On the Temporal and Aspectual Value of Modern Eastern Armenian Aorist: A Comparative Perspective

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Abstract

In this research we study some syntactic and semantic properties of the Modern Eastern Armenian aorist by comparing it to similar verbal forms in English and Italian. We argue that the temporal interpretation of the aorist is not a primitive property, but derives from its main aspectual characteristic, i.e. perfectivity. This hypothesis is further supported by the analysis of the futural value expressed in certain contexts by means of the first person aorist form.

Keywords: perfectivity, temporal anchoring, aorist, future, Modern Eastern Armenian.

Introduction

It is a well-known fact that languages differ widely as far as their verbal systems are concerned. Some languages, for instance, have very poor verbal morphology – like English or Chinese – whereas others overtly mark several subtle temporal and aspectual distinctions – like Russian and Greek, both Ancient and Modern. Temporal and aspectual properties, moreover, can combine with each other following certain patterns discussed at length in the literature.[2]

The analysis of the interactions between temporal and aspectual properties is presumably one of the most fascinating fields in the study of verbal systems. In this paper we show that the temporal interpretation of the Armenian aorist is actually derived from its aspectual properties, in dependence of the context in which the verbal form is used.[3]

The Armenian aorist exhibits temporal and aspectual properties not easily fitting the "canonical" descriptions. We will see that its distribution might seem at first sight incoherent and show that only by means of a finer analysis it is possible to account for its characteristics in a uniform way. To this end, we compare the Armenian aorist with the English simple past and present perfect, on the one hand, and with the Italian *passato remoto* (simple past) and *passato prossimo* (present perfect), on the other.

1. A Brief Overview of the Italian and English Simple Past and Present Perfect

In this section we briefly compare the properties of the English simple past and present perfect with those of the Italian – allegedly – corresponding forms. We show that in spite of the superficial morphological similarity, one must be very cautious in directly identifying the verbal forms in question, given that at a closer look they exhibit different temporal and aspectual properties.

In English some forms are clearly identifiable as temporally marked as past – such as the simple past *I ate* – whereas some forms encode an aspectual value – such as the present perfect *I have eaten*. The literature on the English past and perfect forms is particularly rich and emphasizes in various ways the following point: aspectual and temporal

values interact in complex ways, which are idiosyncratic of a specific language.

For instance in English the aforementioned forms can both refer to a past event, but if the present perfect is used, the consequences of the event must be detectable at the time of the utterance, i.e., it must be *relevant at the present time*.[4] Consider for instance the following example (from Higginbotham 2006, ex. 47):

(1) *I have spilled my coffee.*

This sentence (1) is acceptable only if there is spilled coffee around at the moment of the utterance. Moreover, presumably for the same reason, these forms are (mostly) incompatible with a definite temporal reference, as in the following case:

(2) *John has left at four.*

The sentence (2), with a present perfect, contrasts with the sentence in (3), with a simple past, or with (4), where no temporal reference is realized:

(3) *John left at four.*
(4) *John has left.*

Both sentences are about a past event of leaving, but the specific aspectual properties of the present perfect give rise to the contrast above.

The Italian present perfect has exactly the same morphological structure as the English one: a present tense auxiliary, followed by a past participle. The sentences equivalent to (1) and (2) are however perfectly grammatical and there is no requirement to be observed, such as the *present relevance* found in (1). Consider the following examples:[5]

(5) *Ho versato il caffè*
I have spilled my coffee.
(6) *Gianni è partito alle Quattro.*
Lit: *Gianni has left at four.* (*Gianni left at four*.)

Sentence (5) can be uttered even if there is no sign around of spilled coffee and there is full compatibility with definite temporal adverbs.

It is a well-known fact that it is very difficult to find a correspondence between the forms expressing temporal distinctions and those expressing aspectual ones. In the case of English and Italian illustrated in (1) it is important to understand that if the English sentence *I have spilled my coffee* is translated as *ho versato il caffè*, the fact that the speaker (English) is in a situation where there is actually coffee around is simply lost in the Italian equivalent, where this might be true, but not necessarily so. On the other hand, the Italian sentence does express a meaning corresponding to the English one, i.e., both sentences talk about a past event of spilling coffee, but this is not enough to capture and explain all the properties of these forms.

The challenge is therefore to account for these facts in general theoretical terms, by means of general principles, which might predict the English/Italian behavior of the verbal forms.

In this work we are not going to further discuss the contrast illustrated above, but we will consider a case displaying similar properties: the Armenian aorist. As we anticipated above, this verbal form has in fact a rather puzzling distribution when compared to the possible equivalents in languages such as Italian and English. The analysis of the Armenian aorist will also shed light on the interactions between aspectual properties and the anchoring conditions, which are crucially relevant in the temporal interpretation of utterances.

2. Temporal and Aspectual Properties of the Armenian Aorist

2.1. On the Temporal Properties of the Armenian aorist

In Modern Eastern Armenian – henceforth, MEA – most verbal tenses, at least in the indicative system, are periphrastic, i.e. formed by means of an auxiliary and a participle. The aorist is the only synthetic verbal form of the indicative. It includes the aorist stem of the verb followed by the verbal inflection. Note that for many verbs the aorist stem is lexicalized by adding the suffix *c'* to the verb. We will consider the nature of this suffix with more detail in section (5) below.[6]

The Armenian aorist normally expresses pastness, i.e., it refers to past events, both in main and in subordinate contexts. Consider for instance the following examples:

(7) *Erek Armenə lav gnahatakan* ***stac'av***
Yesterday Armen gained (AOR) *a good mark.*
(8) *Silvan asac' wor erek Armenə lav gnahatakan* ***stac'av***
Silva said that yesterday Armen gained (AOR) a good mark.

The temporal interpretation of (8) is analogous to the English one: *Armen gained a good mark* and this event is past with respect to Silva's saying it. The same holds in Italian:

(9) *Ieri Gianni ha preso un bel voto.*
Yesterday Gianni gained (PRES PERF) *a good mark.*
(10) *Maria ha detto che ieri Gianni ha preso un bel voto.*
Maria said that yesterday Gianni gained (PRES PERF) *a good mark.*

In (10) the gaining of the good mark lies in Maria's past. Hence, it looks like the aorist is the form corresponding to simple past in English and to the present perfect in (Central-Northern) Italian.

In some cases however, the aorist does not have a past reading, but on the contrary, refers to future events. Consider for instance the following sentence:[7]

(11) *Aysōr ašxatavarj em stac'el Vałə t'atroni tomserə* ***gnec'i***
Today I received my salary. Tomorrow I'll buy (AOR) *the tickets for the theatre.*

The buying of the tickets has not taken place yet, as clearly specified by the time adverb *tomorrow.* The speaker's intuition is that the aorist in this sentence is admitted as the future outcome of a past situation, i.e. *I got the money,* ***and on the basis of this*** *I make a decision concerning the future.* The specification concerning the past, enabling the present and the future situation to come out, does not necessarily have to be mentioned, but needs to be present and retrievable from the context. Hence, the future meaning of the aorist needs a presupposition concerning the conditions enabling the future event.

Let us compare now this future usage of the aorist with the meaning expressed by the other future forms in Armenian. In MEA, but not in MWA, the future can also be expressed by means of a form from the conditional mood, i.e. the finite verb prefixed by *k-*, as seen in example (12), which we will gloss as "conditional future" (COND FUT). This form, to be fully acceptable, requires the existence of a planning in the future, as in the following case:

(12) *Vałə t'atroni tomserə* ***kgnem*** (*ayspisov erekoyan miasin kgnank*)
Tomorrow I'll buy (COND FUT) *the tickets for theatre* (*hence in the evening we'll go together*).

The planned events do not need to be overtly mentioned in the same sentence, but they can remain implicit, belonging to the presupposed part necessary to license this usage. This future is in some sense considered a colloquial form and not used in writing. The periphrastic future, formed by means of the future participle and the inflected auxiliary *em* in the present tense, on the contrary, is the more learned form, used in writing as well. Consider for instance sentence (13):

(13) *Vałə* ***gnelu em*** *t'atroni tomserə* (*ayspisov erekoyan miasin kgnank*)
Tomorrow I'll buy (FUT) *the tickets for theatre* (*hence in the evening we'll go together*).

In this case as well, a planning is required, either expressed or retrievable form the context. Finally, the present tense can also have a future meaning, analogously to Italian – and, to a certain extent, to English – as shown in the following example:

(14) *Vałə* ***arjanagrvum em*** *pari dasənt'ac'i* (*bayc' vstah č'em*)
Tomorrow I enroll (PRES) *in a dance course* (*but I am not sure*).

To clarify the meaning of the various forms in Armenian, note that the clause *bayc' vstah č'em* (*but I am not sure*) could neither be added to the sentence with the aorist, nor to the one with the future. The first in fact entails a certainty by the speaker, based on events located in the past, and the second – the existence of a plan in the speaker's mind. Hence the presence of *I am not sure* would be inconsistent. The present tense, however is neutral and therefore compatible with it.[8]

The aorist tense can also express ingressive meaning with verbs of emotion as illustrated in the following example (from Dum-Tragut 2009:232):

(15) *Lilit'n atec' ayn nor usanołin*
Lilit started to hate (AOR) *that new student*.

The event expressed by means of a future aorist does not need to take place in the *immediate* future, as shown by the fact that adverbs such as *in two months* can also be used:

(16) *Aysōr imac'a, wor erku amis heto ašxatavarj em stanalu. Erku amis heto t'atroni tomserə* ***gnec'i***.
Today I learnt that in two months I'll receive my salary. In two months I'll buy (AOR) *my tickets for the theatre.*

Hence, the value of this future aorist is not purely *imminential*, because the event can be delayed. Interestingly, the future interpretation of the aorist is natural for the first person – and the second – but quite marginal for the third one – both singular and plural – where a regular future is by far the preferred option:[9]

(17) *Armenə avartec' dasere*. (Na) *Hima* ***kgna/ *gnac'***
Armen has just finished his lessons. He is now going (COND FUT/*AOR) *away.*

Note also that the futural interpretation of the aorist cannot be simply labeled a *modal* one, in the sense that it is not the expression of a wish, and it is neither an optative, nor a desiderative. The speaker simply expresses what she is going to do in the future.

As additional evidence for the future reading of the aorist, consider for instance also the following example:

(18) *Vaghe andzrev chi galu. Yes vaghe khaghac'-i futbol*
Tomorrow it is not going to rain. I will play (AOR) *football.*

In the same vein, consider the following context. A football team has two goalkeepers. The coach chooses one of them for the match. The chosen one utters to the other:

(19) *Du mnac'ir nstaranin nstatz*
You will stay (AOR) *seated.*

Furthermore, to strengthen our argument, note that the Armenian aorist cannot be used as a counterfactual form as it might be the case for past forms in other languages, for instance in English, as shown by the following example:

(20) *If you went to bed earlier, you would not be so tired*.

Armenian in these cases uses the subjunctive, as Italian. The aorist is ungrammatical, as shown by the following examples:[10]

(21) *Et'e du erek šut ankołin* ***mtac lineir*** (PAST SUBJ)/****mtar*** (AOR), *aysk'an hognac č'ēir lini.*
(22) *Se tu ieri fossi andato* (PAST SUBJ)/**sei andato*(PRES PERF) *a letto prima, non saresti così stanco.*
If you went to bed earlier, you would not be so tired.

Summarizing, in a language like Italian, having the subjunctive in its verbal inventory, it is never the case that the simple past, or the present perfect can have a modal interpretation:

(23) *Se sapessi /*seppi/ *ho saputo volare, farei un giro sopra New York.*
If I could (subj/*simple past/*present perfect) *fly, I would fly over New York.*

The same holds in Armenian as well:

(24) *Ete yes t'ŕč'el imanayi/****imac'a****/*imac'el em New Yorki vrayov kt'ŕč'ei*.
If I could fly (subj/*AOR/*present perfect), *I would fly over New York.*

The Armenian aorist, therefore, seems to behave as a regular past form, with the interesting exception of the future reading. Note that, in general, past forms cannot be used to express future meanings. As discussed above, in Italian, the present tense can have such a use, as shown in the following example (from Bertinetto, 1991, ex. 57):

(25) *Esco fra un attimo*.
I leave (PRES) *in a moment.*

But a past, i.e. a present perfect or a simple past, cannot:[11]

(26) **Sono uscito/*uscii fra un attimo.*
Lit: *I have left /I left in a moment*.

Hence, the present discussion will focus on the anomalous behavior of the Armenian aorist with respect to the availability of the future interpretation, which we will try to characterize and explain without introducing *ad hoc* theories, resorting instead to more general principles of temporal anchoring.

2.2. On the Aspectual Properties of the Armenian Aorist

In the previous section we illustrated the temporal properties of the aorist. In this sec-

tion, we will consider the aspectual one. We apply here the well-known tests on the compatibility of a verbal form with time adverbials, which have been shown to discriminate well between the various aspectual interpretations. In this section we show that the aorist is a perfective form. Consider the following example:

(27) *Silvan erekʻžamum salorə* ***kerav***
Silva ate (AOR) *the plum in three hours.*

In this sentence, the aorist – a form of non-suffixed aorist – is compatible with the adverbial *in X time*, which is a typical property of perfective forms.[12] The sentence means that the plum has been eaten up in a time span of three hours. Analogously, there is the following case:

(28) *Armenə erekʻ tarum tunə* ***kaŕucʻecʻ***
Armen built (AOR) *the house in three years*.

This sentence expresses the reaching of a result: *Armen finished building the house in three years.*

Let us consider now a different adverbial. Bertinetto (1991) points out that in Italian the adverbial *da X tempo* (lit: *from X time*) is only compatible with compound perfective forms and not with the synthetic ones, namely it selects a certain past, even if both past forms in Italian can be said in general to be perfective.

Consider the following contrast between the Italian present perfect and the simple past (adapted form Bertinetto 1991, section 1.5.2.2., exx. 204 and 207):[13]

(29) *Marco è arrivato da almeno due ore.*
Lit*: Marco has arrived* (PRES PERF) *at least from two hours*.
Marco arrived at least two hours ago.
(30) **Marco arrivò da almeno due ore.*
Marco arrived (PAST) *at least from two hours*.
Marco arrived at least two hours ago.

According to Bertinetto (1991), the compound form and the simple one differ because in the former, but not in the latter, the interpretation requires the presence of a *reference point*, in Reichenbachian terms.[14] The adverbial in question in fact measures the time span between the end of the event and the reference point, hence it cannot be compatible with the simple past, which does not have any.[15]

The same judgments obtain with the locution *sono due ore che* (lit: *It is two hours that*):

(31) *Sono due ore che Marco è arrivato*.
Lit: *It is two hours that Marco has arrived* (PRES PERF).
Marco arrived at least two hours ago

(32) **Sono due ore che Marco arrive.*
It is two hours that Marco arrived (PAST).
Marco arrived at least two hours ago.

In Armenian the only locution available in this case is the one corresponding to the Italian *sono due ore che* (*It is two hours that*) in examples (31)-(32). Consider the following examples:

(33) *Erku žam ē inč' Armenə hasel ē*
Lit: *Two hours is that Armen has arrived* (PRES PERF)
Armen arrived two hours ago.
(34) **Erku žam ē inč'Armenə hasav*
Lit: *Two hours is that Armen arrived* (AOR).
Armen arrived two hours ago.

In this case as well, Armenian behaves like Italian, and the aorist patterns with the simple past.

As an *interim* conclusion, we can say that the Armenian aorist is a perfective verbal form, which exhibits properties similar to the non-compound perfective forms of the Italian system.

3. Towards an Explanation: the Anchoring Conditions

Let's summarize the properties of the Armenia aorist discussed so far:

(35) a) It is a synthetic verbal form.
b) It can have a futural meaning, even if it is mostly used as a past.
c) It is aspectually perfective.
d) It patterns with the Italian non-compound perfective forms.

The hypothesis we will argue for here is the following: the Armenian aorist is a perfective present tense. In what follows we argue in favor of this hypothesis.

It is a well-known fact that verbal forms are obligatorily *anchored*.[16] Namely, an event or state, henceforth *eventuality*, must be placed along a temporal *continuum*, taking some other event as the *anchoring* one. In main clauses the anchoring event is provided by the Speech event itself. Consequently, a past, a present or a future verbal form has the effect of placing the eventuality as preceding, overlapping, or following the Speech event:[17]

(36) *John ate an apple.*
(37) *John is eating an apple.*
(38) *John will eat an apple.*

In example (36) the event precedes the Speech event, overlaps it in (37) and follows it in (38).

We follow here Higginbotham's (1995) and Giorgi and Pianesi's (1997) proposal according to which a temporal morpheme is a two-place predicate. Hence, a past verbal form like *ate* is characterized by the presence of a predicate as the following one: *past (e1, e2)*, where e1 is identified with the *eating* event and e2 with the Speech event. The anchoring procedure is analogous to a *theta-marking* (or *theta-identification*) procedure, i.e. to the process involved in the linking of the predicate to its arguments in general.

Subordinate events must be anchored as well. In normal complement clauses, the anchoring point is provided by the superordinate event, plus a condition enabling the Double Access Reading in languages having this requirement. The anchoring requirement is even in this case universal.[18]

Consider for instance the following examples:

(39) *Mary said John ate an apple.*
(40) *Mary said John is eating an apple.*
(41) *Mary said John will eat an apple*.

In sentence (39) the eating precedes the saying, in (40) it is simultaneous with it and in (41) it is located in the future.[19]

However, the anchoring conditions are on their turn constrained by the aspectual properties, namely, the aspect of the verbal form. For instance being perfective or continuous contributes to the outcome of the temporal anchoring. This issue is analyzed at length in Giorgi and Pianesi (1997), who propose the *Punctuality Constraint*. Giorgi and Pianesi (1997) argue that the anchoring event is by definition punctual, both in the case it is taken to be the Speech event itself, and in the case it is the superordinate event in the case of embedded clauses.

Note also that Giorgi and Pianesi (1997) develop a mereological view of the notion of punctuality, to the effect that *punctuality* does not necessarily imply absence of a temporal extension. A *point* under their view is defined as something that, independently of its extension, cannot be partitioned. This is however a technical issue we will not further consider here and refer the reader to the cited works.

The Punctuality Constraint can be stated as follows (from Giorgi and Pianesi 1997:163): (42) "A closed event cannot be simultaneous with a punctual event."

Let us now consider what a closed event is and why it cannot coincide with a punctual event.

Giorgi and Pianesi (1997, ch.4) argue that all eventive predicates – as opposed to stative ones – have an internal structure. Each predicate, even achievements ones – i.e., those usually considered to be inherently punctual – can be seen as a sequence of temporally ordered sub-events. In order to clarify this notion, the authors discuss the following example (Giorgi and Pianesi, 1997, ch.4, ex.9):

(43) *John ate an apple. While eating the first bit of it, he remembered that he had to phone Mary.*

The first sentence set the scene: a native speaker of English knows that the eating event took place in the past and has ended. The rest of the example, however, makes it clear that this event can be partitioned in a meaningful way. Giorgi and Pianesi argue that the role of the past morpheme appearing on *eat* in the first sentence is to put a *boundary* to the sequence of eating sub-events, which however remain conceptually available for further reference. In other words, the English simple past *closes* the eventive sequence. The punctuality constraint states that even if the internal structure of the event, once closed, is still *conceptually* available, it is not *formally* so anymore. Coherently with this view, the following sentence is completely unacceptable:

(44) **While John ate an apple, Mary was playing the piano*.

The only possibility is to express the first verbal form as an open sequence, by means of the progressive periphrasis, also appearing in the second part of the sentence:

(45) *While John was eating an apple, Mary was playing the piano.*

A progressive form is continuous and non-perfective, whereas the simple past of an eventive verb is perfective. Only the progressive form, as shown in example (45), can be interpreted as the background for another event. In other words, the eating and the playing can be made to overlap only if the former is aspectually an open, continuous sequence, and not if it is a closed, perfective, one.

Hence, a closed event can only be ordered as preceding or following a punctual, closed, event and can never be simultaneous with it.[20] In other words a perfective, closed event can only be past with respect the Utterance time or the anchoring point, or future, but could never be simultaneous.

4. Back to the Armenian Aorist

What can we say about the Armenian aorist and its peculiar characteristics? Our hypothesis is that the aorist morpheme does not contribute a past temporal value, but an aspectual one, namely we propose that the aorist is a purely aspectual form and that its temporal interpretation is a side-effect of its aspectual value. More specifically, we propose that this form is a *perfective present tense*.

4.1. A Diachronic View

Let us illustrate the diachronic and synchronic evidence in favor of this conclusion. A typical Armenian aorist form is the following (see also Haroutyunian 2011 for a detailed discussion):

(46) *gr -ec‘ -i*
write-AOR-1SG (were *-e-* is the thematic vowel)
I wrote.

With respect to the Armenian aorist suffix *-c'* Meillet (1936: 115) claims the following: (47) "La caractéristique *-c'-* de l'aoriste repose sur un ancien **-ske-*; le grec a de même des prétérits comme *φάσκον, φεύγεσχον, φύγεσκον, φιλέεσκον*, etc.; le suffixe n'a rien de proprement aoristique: […] l'aoriste arménien représente une forme indo-européenne a désinences secondaires, mais non pas nécessairement un aoriste."

Ačaŕyan (1961) – who is a very authoritative Armenian grammarian – completely agrees with Meillet.

Hence, even if it might *prima facie* seem that the Armenian suffix *-c'* marking the aorist resembles the Indo-European sigmatic aorist, this is presumably not the case. In more modern historical literature the issue is still debated, see for instance Klingenschmitt (1982) and Kortland (1995), without however providing any clear evidence against Meillet's claim.

Note also that in Armenian this verbal form is not called *aorist*, which is a term introduced by the non-Armenian tradition, but is simply called *antc'yal kataryal*, literally meaning *past perfect*.

Now, we know that **-ske-* is an Indo-European suffix which gives rise to different semantic nuances in the various languages, as pointed out for instance by Szemerényi (1985: 314). In Latin, for instance – see also Ernout (1953: 132) – it has a clear inchoative value, but in Hittite, it attributes to the verb an iterative or distributive meaning, and in Tocharian it mostly adds a causative meaning – cf. Szemerényi (1985: 315). Note that in all these cases it contributes an aspectual value and not a temporal one. Hence, a reasonable hypothesis might be the following: the Armenian aorist is formed by the verbal stem plus an aspectual marker, followed by inflection. Hence, we endorse here Meillet's position and propose what is called aorist in the non-Armenian tradition, is actually an aspectual form.[21]

Under this hypothesis, this form does not include any temporal morpheme. Note that the absence of an overtly realized temporal morpheme in the present tense is a largely widespread property among the languages of the world. For instance, Giorgi and Pianesi (1997) argue that this is a universal characteristic of present verbal forms, and that the lexically realized morphemes, which might occasionally surface in association with the present tense, have always an *aspectual* value, and not a *temporal* one, as we briefly discuss below. This observation is coherent with our claim: we propose that the morpheme in question is an aspectual perfective morpheme; hence, the Armenian aorist is a present perfective form.

4.2. Deriving the Properties of the Aorist

Let us go back to the properties of the aorist listed under point (35), repeated here:

(48) a) It is a synthetic verbal form.
b) It can have a futural meaning, even if it is mostly used as a past.
c) It is aspectually perfective.
d) It patterns with the Italian non-compound perfective forms.

Property a) follows from our hypothesis, as we pointed out above. Present tense verbal forms may combine with aspectual morpheme, but never have a purely temporal affix.

An example of this sort is provided for instance by the present tense in Turkish, as discussed in Giorgi and Pianesi (1997, ch.2). We briefly review the relevant paradigm here, because it has some significant similarities with the Armenian phenomena in question.

In Turkish the present tense is formed by means of the verb stem, the suffix *–iyor* and verbal inflection. Consider for instance the verb *gitmek* (to go). The verbal stem is *gid-*. The stem is followed suffix *–iyor* and verbal inflection, giving rise to the form *gid-iyor-um,* meaning *I am going.* The presence of the suffix is obligatory, i.e., the form **gid-um* is not available. One might therefore prima facie conclude that the morpheme *-iyor* is a temporal one. On the other hand, by considering the whole system, we can see that the form *gid-iyor-um* can be combined with the past morpheme *-d-*, giving rise to *gid-iyor-**d**-um,* which means *I was going*. Moreover, the morpheme *-iyor-* is not the only one that can appear in between the verbal stem and inflection, given that, interestingly, the aorist morpheme *-er-* can also appear, giving rise to the pair *gid-er-im*, which might be glossed *I go (habitually)*, and *gid-er-**d**-im,* that can be glossed as *I used to go*, i.e., an habitual past.

Summarizing, therefore, the paradigm in Turkish looks as follows (see Giorgi and Pianesi, 1997, exx.3-5):

(49) *gid-iyor-um* (*I am going*)
(50) *gid-iyor-d-um* (*I was going*)
(51) *gid-er-im* (*I go habitually*)
(52) *gid-er-d-im* (*I used to go*)

Hence, both morphemes *iyor* and *er* can be combined with a past, and therefore cannot be taken to mark a present. They express therefore aspectual meanings, progressive and habituality, respectively.[22]

Therefore, we can conclude that exactly the same situation arises in Armenian: the verbal stem is followed by an aspectual marker and inflection. There is one difference though, in MEA the "normal", continuous, present tense is available and is periphrastic. MEA in fact forms the present tense by means of the *–um* present participle of the verb, and the auxiliary *em* (be):[23]

(53) *kardum ē.*
Read (PRES PART) is
(*he*) *reads*

Hence, in Armenian we find an unmarked, periphrastic, present tense and an aspectually marked one, the so-called aorist.

A possible generalization to account for the non-periphrastic nature of the aorist could

be that in MEA it is impossible to inflect a tensed verb, but there is no ban for inflecting an aspectually, or modally, marked form. Note that this might also account for the existence of the synthetic (conditional) future in MEA i.e. the finite verb prefixed by *k-*, a marker for the conditional, as in ***k-gne-m*** (COND FUT-buy-1SING), as discussed above – cf. for instance ex.(12). As far as *k-* is concerned, we can say that is a conditional – i.e., a modal– prefix, with a future interpretation, hence, there is no co-occurrence of tense and inflection. This ban does not exist in MWA.

Let's consider now the temporal interpretation in point (b). As proposed by Giorgi and Pianesi (1997, 2001) and briefly discussed in section 3, a perfective verbal form cannot be interpreted as a presently ongoing event, due to the *punctuality constraint*. A perfective form, being closed – i.e., punctual in the relevant sense – cannot overlap the Speech event, which, being an anchor, is punctual by definition.

Therefore, a perfective present tense cannot *de facto* be interpreted as a present. The consequence of this is that its temporal interpretation must be shifted either in the past, or in the future. The aorist permits both options. Let us consider the future interpretation first.[24]

As pointed out above, the aorist can express the future outcome of a past situation, which may or may not be explicitly mentioned, even if it must be retrievable from the context. This interpretation is exactly what we expect. As discussed in the introduction, a *present perfect* usually expresses the *present* outcome of a past situation – as very well exemplified by the English language – in which the *past* component is introduced by the perfective marker.

Hence, we can say that in the future interpretation the perfective marker of the Armenian aorist has the same function, requiring the event to be the outcome of a past situation.[25]

Given the co-occurrence in the Armenian system of the futurate – i.e. the present tense with a future interpretation – and the "normal" future, either with the *k-* prefix, or in the canonical periphrastic construction, we find a specialization of the various forms.[26]

Property c), i.e. perfectivity, has already been discussed in section 2 above. Finally with respect to property d), let us briefly consider the analysis proposed by Bertinetto (1991, section 1.5.2.2). He suggests that the temporal adverbs such as *da due ore* (lit: *from two hours*, roughly meaning *two hours ago*) – and we also added periphrases such as *sono due ore che* (lit: *are two hours that*, roughly meaning *two hours ago*, as well) must stress the present relevance of the past event. We can say that in Italian in the present perfect they measure the time lapse between the end of the event – the right boundary – and the present moment, *now*. In other words, *are two hours that (sono due ore che)* implies that the event finished two hours ago, with respect to *now*. The present perfect is compatible with them because it combines perfectivity, expressed by means of the participle, with the present auxiliary. The present tense on the auxiliary is interpreted as a regular, continuous, present – hence, it does not violate the anchoring conditions imposed by the punctuality constraint, as discussed by Giorgi and Pianesi (1997, ch.3). Therefore, the locution can denote the relevant time span, in this case the interval between the realization of the resultant state, expressed by means of the participle, and *now*. As proposed

above, the events expressed by means of the aorist, on the contrary, *cannot* coincide with the present moment, due to the punctuality constraint, hence the temporal locution cannot be properly interpreted, giving rise to ungrammaticality.[27]

Conclusion

In this work we have shown with several arguments coming mostly from a cross-linguistic analysis that the so-called aorist is actually a perfectively marked present tense. Due to perfectivity, the event is a closed sequence – i.e., a mereological point – and cannot be simultaneous with the Speech event. We argued, following Giorgi and Pianesi (1997), that this move would violate the punctuality constraint holding on the anchoring conditions. For this reason, the aorist cannot have a present temporal value, but must be interpreted either as a past, or as future, according to further pragmatic conditions. This analysis is also supported by some diachronic considerations, pointing to the conclusion that its temporal interpretation is just a side effect of its aspectual properties.[28]

Notes:

1. The authors elaborated every part of this research together. However, as a far as legal requirements are concerned, Alessandra Giorgi takes official responsibility for the introduction and sections 1 and 2 up to example (29) and Sona Haroutyunian for the remaining part. We wish to thank Pier Marco Bertinetto for his careful reading of a preliminary version of this paper and his very interesting comments.
2. For a typological perspective, see Dahl (2000) and references cited there. Note also that in some languages the same morpheme can express both a temporal and an aspectual value. This is, for instance, often the case in Italian.
3. Armenian is an Indo-European language spoken in Armenia and in Persian and Indian Armenian colonies. Nowadays it is also spoken in other areas due to recent emigration from Armenia. This variety is called *Modern Eastern Armenia*, MEA. In communities living in Turkey and several other countries where the Armenians have emigrated especially after the 1915 Genocide – other varieties which go under the general label of *Modern Western Armenian*, MWA are used. MEA and MWA exhibit some differences, in particular in the verbal system. Even if the aorist is presumably quite alike in the two varieties, we limit our analysis to MEA. We do not consider here the properties and distribution of other temporal forms in MEA, such as the present and past perfect and the imperfect. Even if a comparison among the various verbal forms is certainly important, it should be addressed in a separate work. In this work Armenian graphemes are transliterated adopting the system developed by Hübschmann-Meillet (1913) as follows: i. Ա A; Բ,B; Գ,G; Դ,D;Ե,E; Զ,Z; Է, Ē; Ը, $; Թ, T‘; Ժ, Ž; Ի, I; Լ,L; Խ,X; Ծ,C; Կ,K; Հ,H; Ձ,J; Ղ, Ł; Ճ, Č; Մ,M;Յ,Y; Ն,N; Շ, Š; Ո,O; Չ, Č‘; Պ,P; Ջ, J̌; Ռ, Ŕ; U, S; Վ,V; S,T; Ր,R; Ց, C‘; ՈՒ,U; Ւ,W;Փ, P‘; Ք, K‘; O, Ō; Ֆ, F.
4. There are other conditions that might intervene in the licensing of a present perfect in English, which will not be discussed here. For a comparative discussion of Germanic

and Romance languages in the framework sketched in this work, see among many others, Giorgi and Pianesi (1997).

5. The variety of Italian given here is the one spoken in Central and Northern Italy, where the simple past, *partì* (*he left*), is quite marked and used only in certain contexts, and the notion of pastness is mostly expressed by means of a present perfect. In Southern Italy, the situation is the opposite: the simple past is the form expressing pastness, whereas the present perfect is only very marginally used. On this issue, see Giorgi and Pianesi (1997, section 3.4); see also Bertinetto and Squartini (1996). Note however that, as discussed in Giorgi and Pianesi, the claim that for Northern Italian speakers the periphrastic form *ho mangiato* (*I have eaten*) is a mere past would be too simplistic. In fact, when the context elicits it, even Northern Italian speakers must attribute to this form the *present relevance* property we are discussing in this section. In English the effect in question is much more marked, in Italian it is less so, but still detectable.
6. For a description of some properties of the verbal system of MEA, see Haroutyunian (2011); for an analysis of tense and aspect in MWA, see Donabedian (1996, 1999, 2002) and Donabedian and Ouzounian (2008). We are not going to consider all the possible ways to derive an aorist in Armenian and will concentrate, mostly in section 4, on the properties of the sigmatic one, as discussed by Meillet and other scholars. Our claim with respect to this point is the one generally holding in generative grammar. Since a native speaker does not have an innate diachronic competence, it is assumed that the generalizations holding for a certain form, namely in this case the sigmatic aorist, also holds for the other forms belonging to the same kind, even if diachronically derived in different ways. In the example and discussion therefore, we will consider all aorist forms as alike.
7. Dum-Tragut (2009) mentions a similar case in her work (252). However, we show that this future meaning is not just *imminential*, as proposed by Dum-Tragut, but selects a particular presupposition.
8. Note that in English the present tense with futural meaning entails the so-called *agenda interpretation*. Namely, the event must have been scheduled in advance. This is presumably due to the aspectual properties of the English present tense form, which are different from those of the present tense in Armenian and Italian (See Giorgi and Pianesi 1997).
9. Note also that, if inserted in a special context, where the sentence can have an exclamative/evaluative interpretation, the aorist can be used. Consider the following dialogue: A: *erku zham avel mn-ank‘ ašxat-enk‘.*
   B: *Razmikə hastat mn-ac‘!*
   A: *Let’s stay for two more hours and work.*
   B: *Razmik will stay for sure*!

   In this sentence B is meaning exactly the opposite, namely that R will never consent at staying. This piece of evidence will also follow from the proposal we argue for in section 4, but we will not consider these contexts in detail. See also fn. 23 below.
10. Note that in Italian the imperfect of the indicative can have a counterfactual role as

well: *Se partivi domani, saresti arrivato in tempo per la cerimonia di aperture. If you left* (IMPF) *tomorrow, you would be* (IMPF) *on time for the opening ceremony*. This, however, does not seem to be the case in Armenian, where counterfactuals can only be expressed by means of the subjunctive.

11. Bertinetto (1991) discusses some cases where the present perfect can have an anteriority reading in subordinate clauses (from Bertinetto, 1991, ex 153b): *Se entro due ore Enrico non è arrivato, gliene dico di tutti i colori*. If in two hours Enrico has not arrived, I'll give him what for. These cases however, are very different form the future reading of the aorist we are discussing here. As a first consideration note that in Italian they can never appear in matrix clauses. Moreover, in Italian the futurate reading of the present perfect is possible only if the event is past with respect to some other event or reference point – even if the whole situation may be located in the future – as is the case in the example above. This is not the case in Armenian, as clearly emerging form the examples.
12. There is important and very interesting literature on this and related issues. Here, we are taking the relevant generalizations for granted, without further discussing them. See, among the many others, Bertinetto (1991) and Giorgi and Pianesi (1997). Note also that all the various sorts of aorist behave alike, independently of their diachronic and morphological derivation.
13. We will not consider here the distribution of similar time adverbials in English, given that the discussion would not be pertinent to the main topic of this paper. In general, however, the indexical temporal expression *X time ago,* does not distinguish between the two verbal forms, as shown by the English translation. On the other hand, other temporal expressions, such as the ones introduced by *since*, would have a different distribution, along however different dimensions.
14. Reichenbach (1947) identifies three temporal points, relevant for locating an event along the temporal axis: E, the event point, S, the speech point, and a third point, R, the reference point. We will not discuss here the Reichenbachian system and the various interpretations given by the scholars during the years. For a brief discussion, see Giorgi and Pianesi (1997, ch.2).
15. Bertinetto (1991, section 1.5.2.2), precisely for this reason, distinguishes between two kinds of perfectivity: the perfectivity of the present perfect and compound tenses, and the one, which he calls *aoristic*, of the simple past. According to him, the aoristic forms cannot express the *persistency* of a certain result at a reference time.
16. See among the many others Enç (1988).
17. There is an ample debate on this topic. See, among many others, Giorgi and Pianesi (2001a, 2001b), Higginbotham (1995).
18. The Double Access Reading is a phenomenon found in some languages, such as Italian and English, according to which the tense of the embedded cause must be interpreted twice: once with respect to the temporal coordinates of the superordinate subject and once with respect to the temporal coordinates of the speaker. Consider for instance the following sentence: John said that Mary is pregnant. For this sentence to be felicitous, Mary's pregnancy must hold both at the time John said it and at the time

the speaker is uttering the sentence. On the anchoring procedure, see also Higginbotham (1995, 2002, 2006). On the Double Access Reading see Giorgi and Pianesi (2001a, 2001b) and Giorgi (2010, 2011).

19. Note that the future must be computed both with respect to the time of John's saying and the time of the utterance event. Giorgi and Pianesi (2001b) and Giorgi (2010) consider this property evidence in favor of a Generalized Double Access Reading theory, holding not only for an embedded present tense, but for a past and a future as well. The issue however is not directly relevant to the present discussion, and we do not pursue it further here.
20. Ramchand (2008:169, ex.23) points out, with respect to perfective forms in Russian, the following properties: i. "[perfective forms] cannot get a simple ongoing interpretation in the present tense." ii. They cannot be used as the complements of phrasal verbs such as *begin/finish/continue*. iii. They cannot form present participles. iv. In discourse, they combine to form non-overlapping events in the narrative. These properties all follow from our proposal, in that they would all violate the punctuality constraint.
21. Cambi and Bertinetto (2003) discuss the properties of *šk*e/*a*- in Hittite and conclude that this morpheme has an imperfective meaning, expressing habitual and progressive reading. This analysis is coherent with our hypothesis.
22. By descriptive grammars, the meaning of the aorist *er i*s often defined as conveying a nuance of "general truth". See for instance Thomas and Itzkowitz (1967:75).
23. Note that the Armenian present tense, as the Italian one, can have the continuous reading. Hence, example (53) corresponds to the English sentence *he is reading.*
24. In Russian the shifting to the future is the natural interpretation of perfectively marked present tense, as in the following example: *Zavtra Maria* ***pri****gotovit užin*. *Tomorrow Maria* PERF-*makes dinner. Tomorrow Maria will make dinner*. If there is no perfective prefix, the sentence is interpreted as a continuous present. Finally, if the perfective form is combined with a past inflection, it is interpreted as a perfective past. See the following examples: *Maria gotovit užin. Maria makes dinner. Maria is making dinner. Včera Maria* ***pri****gotovila užin*. *Yesterday Maria* PERF -*make*- PAST *dinner*. *Yesterday Maria made dinner*. Note however that this issue is much more complex than that, and has been studied at length by many scholars. The only point relevant to our discussion, however, is the shifting of the present perfective form to the future, as predicted by our hypothesis.
25. The reason why this most naturally happens with first and second person sentences might simply be due to the fact that the knowledge of the past situation is taken to be subjective, i.e. to be limited to the speaker and to the discourse situation. This might also be an explanation for the fact that, third person, both singular and plural, tends to have an exclamative/evaluative interpretation – see fn. 8 above. The evaluative component is actually speaker-related as well. Hence, the whole pattern might follow from the same property. Further investigation on this point is however required.
26. For a discussion of the futurate interpretation as a *planning* future, with respect to the normal future, see Copley (2009) and Greco (2011).

27. See Beninca' (1978) for a syntactic analysis of locutions such as *sono due ore che* (lit: *are two hours that*, roughly meaning *two hours ago*).
28. Note that this analysis does not amount to saying that the Armenian aorist and the English present perfect have the same value. Their interpretation is derived in very different ways. Recall in fact, as discussed in section 1, that the English present perfect is used for talking of the present relevance of a past event, whereas this is not the case in Armenian.

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ժամանակակից արևելահայերենի անցյալ կատարյալի ժամանակային և կերպային իմաստները (համեմատական վերլուծություն)

Սույն ուսումնասիրության մեջ մենք հետազոտում ենք ժամանակակից արևելահայերենի անցյալ կատարյալ ժամանակաձևի որոշ շարադասական և իմաստաբանական առանձնահատկություններ, դրանք համեմատության մեջ դնելով իտալերենի և անգլերենի բայական նմանատիպ ձևերի հետ: Մենք քննարկում ենք, որ անցյալ կատարյալի ժամանակային մեկնաբանությունը տարրական հատկանիշ չէ, այլ այն բխում է նրա հիմնական կերպային հատկանիշից՝ այսինքն կատարյա-

լությունից: Այս վարկածը հիմնավորվում է ապառնի ժամանակի իմաստի վերլուծութ յամբ, որը որոշ համատեքստերում արտահայտված է անցյալ կատարյալի 1-ին դեմքով:

Временные и видовые значения аориста в современном восточноармянском языке (сопоставительный анализ)

В данной работе мы исследуем некоторые синтаксические и семантические свойства аориста в современном восточноармянском языке в сопоставлении со сходными глагольными формами в английском и итальянском языках. Мы аргументируем, что временная интерпретация аориста не является элементарным качеством, а производна от его основной видовой характеристики, т.е. perfectivity. Данная гипотеза в дальнейшем обосновывается анализом значения будущего времени, выраженного в определенных контекстах посредством формы первого лица аориста.