DIGITAL CLASSICS ONLINE

A Digital Timeline of Greek Theatre Events

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Abstract: The present paper describes the dataset, the visualisation, and the storage details of the *Timeline* tool developed in the framework of the project *Greek Fragmentary Tragedians Online*. The tool is based on a structured collection of *events* related to the fragmentary tragedians of the 6th and 5th centuries BC and visualises them in a vertical timeline graph.

A tool for the study of Greek Drama: the motivation

The project *Greek Fragmentary Tragedians Online* (*FragTrag.1*) is developing an open-access database[1] containing all available information about 45 Greek tragedians of the 6th and the 5th centuries BC, whose works have come down to us in a fragmentary state.[2] In keeping with the tradition of print editions of fragmentary texts, *FragTrag.1* collects, edits, and translates *testimonia* pertaining to the lives, careers and works of the 'fragmentary' tragic poets.[3]

These *testimonia* are extracted from five types of ancient and medieval sources: (1) Inscriptions related to the history of dramatic contests (*didascaliae*, victor lists, et al.),[4] (2) hypotheseis of plays preserved on ancient papyri and medieval manuscripts, (3) chronographical works (such as the *Marmor Parium* and Eusebius' *Chronicle*), (4) lexicographical, encyclopedic, and biographical works (such as the *Suda*), (5) other literary works.

1 https://fragtrag1.upatras.gr (last access 15.01.2024).

2 For more information on the nature and the specifics of the project, see Antonopoulos et al. (2023). *FragTrag.1* is hosted by the Department of Philology, University of Patras – Greece. Its research and other activities are also supported by the dynamic Institute of Digital Innovation of the University Research Centre of Ioannina. The project has been made possible through a funding grant from the Hellenic Foundation for Research and Innovation (HFRI), in the framework of the *2nd Call for Research Projects to Support Post-Doctoral Researchers* (Project Number: 85). The authors of this paper wish to thank the HFRI for its generosity, as well as the members of the project's Advisory Board, Profs. James Diggle (Cambridge), Eric Csapo (Warwick), George W.M. Harrison (Carleton), Antonis Petrides (Open University of Cyprus), Angeliki Syrkou and Ioannis Chatzi-lygeroudis (Patras) for their support in the implementation of the database. With regard to the present paper, in particular, we are grateful to James Diggle and Brady Kiesling (*ToposText*-Project) for their edits and remarks on our earlier version of it.

3 For the term, see Antonopoulos et al. (2023), 20.

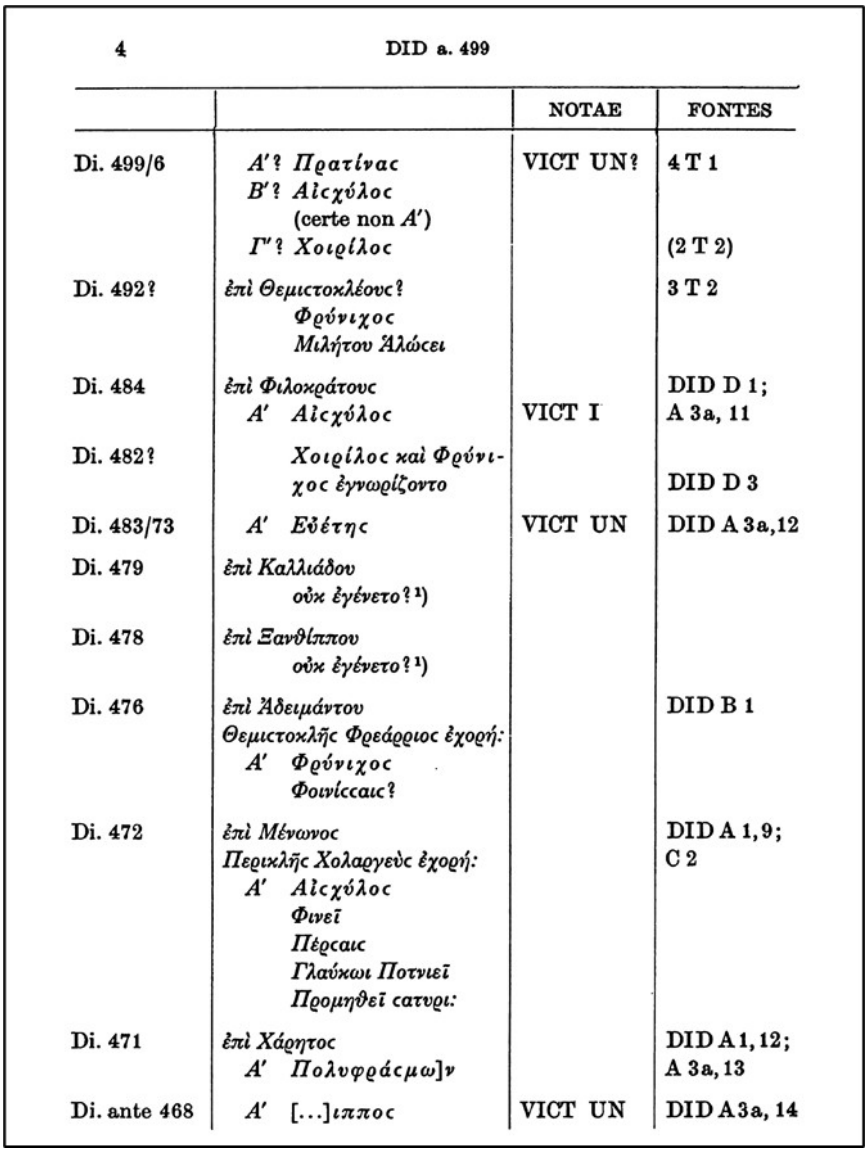
4 For these, see esp. Millis / Olson (2012).

From the early stages of the project, we realised that several of these *testimonia* constitute documentations of events[5] and could, thus, be treated as data with a time dimension.[6] When assembled, these data can contribute significantly to reconstructing the history of ancient Greek theatre. Thus, we decided to create a structured and searchable collection of these data, along with a timeline visualisation and access to the original texts of the testimonies, as a helpful tool for the study of these less-known poets and of the history of Greek drama in general. In this framework, while the known facts about each of these poets are presented with full documentation, they are also correlated with relevant facts of other poets to provide a context for the evolution of Greek drama during the 6th and the 5th centuries BC. In practice, such a collection allows the user to search for and retrieve both individual events related to one or several poets (e.g. participation of one or more poets in a specific tragic contest), as well as groupings of similar events (e.g. first victories at the City Dionysia).

This collection bears similarities to the chronologically ordered list of reconstructed *didascaliae* printed at the beginning of Snell / Kannicht (1986) *TrGF* vol. I (*didascaliae e fontibus restitutae*, pp. 3–21, see Fig. 1). The difference at the material level is that our collection also includes events other than tragic performances, namely important moments in the life and career of these poets extracted from their respective *testimonia*. Regarding utility, unlike the *TrGF* printed edition, where the reader needs to page back and forth through the entire book to consult the sources of the respective didascalic entries, here all data are easily accessible to the user in parallel windows with the opening of the relevant hyperlinks. Furthermore, presenting our collection in a digital medium opens possibilities for alternative orderings and visualisations of the material, as well as for interconnections with other sources available online.

5 Most of these are unique events in terms of their spatiotemporal constituents; nevertheless, a few of the recorded events, such as ‘dramatist X was active (= presenting his plays) in place P at time T’ (see e.g. the case of Euetes Test. 1 [= *Suda* E. 2766] reporting that Epicharmus, Euetes, Euxenides, and Myllus were active six years before the Persian Wars) do not have uniqueness concerning their temporal constituents. For the purposes of this collection of data, our understanding of event is rather loose and includes occurrences or incidents (see Oxford English Dictionary, s.v. ‘event (n.)’, sense II.3.a, https://doi.org/10.1093/OED/1106581244 [last access 15.01.2024]), which are related to fragmentary tragedians and to which the reporting sources attribute directly, or by implication, a more or less precise date. For a concise introduction to the philosophical discussion about events, see Schneider (2005).

6 The term ‘data’ is used here in a very broad meaning; we are actually dealing with *capta*, as Drucker (2011) defines them, that “are not ‘given’ pieces of information able to be recorded and observed”, but pieces of information produced through an interpretative process.



4 DID a. 499

		NOTAE	FONTES
Di. 499/6	*A'*? *Πρατίνας* *B'*? *Αἰσχύλος* (certe non *A'*) *Γ'*? *Χοιρίλος*	VICT UN?	4 T 1 (2 T 2)
Di. 492?	*ἐπὶ Θεμιστοκλέους*? *Φρύνιχος* *Μιλήτου Ἁλώσει*		3 T 2
Di. 484	*ἐπὶ Φιλοκράτους* *A'* *Αἰσχύλος*	VICT I	DID D 1; A 3a, 11
Di. 482?	*Χοιρίλος καὶ Φρύνιχος ἐγνωρίζοντο*		DID D 3
Di. 483/73	*A'* *Εὐέτης*	VICT UN	DID A 3a,12
Di. 479	*ἐπὶ Καλλιάδου* *οὐκ ἐγένετο*?[1])		
Di. 478	*ἐπὶ Ξανθίππου* *οὐκ ἐγένετο*?[1])		
Di. 476	*ἐπὶ Ἀδειμάντου* *Θεμιστοκλῆς Φρεάρριος ἐχορή:* *A'* *Φρύνιχος* *Φοινίσσαις*?		DID B 1
Di. 472	*ἐπὶ Μένωνος* *Περικλῆς Χολαργεὺς ἐχορή:* *A'* *Αἰσχύλος* *Φινεῖ* *Πέρσαις* *Γλαύκωι Ποτνιεῖ* *Προμηθεῖ σατυρι:*		DID A 1, 9; C 2
Di. 471	*ἐπὶ Χάρητος* *A'* *Πολυφράσμω]ν*		DID A 1, 12; A 3a, 13
Di. ante 468	*A'* [...]*ιππος*	VICT UN	DID A 3a, 14

Fig. 1: Extract from the list of the *didascaliae* printed in *TGrF*.

So far, the most characteristic example of the possibilities offered by a properly annotated collection of events in digital format combined with a timeline is *The Chronology of the Marmor Parium* (*CMP*),[7] which is part of the project *Digital Marmor Parium* directed by M. Berti (2014–). This tool encodes carefully the chronological expressions of the *Marmor Parium* related to the recorded events and visualises them in a timeline through *TimelineJS*[8] (see Fig. 2). It encodes events coming from only one source which, being a chronicle, has a structure very similar to that of a timeline and offers concrete dates for the recorded events. The *CMP* does not offer a specific search interface, but only the possibility to download a fully searchable spreadsheet underlying the visualisation. Even so, the structured data generated by the project make it possible to quickly retrieve any information related to a specific subject (e.g. using the search term *poet*). Moreover, the timeline visualisation offers a clear overview of the *Marmor Parium*'s uneven distribution of events in time, which makes it obvious, for example, which time periods have a high or low concentration of events.

7 https://www.digitalmarmorparium.org/chronology.html (last access 15.01.2024). See also Berti (2016).

8 https://timeline.knightlab.com (last access 15.01.2024).

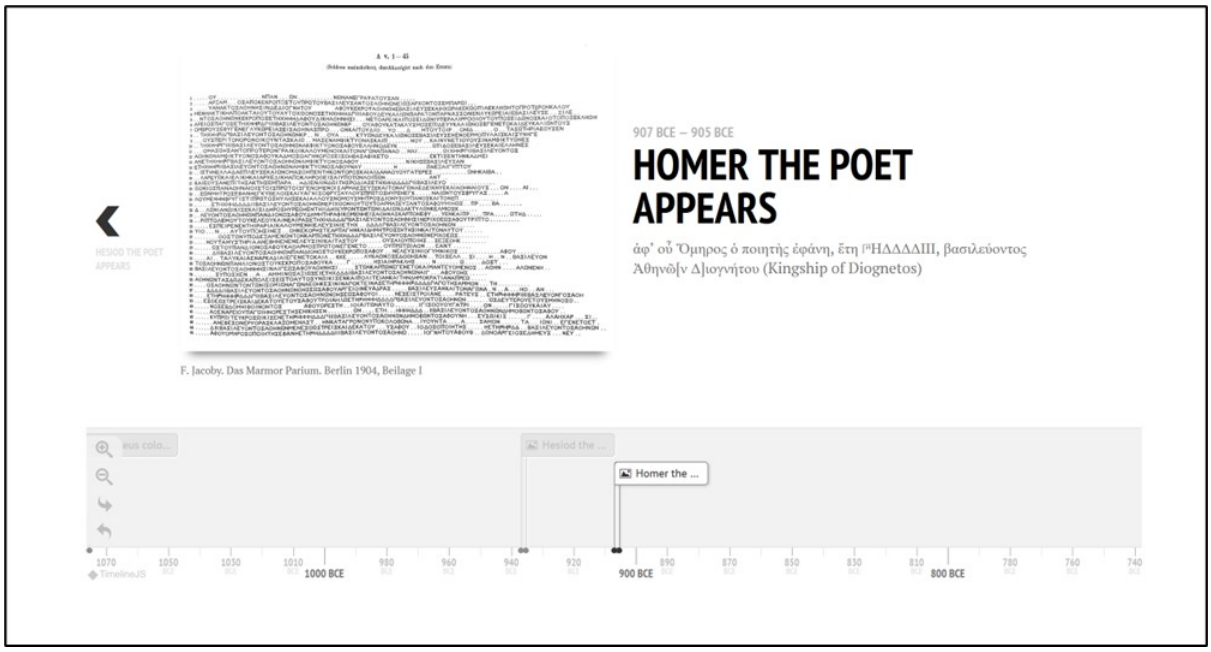


Fig. 2: Extract from the *Digital Marmor Parium*'s Timeline.

In addition, several online sources (mostly educational) offer digital timelines documenting events related to the ancient world. Some of them refer to Greek theatre, for example the *Greek Theatre Timeline*[9] by *The World History Encyclopedia* (which is in turn retrieved from the broader *Ancient History Timeline* of the project). Nevertheless, these timelines focus only on major events, concerning mostly the 'Great Three' tragedians, and do not document the events they are presenting with references to primary sources.

The *FragTrag* project proposes a collection of data and its visualisation as a timeline, with the following targets:

- to provide an easily navigable and complete overview of events related to the fragmentary tragedians of Greek theatre, combining data from various sources;
- to offer an environment that allows for different visualisations based on specific searches;
- to give easy access to the source(s) of each event in the original language and in English translation.

In this article, we are presenting the data-structure, the visualisation, and the storage details of the relevant files. At the moment the *Timeline of Greek Theatre Events* includes data related to the following tragedians: Thespis, Choerilus, Phrynichus, Pratinas, Euetes, Polyphrasmon, Aristias, Mesatus, Aristarchus Tegeates, Euphorion, Ion, and Achaeus. We expect to cover all remaining poets from the 5th century BC by the end of the project (summer 2024).

9 https://www.worldhistory.org/timeline/Greek_Theatre (last access 15.01.2024).

Data-structure

The basic unit of our data structure is the *event*. This might be related to one or more tragedians, a specific dramatic contest, or a particular dramatic performance. These events are or could be, dated, although, obviously, we are not always able to retrieve their dating.

The definition of *events* for our purposes presents two methodological challenges. These arise from the fundamental fact that we are not directly registering events based on primary empirical material, but, rather, we are recording registrations of events as they are represented in our ancient and medieval sources:

1. Given that a significant portion of theatrical life in classical Athens revolved around dramatic contests during major religious festivals, it seems natural to consider the specific contests as a primary organisational unit in a list of theatrical events (e.g. the City Dionysia tragic contest of 483 BC). However, the available material is influenced by structural decisions made by the sources transmitting it, and these decisions do not always use the dramatic contest as the basic unit. For example, the so-called *Victor Lists* (*IG* II.2 2325) documenting the total number of victories of tragic poets use the poet as the basic unit. They record the names of poets in the order of their first victory (without giving a date for that victory), followed by the total number of their victories.[10] Consequently (and often after correlation with other sources) 'the first victory of poet P in the tragic contest of a festival F' is reconstructed as an event involving a single individual. The highly fragmentary nature of our evidence often precludes precisely dating these victories[11] or associating them with specific contests where (potentially) all participating poets are known (as e.g. documented by the so-called *Fasti*).[12] In our *Timeline of Greek Theatre Events*, we adhere to the ordering logic of the sources and register 'first victories' as distinct event units. However, in cases where we can combine information about a poet's first victory with other details related to the same tragic contest, we compile all related pieces of information into the same entry (interconnecting, if necessary, with other *distinct* entries).

2. Given the complexity of theatre contests, which involve the participation and competition of various individuals in different roles (such as poets, *choregoi*, and actors), we often find information about several participants in a specific contest. For instance, at the tragic contest of the City Dionysia in 476 BC, the winner was the tragic poet Phrynichus, alongside his *choregos*, Themistocles.[13] In such cases, there are two possible ways to structure the data: one approach is to break down the complex event into its simplest components, namely the victory of the tragic poet Phrynichus and the victory of the *choregos* Themistocles, recording each as a separate entry while indicating in a machine-readable format that these entries are interconnected. The other way is to record the multifaceted event as a single entry, with

10 See e.g. the portion of the inscription mentioning Euetes, Polyphrasmon and Nothippus: https://fragtrag1.upatras.gr/exist/apps/fragtrag/polyphrasmon/testimonia/Polyphrasmon_TESTIMONIA.xml?action=search&view=page&odd=fragtragodd.odd#3.4.2.2.8.7.4.8.4.2.3 (last access 15.01.2024). For further details on these inscriptional records, see Millis / Olson (2012), 133–149 and 204–207.

11 For instance, the best we can have for the first victory of Polyphrasmon is between 482 and 471 BC (see Polyphrasmon Test. 1: https://fragtrag1.upatras.gr/exist/apps/fragtrag/polyphrasmon/testimonia/Polyphrasmon_TESTIMONIA.xml#Polyphrasmon-test-1 [last access 15.01.2024]).

12 I.e. *IG* II.2 2318, offering a detailed programme for each given contest (at least in the preserved portion of the inscription). For more information, see Millis / Olson (2012), 5–58.

13 See Phrynichus Test. 4 (https://fragtrag1.upatras.gr/exist/apps/fragtrag/phrynichus/testimonia/Phrynichus_TESTIMONIA.xml#Phrynichus-test-4 [last access 15.01.2024]).

its complexity documented in a machine-readable format. In our *Timeline of Greek Theatre Events*, we have chosen the latter approach.

The dating of events is frequently uncertain and a subject of debate. In such instances, we have chosen to provide a range of datings that cover all plausibly proposed dates. While we do not yet explicitly encode this uncertainty into a machine-readable format, we do document it in our human-readable descriptions of each event.

Consistent with the approach adopted for the *Greek Fragmentary Tragedians Online* project, the data collection *Timeline of Greek Theatre Events* structures its data using a TEI/XML-compatible scheme.

All event units are contained within a single <listEvent> element. Each event unit is represented by an individual <event> element, which is supplied with an @xml:id attribute to make it uniquely identifiable.

- Importantly, each <event> is necessarily equipped with an @type, which can hold one or more values identifying the type of event. These are: “tragic-performance”, “tragic-victory”, “choregic-tragic-victory”, “birth”, “death”, or “incident”. We define these values following the categories implied or explicitly used by our ancient sources. By the end of the project we expect to have added some more values and we plan, in a next step, to use the ontological framework “E5 Event” of CIDOC-CRM to represent formally the events we have registered.[14]

- The dating of the event is specified using an @when for exact dates, @notBefore for *post quem* dates (earliest possible dates), and @notAfter for *ante quem* dates (latest possible dates), or even a combination of @notBefore and @notAfter. The values of these attributes follow the format of *W3C XML Schema Part 2: Datatypes Second Edition, 3.2.7*.[15] To aid in the chronological sorting of the entries, we also add an @datingPoint, which takes the value of @when, @notBefore, @notAfter, or, in cases where both @notBefore and @notAfter are present, the value of @notBefore.

- Each <event> element is also necessarily equipped with an @source containing references to the *testimonia* documenting the specific event. Each <event> is optionally equipped with an @corresp with a value pointing to another <event>, in cases where two different events may be considered as one and the same.[16]

- Each <event> element includes a further <desc> element (description), a concise text that presents the event in all its aspects and documents any uncertainties in a human-readable format.[17] Personal names, play titles, and names of festivals mentioned in the <desc> are annotated using the <persName>, <title>, and <name @type=“feast”> elements, respectively. Each <persName> element is equipped with an @role, which accepts values indicating the person’s role in the event, such as “poet” or “choregos”. It also includes an @sameAs, holding a pointer to the xml:id of the person in the *FragTrag*-database, and an @ref with a link to

14 https://www.cidoc-crm.org/entity/e5-event/version-7.1.1 (last access 31.03.2023). For a comprehensive review of existing event ontologies, see Piryani et. al. (2023).

15 https://www.w3.org/TR/xmlschema-2/#dateTime (last access 15.01.2024).

16 For instance, Choerilus first participation in the City Dionysia tragic contest was recorded by Test. 1 (https://fragtrag1.upatras.gr/exist/apps/fragtrag/choerilus/testimonia/Choerilus_TESTIMONIA.xml#Choerilus-test-1 [last access 15.01.2024]) may coincide with his (first?) victory recorder by Test. 3 (https://fragtrag1.upatras.gr/exist/apps/fragtrag/choerilus/testimonia/Choerilus_TESTIMONIA.xml#Choerilus-test-3 [last access 15.01.2024]).

17 We plan to implement a fully machine-readable format in future.

the relevant entry in *Wikidata*.[18] Each <title> element comes with an @type, allowing for three possible values: "tragedy", "satyr-drama", or "comedy". Additionally, all <name> elements, besides the @type="feast", include an @subtype with "city-dionysia" or "lenaea" as potential values (as well as an @ref with a link to the relevant entry in *Wikidata*).

To illustrate how we encode these events, we give here as an example the encoding for the City Dionysia tragic contest of 467 BC (Fig. 3).

```
<event xml:id="ev00013" type="tragic-performance;tragic-victory" when="-0467"
   datingPoint="-0467"
   source="#Pratinas-test-2 #Pratinas-test-3 #Aristias-test-3 #Aristias-test-4 #Polyphrasmon-test-3 #Polyphrasmon-test-4">
   <desc>
      <persName role="tragedian" sameAs="#Aeschylus" ref="https://www.wikidata.org/wiki/Q40939">Aeschylus</persName>
      with the plays
         <title type="tragedy" rend="italic">Laius</title>,
         <title type="tragedy" rend="italic">Oedipus</title>,
         <title type="tragedy" rend="italic">Seven against Thebes</title>
         and <title type="satyr-drama" rend="italic">Sphinx</title>,
      <persName role="tragedian" sameAs="#Aristias" ref="https://www.wikidata.org/wiki/Q3622659">Aristias</persName>
      with the plays
         <title type="tragedy" rend="italic">Perseus</title>,
         <title type="tragedy" rend="italic">Tantalus</title>,
         an unknown tragedy,
         and the satyr drama <title type="satyr-drama" rend="italic">Wrestlers</title>,
      and <persName role="tragedian" sameAs="#Polyphrasmon" ref="https://www.wikidata.org/wiki/Q3907308">Polyphrasmon</persName>
      with a <title type="tragic-tetralogy" rend="italic">tetralogy on Lycurgus</title>,
      competed at the tragic contest of the <name type="feast"
         subtype="city-dionysia" ref="https://www.wikidata.org/wiki/Q21707866">City
         Dionysia</name>.
      Aeschylus won the first and Aristias the second prize. Polyphrasmon occupied the third place. </desc>
</event>
```

Fig. 3: Extract from our XML data collection of *events*.

In the above example, all information about the specific tragic contest is included within a single element <event> (which in our system is in turn included within a single <listEvent> element), which is given a unique identifier, an @xml:id ("ev00013"). The event is further defined by an @type as a "tragic-performance" and "tragic-victory" (the latter referring to the documented victory of Aeschylus), dated with the @when to "-0467" (equivalent of 467 BC) and chronologically arranged in relation to the other events of the *Timeline of Greek Theatre Events* with the aid of an @datingPoint (in this case it gets the same value as the @when, namely "-0467"). In addition, using an @source the event is interconnected with its sources, namely Pratinas Test. 2 and 3, Aristias Test. 3 and 4 and Polyphrasmon Test. 3.

Further details of the event are provided through an additional element <desc> (included within the <event>). The three playwrights participating in this event, Aeschylus, Aristias and Polyphrasmon are encoded with a <persName> element each, which is further defined with an @role (taking the value "tragedian") and an @sameAs pointing to each of these authors' xml:id in our project (respectively "#Aeschylus" "#Aristias" and "#Polyphrasmon"). A further @ref links to each poet's entry in *Wikidata*. The plays with which each tragedian participated in the contest are encoded with the element <title>, which is further defined by the @type (in the case of Polyphrasmon's *Tantalus*, for instance, the attribute takes the value "tragedy", whereas for his *Wrestlers* the value "satyr-drama"). Finally, we specify the festival in whose framework the event took place using the element <name>, which is defined with @type as a "feast" and with the @subtype as the "city-dionysia".

18 https://www.wikidata.org (last access 15.01.2024).

The above encoding results in the following visualisation (Fig. 4):

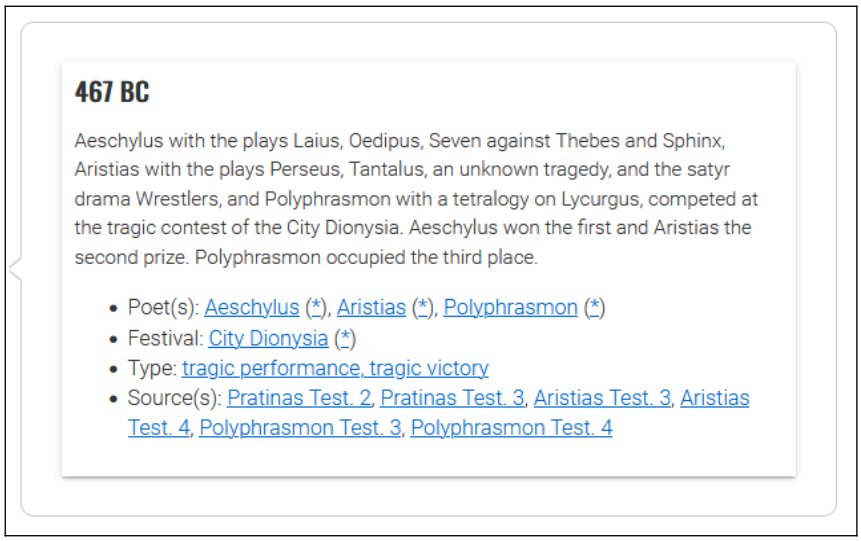


Fig. 4: Extract from the *Timeline of Greek Theatre Events* presenting the City Dionysia tragic contest of 467 BC.

The visualisation

The visualisation of our data collection takes the form of a simple, vertically oriented timeline (*Timeline of Greek Theatre Events*, Fig. 5), on which by default all event entries appear in chronological order on the basis of their @datingPoint attribute. If the @datingPoint value of two entries coincides the entries are sorted according to the order in which they are placed in the XML-document.

We have chosen vertical scrolling for presenting the events as it is a widely adopted and expected behaviour across various platforms and devices. Considering general web viewing patterns, researchers have observed that nowadays most users do not utilize fully horizontal scrolling, as most of the viewing content is on the left half of the screen.[19] Moreover, users tend to dislike horizontal scrolling, whereas they are accustomed to vertical scrolling on websites, mobile apps, and other digital interfaces, creating a consistent user experience.[20]

19 See Fessenden (2017).

20 See Nielsen (2018).

Fig. 5: Extract from the *Timeline of Greek Theatre Events*.

In the visualisation of each entry, the attributed dating appears as the heading. This may be a single date, with or without attributes (such as “after” or “before”), or a date-span indicating an approximation. The main body of the visualisation contains the description of the event.

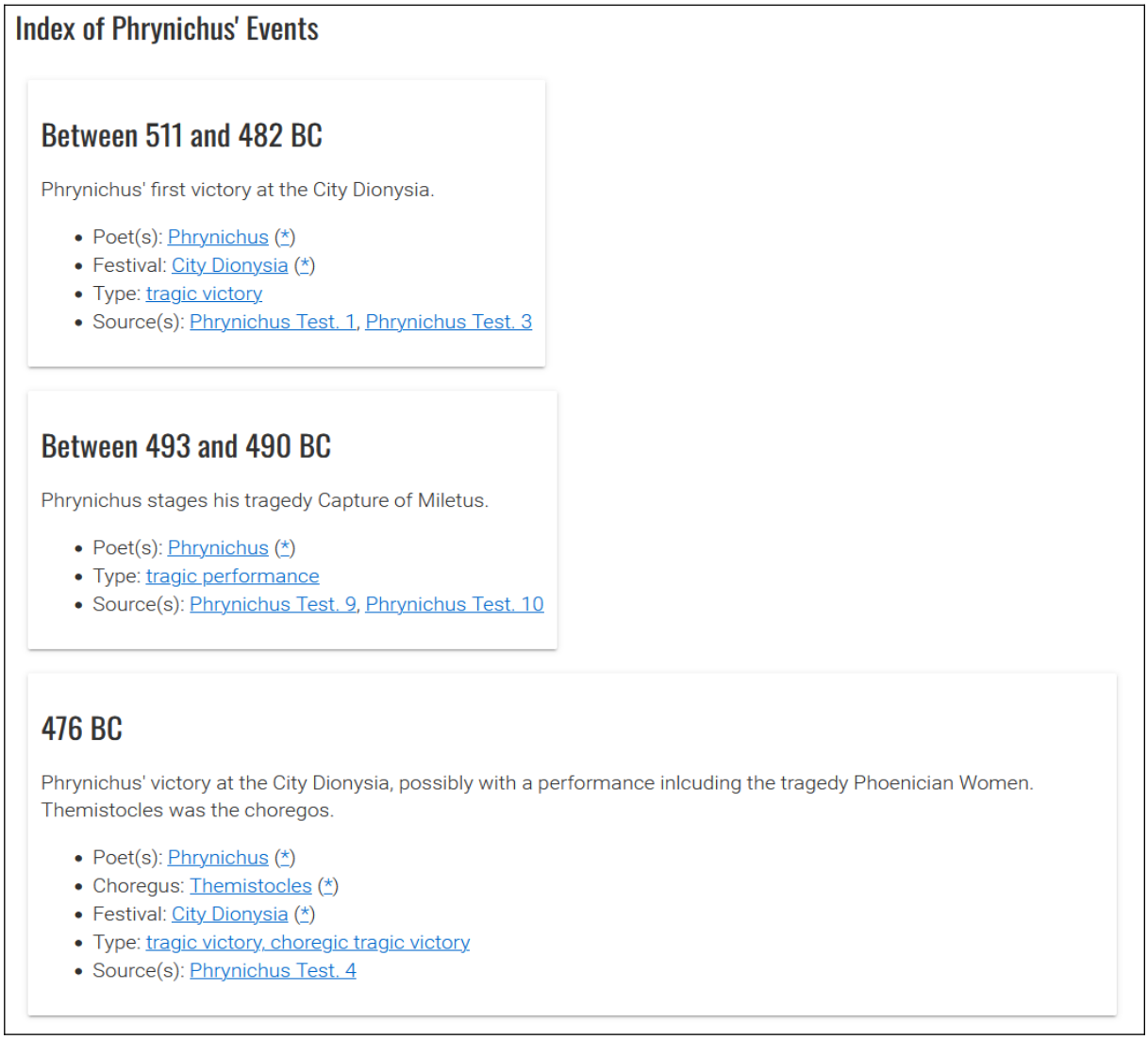


Fig. 6: Visualised aggregation of events related to Phrynichus.

The description is followed by a list of entries. Among them, "Poet(s)", "Choregus" and "Festival" (where applicable) are extracted from the <desc> element and correspond to the values assigned to, respectively, the <persName type="tragedian">, <persName type="choregus"> and <name type="feast"> elements. Personal names and names of feasts appear as interactive links. Upon clicking, these links lead to a new visualisation aggregating events related to the specific person or feast (see e.g. Fig. 6). Additionally, these elements are interconnected with corresponding entries in *Wikidata*. Users are directed to these *Wikidata* entries by clicking on the asterisk symbol (*) next to the annotated term. Additional entries, "Type", "Source" and "Corresponding event(s)" are extracted directly from the <event> element and correspond to the values assigned to the @type, @source, and @corresp attributes. The visualisation of these values includes interactive links with the following behaviours upon clicking:

- each "type" value links to a new visualisation aggregating events categorised under the same type.
- each "source" value links to the referred *testimonium* in our edition (Fig. 7).
- each "corresp" value links to the corresponding event.

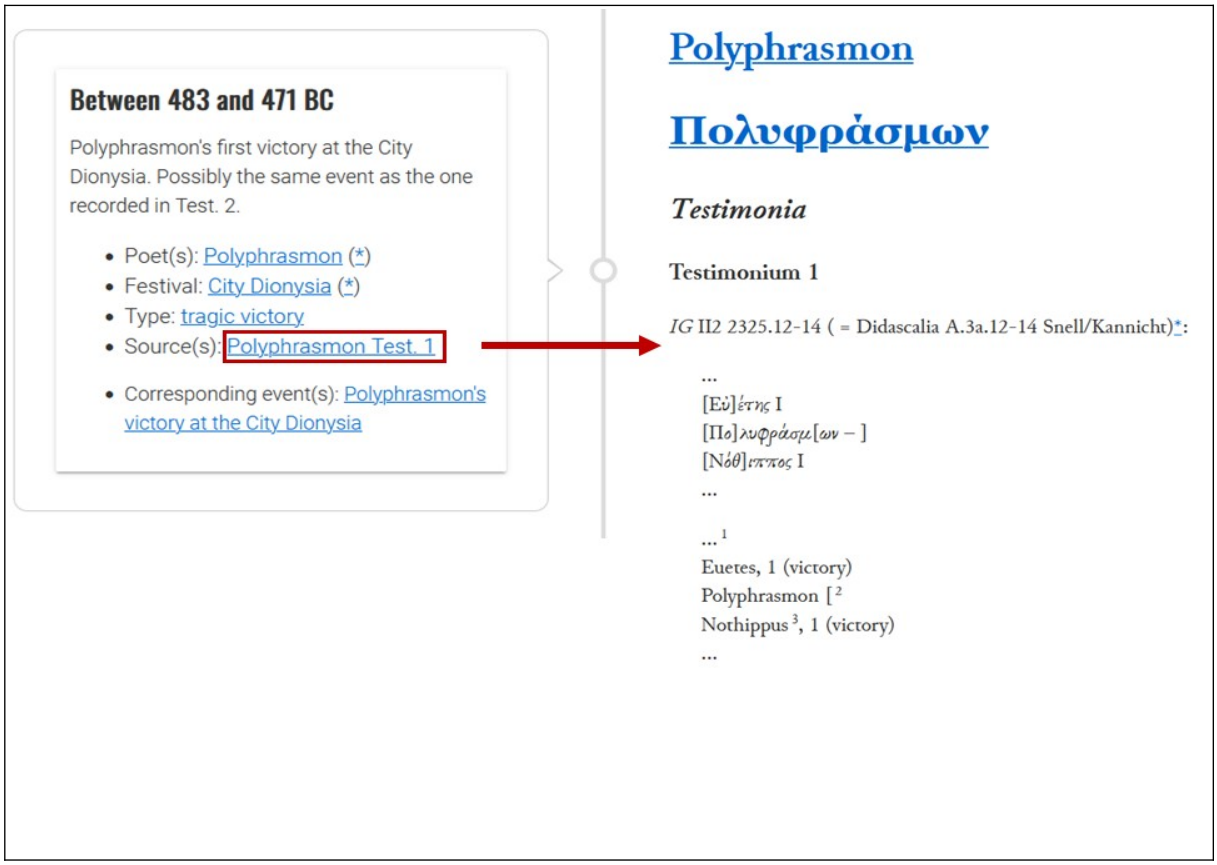


Fig. 7: From the *Timeline of Greek Theatre Events* to the original source documenting Polyphrasmon's first victory at the City Dionysia.

The visualisation is generated through a simple transformation script combining XQuery (app.xql file), HTML (events.html, indexe.html, indexesameas.html and indexesubtype.html files), and JavaScript (timeline.min.js file).

With regard to the four HTML files used to visualise the data:

1. *events.html* implements the *Timeline of Greek Theatre Events of Events* via the call to the *app:fragtragevents* function (see in the app.xql file) and the use of timeline.min.js, a JavaScript to produce the format of the Timeline.

2. *indexe.html* gathers the different types of events via the call to the *app:searchevents* function (from the app.xql file) and the use of JavaScript to produce the title of the document.

3. *indexesameas.html* filters the different personal names, so as to visualise the relevant events for each person via the call to the *app:searcheventsp* function (from the app.xql file) and the use of JavaScript to produce the title of the document.

4. *indexesubtype.html* filters the different types of festivals, so as to visualise the relevant events for each festival via the call to the *app:searcheventsf* function (from the app.xql file) and the use of JavaScript to produce the title of the document.

The app.xql file, includes the following functions that process the source XML-file of the events and, according to the XML-tags, these functions extract all the appropriate information to be visualised for the user:

1. *app:fragtragevents* selects all events from the database and sorts them according to each event's @datingPoint. In this function, there is a call to another function, the *app:show-events* function (see below).

2. *app:searchevents* selects the events belonging to each event's type and sorts them according to the @datingPoint attribute. In this function, there is also a call to the *app:show-events* function (see below).

3. *app:searcheventsp* selects the events related to each person (tragedians, choregoi and actors) and sorts them according to the @datingPoint. In this function, there is also a call to the *app:show-events* function (see below).

4. *app:searcheventsf* selects each festival's events (City Dionysia or Lenaea) and sorts them according to the @datingPoint. In this function, there is also a call to the *app:show-events* function (see below).

5. *app:show-events* organises the selected data, formats them in the appropriate way to be used in the HTML page, and calls the *app:get-event* function (see below).

6. *app:get-event* is the most important function as it gives the data its final format, creates the hot-words with links to the indexes (the various event aggregations) and the *FragTrag*'s basic texts (*fragmenta*, *testimonia*, biographies), and checks if there are any restrictions or conditions to take into account while building each event's card, as shown to the user.

Data storage and accessibility

The XML file which contains the data, the XQL file which extracts the relevant information, along with the HTML and the JavaScript used to generate the visualisation, are stored in a location under our database's "Documentation" menu and are openly accessible. The direct link is https://fragtrag1.upatras.gr/exist/apps/fragtrag/resources/fragtrag_events.zip (last access 15.01.2024; all files are concentrated in a compressed file).

Finally, the *Timeline of Greek Theatre Events of Events* tool can be accessed at https://fragtrag1.upatras.gr/exist/apps/fragtrag/events.html (last access 15.01.2024). Hosting these resources (as well as our entire database) on the servers of the University of Patras, a public institution, ensures their long-term maintenance and open-access availability.

Potential expansion and reusability of data

Our data collection currently focuses on material related to fragmentary tragedians, which derives from the *Greek Fragmentary Tragedians Online* edition of their *testimonia*. It has the potential to be expanded to well-known playwrights such as Aeschylus, Sophocles, Euripides. In fact, we have already included some material from them in cases of events where their own paths meet with those of the fragmentary tragedians. For instance, we know from our sources that in a tragic contest during the

70th Olympiad (i.e. between 500 and 497 BC) Aeschylus competed against Pratinas and Choerilus,[21] and this information has been added to our Timeline of Greek Theatre Events. Our plan is to expand the material pertaining to the 'Great Three' so as to provide an all-inclusive chronological tool for the events of Greek tragic theatre as a whole. But that will have to wait until we have completed our work with the fragmentary tragedians.

Furthermore, given the specialised nature of our data and its format in TEI/XML – a format prevalent in Digital Humanities and easily convertible to formats like JSON – combined with its open accessibility, we believe that databases of cultural or historical events in the ancient Greek world could effectively reuse and repurpose our data in their projects.

21 See Choerilus Test. 2 (https://fragtrag1.upatras.gr/exist/apps/fragtrag/choerilus/testimonia/Choerilus_TESTIMONIA.xml#Choerilus-test-2 (last access 15.01.2024).

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Figure References

Fig. 1: Extract from the list of the *Didascaliae* printed in *TGrF.*

Fig. 2: Extract from the *Digital Marmor Parium*'s Timeline, https://www.digitalmarmorparium.org/chronology.html (last access 15.01.2024).

Fig. 3: Extract from our XML data collection of *events*.

Fig. 4: Extract from the timeline presenting the City Dionysia tragic contest of 467 BC, https://fragtrag1.upatras.gr/exist/apps/fragtrag/events.html (last access 15.01.2024).

Fig. 5: Extract from the *Timeline of Greek Theatre Events*, https://fragtrag1.upatras.gr/exist/apps/fragtrag/events.html (last access 15.01.2024).

Fig. 6: Visualised aggregation of events related to Phrynichus, https://fragtrag1.upatras.gr/exist/apps/fragtrag/indexesameas.html?p=Phrynichus (last access 15.01.2024).

Fig. 7: From the *Timeline of Greek Theatre Events of Events* to the original source documenting Polyphrasmon's first victory at the City Dionysia.

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