)

b. Juan pudo ser presidente (en España) (en un año)
   Juan could.aor be president (in Spain) (in a year)
   ‘Juan managed to become president in Spain after a year (of trying)’

(5) a. Juan quiere una novia (*en la boda) (*en cinco minutos)
   Juan wants a girlfriend (*in the wedding) (*in five minutes)

b. Juan quiso una novia (en la boda) (en cinco minutos)
   Juan wanted.aor a girlfriend (in the wedding) (in five minutes)
   ‘Juan started feeling like he wanted a girlfriend after five minutes, in the wedding’

(6) a. Juan odia a su profesora (*en la primera clase) (*en unos minutos)
   Juan hates ACC his teacher (*in the first class) (*in some minutes)

b. Juan odió a su profesora (en la primera clase) (en unos minutos)
   Juan hated.aor ACC his teacher (in the first class) (in some minutes)
   ‘Juan started to hate his teacher in the first class, after a few minutes’

(7) a. Juan ama a Lucía (en el bosque) (en un ratito)
   Juan loves ACC Lucía (in the forest) (in a while)

b. Juan amó a Lucía (en el bosque) (en un ratito)
   Juan loved ACC Lucía (in the forest) (in a while)
   ‘Juan started to love Lucía in the forest after a short while’

All these verbs seem to adopt the same kind of interpretation when they become achievements: a focus on the initial point that defines a change, followed by the state that the verb originally means. If saber means ‘know’, supo talks about a temporal point where there is a change and the person learns something; that is, the initial boundary of a situation where the person starts to know. This is noticeable in the kind of glosses that are necessary in English to express the meaning of the verb in the aorist.

(8) started V-ing / came to V / become V-ed

(9) a. came to know
   b. became aware
   c. managed (‘started being able’)
   d. started feeling like
   e. started hating
   f. came to love...

Thus, it does not seem that we are in front of a quirk of a particular verb; the phenomenon seems wider and has a systematic impact: from a state (10) we move to the denotation of a starting boundary which conducts the subject to the state (11).

(10) [BE IN STATE]
(11) [BECOME [BE IN STATE]]
Let us now consider the properties of this empirical pattern in a more detailed way.

3. Step 1: to show that these verbs have become achievements in the aorist

The first issue that we need to address so that our claim is convincing is to provide evidence that these states in the aorist have become achievements, and not any other dynamic class (such as activities or accomplishments). The tests that we are going to see here are taken from Piñón (1997), Heyde (2008), Martin (2011) and Rothstein (2004: 36-58).

3.1. Time-span adverbials

Achievements, like accomplishments, are telic events, and as such they can be combined with in-adverbials.

(12) a. He wrote the book in ten days.
   b. He arrived in ten days.

   There is a difference, though. With accomplishments, the in-modifier quantifies the extension of the progression part of the event, from its beginning to its culmination. In (12a) the default reading —that is, when no arbitrary point in time is contextually specified— is that the whole writing took place in the course of ten days. However, in (12b), we do not say that the arrival lasted for ten days. The adverbial quantifies the distance between the starting point of the event and an arbitrary point in time that precedes it. What we measure is the preparatory state that precedes the arrival (say, the whole trip that ended when he arrived at some place). Consequently, the PP is equivalent to an after-modifier only in the second case.

(13) a. He wrote the book in ten days =//= He wrote the book after ten days.
   b. He arrived in ten days == He arrived after ten days.

This second reading is the one that emerges with our states in the aorist.

(14) Juan supo la respuesta en dos días.
    ‘Juan knew.aor the answer in two days’

3.2. No partial completion

Another difference between accomplishments and achievements is that, given that achievements lack a relevant period of time through which the process happens (remember that even theories that treat them as short accomplishments propose that the progression part is quasi-instantaneous), they take place or not, but they cannot be only partially completed. Accomplishments can be partially completed, meaning that the process starts and part of it is satisfied, but there is an interruption.

(15) a. Juan escribió el libro a medias.
    ‘Juan wrote.aor the book at half’
   b. *Juan llegó a casa a medias.
    ‘Juan arrived.aor at home at half’

   Intended: ‘Juan arrived home in part’

   In our stative verbs in the aorist, we find the same situation as with achievements:

(16) ??Juan supo que la tierra era redonda a medias.
    ‘Juan got in part to know that the earth is round’

When the non-completion modifier is possible, it refers to the state achieved —that is was not the highest degree possible of that state—not to the change.

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3 For completeness’ sake, note that there is a potential reading of (15b), perhaps licensed by pragmatic contextual knowledge. In that reading, the partial completion does not apply to the event—which has to be necessarily completed—but to the state obtained as a result: (15b) can be interpreted as a claim that the arrival happened, but one cannot say that Juan is now at home completely, because, for instance, his heart is still somewhere else.
(17) Juan conoció a su jefe a medias.
   Juan knew.AOR ACC his boss at half
   ‘Juan got to know his boss only in part’

**3.3. Place adverbials**

Note that this test shows that the state is not a state anymore when combined with the aorist aspect, but it does not show whether it became an achievement or an accomplishment. States—at least, leaving aside the problematic class of Davidsonian-states (Maïenborn, 2003)—reject place modifiers locating the eventuality.

(18) *Juan sabe inglés en su casa.
   Juan knows English at his house
   *‘Juan knows English at home’

Place adverbials are possible, however, in the aorist.

(19) Juan supo la noticia en su casa.
   Juan knew.AOR the news at his house
   ‘Juan got to know the news at home’

**3.4. Manner adverbials**

If we concentrate now on manner adverbs, and leave aside those that express the behaviour of the agent, we find also—expectedly—that states will reject adverbials meaning quickly or slowly, because in them there is no dynamic part that can have a speed.

(20) a. *John knows English quickly.
    b. John learns English quickly.

Accomplishments and achievements allow them, but they contrast, again, in what the speed refers to. With accomplishments, the speed modifier refers to the process—‘the process V was quick or slow’—, while with achievements, it refers to the timespan of the preparatory stage: whether that preparatory stage was short or long.

(21) a. He wrote the book quickly. == His writing was quick.
    b. The book arrived to the shops quickly. == The time that passed between an arbitrary point in the past (presumably, his writing the book) and the arrival of the book was short.

Our stative verbs in the aorist produce the same interpretation as with achievements.

(22) Supo la noticia rápidamente.
    He.knew.AOR the news quickly
    ‘He got to know the news soon’, not ‘The way in which he came to know the news was quick’

**4. Step 2: to restrict the class of stative verbs that can become achievements**

Not all stative verbs adopt an achievement behaviour with perfective external aspect, which brings up the question of whether one has to list idiosyncratically the verbs that do. Verbs that allow it typically involve mental states (odiar ‘hate’, querer/desear ‘want’...).

(23) Juan conoció en cinco minutos al presidente.
    Juan knew.AOR after five minutes to-the president
    ‘Juan became acquainted with the president after five minutes’

This is not the case with other states, including those that express possession, inclusion, existence or resemblance.

    The cask contained.AOR fifty liters in five minutes.

The situation with locative states is more complex, but we believe that it also follows the general proposal. The first thing to note (and we are grateful to an anonymous reviewer for this observation) is that sentences like (i), with an animate subject, are not impossible.

(i) Juan estuvo en lo más alto en un año.
    Juan was in the more high in one year
    ‘After one year, Juan had arrived to the highest level’
Intended: ‘After five minutes, the cask came to contain 50 liters’

b. *Faltaron mil euros en cinco minutos.
   There.lacked.aor thousand euros in five minutes
   Intended: ‘After five minutes, they were 1000 euros short’

c. *Juan poseyó cuatro millones en el banco
   Juan possessed.aor four millions in the bank
   Intended: ‘Juan got to have four millions in the bank’

d. *Sobraron tres empleados en un año de crisis
   There.were.superfluous.aor three employees in a year of crisis
   Intended: ‘After one year of crisis, three employees become superfluous’

e. *Juan se pareció a su madre en unos meses
   Juan SE seemed.aor to his mother in some months
   Intended: ‘Juan started resembling his mother after a few months’

What is the right generalisation? It seems that the restriction on the class of states that become achievements in the aorist has to do, indeed, with the presence of an experiencer of a mental state: if the predicate defines a state that is experienced by an animate entity, the achievement interpretation will be available. Evidence in favour of this is that with the same verb we have both cases where the state becomes an achievement, and cases where this does not happen. The crucial difference between these minimal pairs is whether the predicate assigns an experiencer interpretation to the subject or not:

(25) a. Juan fue consciente de esto en su casa en un par de días.
   Juan was.aor conscious of this in his house in a couple of days
   ‘Juan became aware of this at home after a couple of days’

b. *Juan fue cruel en una hora.
   Juan was.aor cruel in one hour
   Intended: ‘Juan started being cruel after one hour’

(26) a. Juan tuvo {hambre / sed} otra vez en una hora.
   Juan had.aor {hunger / thirst} other time in one hour
   ‘Juan got {hungry / thirsty} again after one hour’

b. ??Juan tuvo dinero otra vez en una hora
   Juan had.aor money other time in one hour
   Intended: ‘Juan received money again after one hour’

(27) a. Juan estuvo en dificultades económicas otra vez en unos días.
   Juan was.aor in difficulties economic other time in some days
   ‘Juan started having economic difficulties again in a few days’

b. Juan estuvo enfermo otra vez en unos días.
   Juan was.aor sick other time in some days
   ‘Juan started being sick again after a few days’

c. *La pared estuvo rota otra vez en unos días
   the wall was.aor broken other time in some days

4 Crucially, because the subject is animate, it can be interpreted that the psychological state in which he is found, and the mental properties associated to those states, are responsible for the change of location. Contrast this with (ii), with a non-animate subject, and thus unable to hold psychological states.

(ii) *La televisión estuvo en la mesa en una mañana.
   the television was on the table in one morning
   Intended: ‘The television ended on the table after one morning (during our moving to the new flat)’

We are grateful to this anonymous reviewer for this suggestion. In fact, this suggests that the conditions under which the state can become an achievement are more conceptual than lexical: the availability of the interpretation is made possible by the structure, and after the structure imposes a reading, whether the interpretation is possible or not depends on how much the role of the psychological state of the subject is compatible with the interpretation of each individual lexical item inside the structure.
Intended: ‘The wall got broken again after a few days’

Thus, there must be some relation between having experiencers and mental states and allowing this Aktionsart reinterpretation in the aorist.

5. Step 3: how it is done

The following characterisation of the aorist form has become standard in a Kleinian view of aspect (Klein, 1992): the aorist is a situation where the focus time includes the boundary of the event time. Here we represent with - - - the event time, with + + + + the time not covered by the event, and with [ ] the interval focalised by grammatical aspect.

(28) + + + + + + + + + + + + + + + [+] + + + + + + + + + +

However, the representation in (28) is able only to account for the terminative reading of the aorist (where the point that is focalised coincides with the endpoint of the event). Other authors, like Smith (1991) (building on observations by Talmy, 1985) have noted that there is also an ingressive interpretation of the aorist, where the point focalised is the starting point of the event time.

(29) Juan ordenó sus libros alfabéticamente a las diez.

Juan arranged his books alphabetically at the ten

‘Juan arranged alphabetically his books at ten’

(30) a. Starting point of the event: 10 p.m.
   b. Duration: Unknown
   c. Ending point: Unknown

The ingressive is also the interpretation that is relevant in our states in the aorist: as the gloss makes clear (come to V, start V-ing...) our sentences in the aorist claim something about the starting point of a situation, but say nothing about when (or whether) the endpoint appears.

Even though we borrow the ingressive interpretation from her theory, we take distance from Smith’s (1991) proposal that the aorist grammatical aspect covers the whole event time (as in 31), subsuming in practice both starting and ending points, and instead propose that aorist focalises one of the boundaries of the event (left or right) (32). This is an application of the Kleinian view of aspect, only that with the modification that the boundary focalised does not need to be the final one.

(31) + + + + + + [+] + + + + + + + + + + +

(32) Interpretations of the aorist
   a. Ingressive: + + + + + + + + [+] - - - - - - - - - - - - -
   b. Terminative: - - - - - - - - - - - - [-+] + + + + + + + + +

Thus, from this perspective, the question of why some states get an achievement interpretation in the aorist reduces to the following problem: why does perfective, with these states, have an ingressive interpretation that focalises a starting point of the situation?

Here is our proposal: the state, as such, lacks any event boundary and does not express any event. For lack of a better representation, conceive a pure state as a series of - - - - - - - - -: points without delimiting + + + +:’s:

(33) - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

An aorist grammatical aspect combines with the lexical verb, and brings with it the need to identify a final or initial boundary. With most states, this boundary would be final: the state ceases to exist. Nothing happens with respect to its internal Aktionsart type, because the boundary does not need to be identified with a culmination point: it is just the final point where the predicate holds, followed by a point where it does not hold.

(34) - - - - - - - - - - - - [-+] + +

(35) Mi abuelo fue médico.

‘My grandfather was doctor’

The only meaning addition here is a final point, but this does not affect the aspeсtual class
of the predicate, because there is no qualitative
difference between that final point and the oth-
er ones that preceded it: there is no culmina-
tion. Consequently (35), one possible interpreta-
tion that is triggered is a lifetime effect: the state
does not hold anymore because my grandfather
is dead now.

However, in our case, with states that be-
come achievements, the point that is picked by
the aorist is a starting one.

(36) +++++ [+ :] · · · ·
‘+++ [come to] k n o w’

Interestingly, this changes the aspectu-
cal class of the verb, by making it turn into an
achievement: it expresses a boundary of change,
a transition between a situation not being true
and a situation being true.

5.1. On the asymmetry between initial
and final points

This explanation, in practice, makes an im-
portant presupposition that, in our mind, is im-
plicit in many existing works on aspectual struc-
ture: initial and final points of a situation are not
identical, and there are important asymmetries
between them. So why do we have an asymme-
try between initial and final boundaries?

Even though we do not consider our answer
to be complete, we could perhaps speculate a
bit. One can think that there is an inherent asym-
metry between the first and the final temporal
point of a situation. The first point of a situation
is always qualitatively different from the one
that precedes it, while the last point of a situa-
tion is not necessarily qualitatively different
from the point that precedes it. In telic events,
there is a culmination and the last point of the
situation will be qualitatively different from the
one that precedes it, but if the event is atelic
that point is not qualitatively different from the
one that precedes it—it is identical to the rest
of the series—. On the assumption that chan-
ges are evaluated by comparison to the point in
time that precedes them, and not by comparison
to the point in time that follows them (because
that point in time has not happened yet) the ines-
capeable conclusion should be that initial points
always imply a change, while final points do not
always imply a change. But this is necessarily
implying that the relevant qualitative difference
in order to define the aspectual type of the verb
is the difference of a point T with respect to the
point T' that precedes it in time, ignoring the one
that follows it in time. If the time that follows
it is also relevant, then the initial and the final
boundaries should be equal.

We can conclude then that with states the
default interpretation of aorist is in the final
point, precisely because it does not imply an as-
pectual change in the semantics of the verb.

5.2. Why not accomplishments or activi-
ties?

Finally, another question is relevant at this
point: why doesn't an aorist turn an activity or
an accomplishment into an achievement when
it takes the ingressive reading? Why should the
capacity of an aorist grammatical aspect to
change the Aktionsart of a predicate be restric-
ted to just states?

We suggest the following explanation: the
role of the external aspect is to add information
over what is defined at the level of the lexical
verb, but it cannot remove information with res-
pect to what the verb means lexically. In the case
of a stative verb, aorist can define a boundary
(add the information ‘come to’ at an inter-
pretative level) and the denotation of the verb(a
state) can be interpreted as the result state fo-
llowing that boundary. This gives, in fact, a type
that is independently identified for some achie-
vements related to psychological stats (Marín
& McNally, 2011): a left boundary followed by a
state.

(37) · · · · (get worried, preocuparse)
However, in the case of an activity or an accomplishment, turning it into the structure of (37) would imply ignoring the dynamic component that follows the left boundary in those verbs: the activity or the accomplishment cannot be a result state following a change, simply because the lexical verb does not denote (just) a state.

6. Step 4: why?

The question that remains at this point is why the situation should be like this.

i. Why does aorist only select the initial point with some states? Why cannot extend this state \(\rightarrow\) achievement transformation to, for instance, existence states?

ii. What makes that initial point special only for some states?

Remember the generalisation that we presented in §4: only states that assign an experiencer role to its subject can take part in the construction where aorist turns the state into an achievement. The question is what relates the presence of an experiencer with the saliency of the initial point of the situation.

We believe that the answer lies in considering experiencers initiators of psychological states. Following Ramchand (2008: 106-107), one can assign the following structure to a stative predicate, essentially reducing it to a causative/agentive head that does not select a process complement.

(38)

The experiencer is an initiator (a ‘causer’ of sorts, an entity that in some way triggers the situation) because for the psychological state to hold it is crucial that it has some particular internal properties: “I am assuming it is the Init(iation) head what is at issue here because it shares some salient properties with the Init(iation) head in dynamic predications. First of all, the DP argument in its specifier is the entity whose properties are the cause or grounds for the stative eventuality to obtain, for example, it is because of Katherine's personality that the state of her fearing nightmares arises” (Ramchand, 2008: 107).

Note that this cannot be the case for all states: if John has one kilo of rice, it is very difficult to conceive of the set of internal properties of John that triggers this state. However, the definition clearly applies to psych states: unless John has some special predispositions and a set of human characteristics, he cannot fear spiders.

Thus here is our proposal: the presence of the experiencer in a state makes the initial point of the state salient —because it is the point at which the internal properties of the experiencer license the situation—. Assuming a counterfactual theory of causality (Lewis, 1973), that triggering component entails that previously to the intervention of the experiencer, the state did not hold. The presence of the experiencer, with its defining mental characteristics, defines a starting point. This saliency is what makes the initial point available for aorist to define a left boundary.

7. Conclusions. What does this tell us about what an achievement is?

The phenomenon studied here has implications for two debates that intersect in the study of achievements.

The first one is whether so-called ‘lexical’ aspect is really lexical, that is, defined for atoms that are the minimal units that the computational system can combine. The phenomenon that we have identified here —independently
of whether our analysis is right or not— constitutes a problem for lexicalist theories of Aktionsart, where aspect is defined at a lexical level (X0). In order to explain the data we have here one has to accept that the Aktionsart of a predicate can be defined at a higher level of structure (XP, and worse than that for lexicalism, a functional XP): grammatical aspect must be able to define Aktionsart. Given our data, we must admit that something like (39) can be an achievement.

(39)

Secondly, our analysis has consequences for the debate of what an achievement is.

Dowty (1979) and Ramchand (2008), from very different frameworks, have argued that achievements are just accomplishments whose process part is extremely short — e.g., because the initial and the result states have to be adjacent —, while other authors like Piñón (1997) and Martin (2011) have argued that achievements entirely lack the process part and are, literally, boundaries without any internal temporal extension. The data we have presented here clearly support the boundary analysis, because a state becomes an achievement under aorist. Aorist defines a boundary, in accordance with the standard account of this grammatical aspect, but no account — to the best of my knowledge — has proposed that aorist provides the VP with an event or imposes conditions on how temporally close the initial and final points of an event have to be.

There are, of course, many issues that would have to be addressed also in order to give a complete characterisation of the nature of aorist aspect and the operations that it triggers in combination with other Aktionsarten. However, we hope to at least have provided a convincing account of a fragment of its grammar that deepens our understanding of achievements and the relation between the lexical and functional aspectual layers.

8. Works cited


