




# Annotations and the Ancient Greek Hero: Past, Present, and Future

## Anotaciones y el héroe griego antiguo: Pasado, presente y futuro

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### ABSTRACT

Evidence for annotating Homeric poetry in Ancient Greece is as old as the 5<sup>th</sup> Century BCE, when the «Iliad» and «Odyssey» were performed by professional singers/composers who also performed annotations to the poetry in answer to questions from their audiences. As the long transition from a song culture into a literate society took place in Ancient Greece from the 8<sup>th</sup> to the 2<sup>nd</sup> and 1<sup>st</sup> centuries BCE, annotations were gradually incorporated into written poetic texts. By the 10<sup>th</sup> Century CE, the quantity of written annotations in the margins of medieval manuscripts has become huge. For the first two versions of «The Ancient Hero», a HarvardX MOOC, it was not possible to implement the set of annotation tools that we requested as a vehicle for close reading and assessment. Using a partial system, we were able to create a semblance of annotations in close reading self-assessment exercises. For the anticipated third version, we expect to have a complete set of textual and video annotation tools developed for HarvardX, including semantic tagging and full sharing of annotations. Such a system, which promises to make the educational experience more effective, will also inaugurate a digital phase in the long history of Homeric annotation.

### RESUMEN

Las evidencias de anotaciones en la poesía homérica de la Antigua Grecia se remontan al siglo V (a.C.), cuando ya la «Iliada» y la «Odisea» eran representadas por cantantes profesionales/compositores, que hacían anotaciones en la poesía para responder a los interrogantes de su público. A medida que la transición, desde una cultura de la canción a una sociedad alfabetizada, aconteció en este período de la Antigua Grecia, entre el siglo VIII al I y II (a.C.), las anotaciones se incorporaron poco a poco en los escritos poéticos. La cantidad de anotaciones escritas en los márgenes de los manuscritos medievales se volvió enorme hacia el siglo X. En las dos primeras versiones de «The Ancient Hero» en el MOOC de HarvardX no fue posible utilizar el conjunto de herramientas de anotación solicitadas como medio para una atenta evaluación de las lecturas. Utilizando un sistema parcial, hemos sido capaces de crear aparentes anotaciones en los primeros ejercicios de autoevaluación de lectura. En la tercera versión, disponemos ya de un conjunto completo de herramientas de anotaciones de texto y de vídeo, desarrollados para HarvardX, incluyendo etiquetado semántico y anotaciones compartidas. Dicho sistema nos permitirá una experiencia educativa más eficaz, inaugurando también una fase digital en la larga historia de la anotación homérica.

### KEYWORDS | PALABRAS CLAVE

Text analysis, ancient texts, song culture, Greek hero, multimedia annotation, MOOC, self-assessment, tagging ontology, semantic tagging.

Análisis de textos, textos antiguos, cultura de la canción, héroes griegos, anotaciones multimedia, MOOC, autoevaluación, ontología de etiquetas, etiquetado semántico.

## 1. Introduction

The topic of this paper is annotation in its historical context as a vehicle for research and teaching MOOCs in the humanities, more specifically, past uses of annotation and its present and future uses. In Ancient Greek epic poetry, the poet and the seer, in other words, the persons who 'see' most clearly and whose minds are most attuned to the world, are those who know the connections between the things that are, the things that were before, and the things that will be, so that will be our model to emulate.

## 2. Annotations as performance in the ancient Greek song culture

Ancient Greece emerges from pre-history as a song culture, a culture of the spoken, performed word. As early as the 8<sup>th</sup> Century BCE, Greeks had transformed the Phoenician syllabary into a phonemic alphabet and made it thereby easy to learn and to use. Even so, alphabetic writing was not popular among Greeks even into the Classical period, the 5<sup>th</sup> Century BCE, the time of the Athenian empire. Writing was conceived of as a secondary phenomenon to singing and speaking. For centuries after its invention, it was underutilized and even treated with contempt by a society that could do everything that it wished to with performed, spoken language (Svenbro, 1993).

Just as it took generations for prose to develop out of poetry, so also it took generations for alphabetic writing to become an acceptable part of daily life. A sluggish transitional process began in the 8<sup>th</sup> Century BCE and continued for centuries. Even though Plato used alphabetic writing in the 4<sup>th</sup> Century BCE to create a voluminous corpus of written work that has survived apparently in its entirety, he still portrays his revered teacher, Socrates, in the late dialogue «Phaidros» disparaging writing. For Socrates, writing is nothing but a poor reminder of an idea, since letters are silent and cannot respond to anyone's questions (275c-d): the logos of dialogue, of living, face-to-face question and answer, is the only means to true understanding. When alphabetic writing eventually did acquire prestige, it existed alongside the song culture. It did not displace performance traditions, for instance, of Homeric poetry, which thrived at least into the 2<sup>nd</sup> Century CE (Nagy, 2001).

This cultural state of mind about writing had consequences for the study and use of annotation, because during the transitional period, just as poetry was composed and performed in festivals and in front of crowds, so also were annotations on its interpretation and transmission. We know of figures in the 5<sup>th</sup>

Century BCE like the rhapsode Hippias of Elis, who boasted that he was able to simultaneously perform and interpret poetry, both the poetry of Simonides and of Homer, as we learn from Plato's «Protagoras» (for instance, at 347b) and the «Hippias Minor» (363c-d; the Greek word for such a performance was «epideixis», a word also used of public oratorical performance). He says there that at the Olympic games he publicly stated his willingness to perform and to answer any question about his performance that the assembled visitors could ask.

The rhapsode Ion, like Hippias the subject of a Platonic dialogue that bears his name, also claims to be an interpreter (Ion, 531c, hermeneus) of poetry able to speak beautifully about its intent. And we have testimony from the 4<sup>th</sup> Century BCE orator, Isocrates, who complains in his last oration (Panathenaicus, 17-19) about «run-of-the-mill sophists» sitting together in the Lyceum in Athens, where they would recite and comment on the most elegant features of the poetry of Homer and Hesiod, repeating material which they had learned from others. So it is clear that there was a tradition of performed commentary or annotation that accompanied the performance of poetry before there were written texts of poetry with annotations embedded in them.

## 3. Transition to literacy and written annotations

Even though the transmission of knowledge without writing is a remarkably reliable process in such cultures, eventually writing did become a medium for the sharing and transmission of knowledge. It is not a coincidence that the oldest document written on papyrus that we have from antiquity, was meant to do exactly that, namely the Derveni papyrus roll, generally dated to the 4<sup>th</sup> Century BCE and unearthed in 1975 near Thessaloniki in Northern Greece as the consequence of a highway construction project. This papyrus was buried with its owner and intentionally burnt with him. It was supposed to have been destroyed, since its destiny was to communicate with higher powers on the other side of death, not to be read by or shared with the poor souls left behind in this world.

Only a fortunate circumstance prevented this carbonized papyrus roll from being burnt up completely and then from completely disintegrating in the temperate climate of Northern Greece. As one might expect from a written document with such a ritual purpose, there are no exegetical annotations on the text of the Derveni papyrus. But once we move to a climate that is friendlier to the preservation of papyrus fibers, the desert climate of Greco-Roman Egypt, and to a culture

in which writing was integrated into daily life practices, we can acquire a better notion of the early history of written annotation. Figure 1, for example, shows two columns of a 2<sup>nd</sup> Century CE papyrus that was used as a kind of papier mâché for making mummies, from a cemetery in Hawara, about 100 miles south of Cairo.

On each of the columns on this fragment of the scroll, there is a single marginal note in cursive lettering commenting on the text that has been copied in beautiful uppercase letters from the second scroll of the Homeric Iliad. The poetry is discussing whose were the best horses of all the Greeks who came to Troy. It says that the warrior Eumelus had the best horses, and that in addition, Ajax the son of Telamon was the best warrior – that is, he was the best as long as Achilles was angry and not fighting, it adds, because he, Achilles, was much the best warrior; and, in fact, so were the horses that carried Achilles the best. The line with the note to the right of it reads: Iliad II 769: ΟΦΡ' ΑΧΙΛΕΥΣ ΜΗΝΙΕΝ ΟΓΑΡ ΠΟΛΥΦΕΡΤΑΤΟΣ ΗΝ. (while Achilles was angered; in fact he was the best by far).

The marginal note, written in smaller, cursive letters, with spaces between the words (there are no spaces between words in the uppercase letters of the poetic text), says «κοιν(η) φερτερος εν»/ «the standard he was better».

In the highly abbreviated language of such margi-

nal notes, these words mean that the standard (koinē) text of Homeric poetry reads «he was better» in this line, in contrast to the text given in the papyrus itself, which reads «he was the best». So the marginal note records a variant reading of the line, a change that lowers the rhetoric of the verse, calling Achilles better than Ajax – but Ajax has just been said to be the best when Achilles was not fighting, so whether this line says he is better or the best, either way, Achilles is still the best overall.

This kind of annotation, which may be by a second hand and not the original scribe, is consistent with editorial practice that we know of elsewhere in the Hellenistic period. Checking the text against a standard version and preserving rather than suppressing variants was the regular practice, for instance, of the most famous Homeric researcher in the Hellenistic (2<sup>nd</sup> Century BCE) period in Alexandria, Aristarchus of Samothrace. Usually, he would give the standard (koinē) version in his text and preserve the variant in an annotation, but his successors often promoted his relatively exotic variants to the base text.

For example, among the most famous witnesses of the Homeric text, the 11<sup>th</sup> Century MS. from the El Escorial Monastery in Madrid, Escorial Omega 1.12, in fact reads the more subtle «ferteros» (better), not «phertatos» (best) here. Aristarchus was head librarian in the Museum of Alexandria from ca. 180-145 BCE. By his time the writing of both texts and comments had

become the norm. Even so, we do have reliable information that it was his editorial practice, as it was also that of others in this time period, to have a professional reader, a so called «anagnōstēs» (reader) whose name was Posidonius, read every line of Homer out

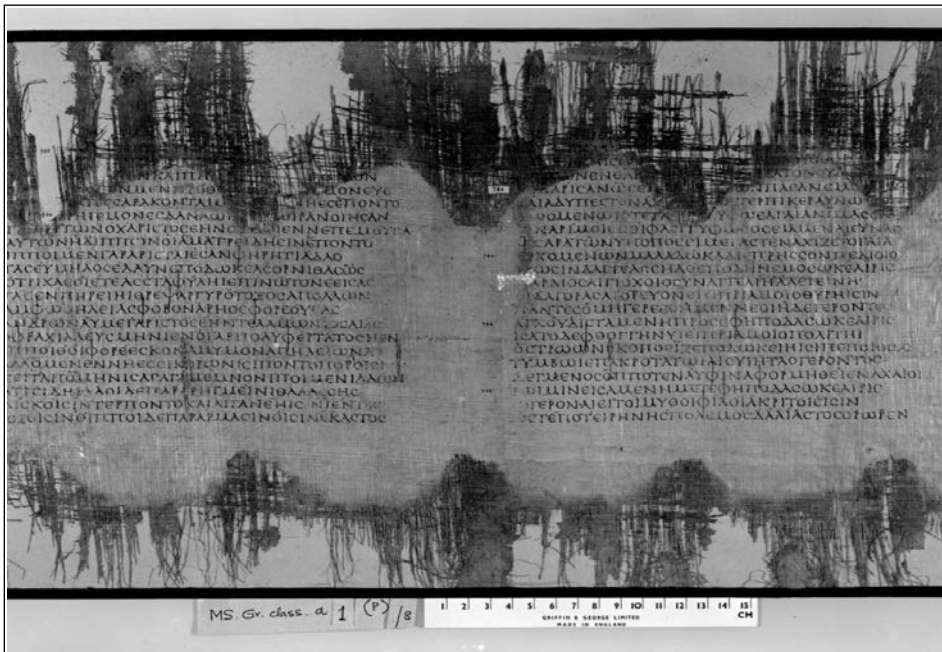


Figure 1: 2<sup>nd</sup> Century CE: Hawara Papyrus of Homeric Iliad, in Bodleian Library, Oxford (P. Bod. I.1), fragment viii<sup>1</sup>.

loud as he was editing the texts. Aristarchus regarded the traditional performance practice of such a person as authoritative, especially for the way that words in the poetry were to be divided and understood (Nagy, 2008). Without word divisions in alphabetic Greek (as we see the text written in the papyrus), there are options about how to divide up and read the words in the poetic line. Clearly, this professional reader/performer was continuing in the authoritative.

Tradition of the rhapsodes and sophists mentioned above, Hippias and Ion and others, though now the performing of the text and its annotation had become the domains of separate individuals. But it is also clear that by Aristarchus' time, the written form of the text is primary even to the «anagnōstēs», who is not a performer but a 'reader.' We also know that Aristarchus physically separated the edition of poetic texts into one scroll and the edition of his annotations into another, into what he called «hupomnēmata», a word that originally meant 'reminders, notes' and then came to mean a separate collection of note (Pfeiffer, 1968).

So effectively we can point to this moment as the transitional stage between annotations in a song culture and purely written annotations that are the vehicle for scholarly publication in the modern academic world. By the time we get to the medieval transmission of the Homeric text, the annotation process has undergone a dramatic development in both quantity and types of annotation and their presentation. Consider an image (figure 2, above) of the eleventh folio (recto) of the 11<sup>th</sup> Century manuscript of the Homeric Iliad in the Escorial Monastery of Madrid, catalogued as Upsilon 1.1, a page with the text of lines 322-341 of the first scroll of the Homeric Iliad. It represents a fairly «normal» page of one of the dozen best Byzantine MSS. of the Homeric text. The middle of each page of parchment contains about 20 lines of the Homeric text, written in relatively larger letters, and there are annotations in two regions of the page: between the lines, where there are short paraphrases of words that are old or obscure to the current reader and that appear over the words that they explain; and, in addition, all around the outermost part of the page, beginning at the top left, there are notes that are referenced by numerals that appear over words or phrases in each line of the poem, like numbered footnotes, explaining the language or the grammar or the mythology of that particular line, and at times reporting the opinion of other scholars from antiquity as well as citing other texts in support of their interpretation.

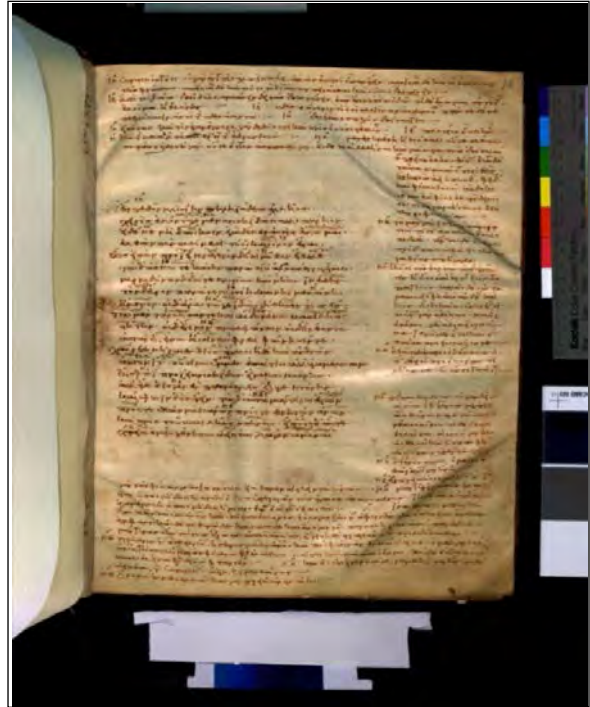


Figure 2. Upsilon 1.1, Real Monasterio de El Escorial, Madrid; folio 11r. contains Iliad 2: 322-341<sup>2</sup>.

Figure 3 is a less «normal» page from the 10<sup>th</sup> Century MS. called Venetus A, with even more notes on textual matters in the margins to the right and left of the Homeric text in the middle of the page (in other words, it uses an area on the page for a specific kind of annotation that is missing in the later MSS.). In this older form, there are no numbers to connect the text to the marginal notes. Instead, each annotation begins with a word or group of words from the poetic text being commented on in order to make the connection between text and its annotation as explicit as possible. So the tradition of commenting which looks like a weak stream in the 2<sup>nd</sup> Century CE papyrus from Hellenistic Egypt has swollen to a great river of annotations that Byzantine scribes handed on to us through a process of compilation, copying, and recopying.

The copious notes that they have transmitted explain how to interpret the Homeric text and cite authorities for doing so that date as far back as the allegorical interpreters of Homeric poetry in the 6<sup>th</sup> Century BCE. They include material that is Aristotelian (4<sup>th</sup> Century BCE) in conceptual pedigree, as well as the opinions and results of all the researchers on Homer from the learned communities established in Pergamum and Alexandria after the death of Alexander the Great and thereafter, on into the heyday of the Roman Empire.

#### 4. Annotation in a Digital Age: Research, Teaching and MOOCs

There is one striking and crucial fact about these medieval MSS from Byzantium: not only were they created by hand by one scribal artisan at a time, they also could only be read by one person at a time, though they could be heard by more than one if that person read aloud. So the end of the performance tradition plus the end of the Ancient Greek song culture plus the advent of writing effectively reduced access to this river of annotations, making them accessible to a relatively few, especially as compared to the crowds of Greeks attending an Olympic festival where Hippias performed poetry and explained it in public; one can see how eventually, with the advent of the expensive, hand-written single book, poetry became the property of elites, not the general population. In 2005, a team from the Center for Hellenic Studies in Washington DC did the first high-resolution photography of three of these Byzantine MSS. of Homer in Venice, where we photographed the oldest of them, the 10<sup>th</sup> Century MS. called Venetus A as well as a manuscript that is referred to as the twin sister to Escorial Upsilon 1.1, the so-called Venetus B. Roughly twenty percent of the annotations in these MSS. (and there are other such MSS. extant, in Geneva, in the British Library, and in Florence with different as well as overlapping collections of annotations in each) has never been published even in modern times. Until the CHS team

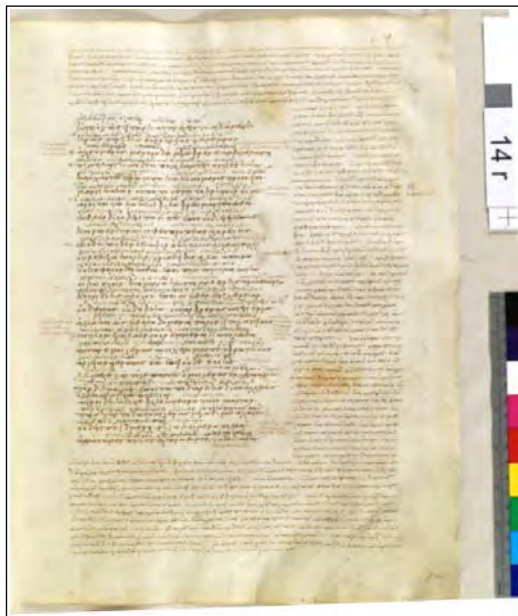


Figure 3. 10<sup>th</sup> Century CE Venetus A, Biblioteca Marciana Z 454, folio 14r, Homeric Iliad 1.101-125<sup>3</sup>.

made the photographs and published them on the internet under a Creative Commons license, fewer than 25 people since the 16<sup>th</sup> Century had ever even looked at the MSS. themselves in Venice, though in 1901 Domenico Comparetti published a facsimile of Venetus A – at most not more than a couple of hundred copies of it exist (Comparetti, 1901). As mentioned above, the Center for Hellenic Studies in Washington has made high-resolution photographs of these medieval manuscripts of Homer available at no cost to the world via the internet on a Creative Commons License. So technology has enabled at least visual access to these ancient annotations. Yet they are not, as you can well imagine, easy to read and understand. Not only is the writing style elliptical and conventional, as in the sample given above, but also the actual writing of the words themselves is compressed and abbreviated, because the scribes had to fit many annotations into limited space. So a large effort is now underway to make machine-readable versions of these annotations, 20% of which have never been published, and to translate them and make them comprehensible to a wider audience. Since 2008, a worldwide project, sponsored by the Center for Hellenic Studies in Washington DC, has been training those among us with the best eyes, the sharpest decoding skills, and the greatest comfort with digital technology, namely young people from age 18-21, to produce digital editions of this massive quantity of material.

This historical example of Homeric annotation and its transformations over time is worth dwelling upon in order to highlight the potential for a new golden age in the democratization of education that the development of digital technology for creating and also sharing annotations offers. That large potential is based on three crucial smaller potentials of digital technology:

a) First, there is the potential ubiquity of free and open access to published research in higher learning, including annotations, that digital technology affords;

a) Second, there is the potential development of protocols and software for federated annotation of the objects of higher learning – in other words both texts and images;

b) Third, there is the ability of digital technology to create conversing communities of learners, researchers, and teachers around the world through cheap and effective communication by way of simple software for asynchronous as well as synchronous sharing of ideas and insights.

These three aspects of the current state of digital technology make our times a potential golden age for

education through annotation. As the historical example shows, annotation of an enduring cultural monument of Western literature, the Homeric poems, has always been and continues to be the vehicle of choice for communicating, sharing, and developing ideas and understanding around it. Even though the advent of alphabetic writing and the eventual suppression of song culture effectively reduced the scope of annotation-sharing, in the Renaissance the advent of the printing press then made it possible to print books of annotations, and libraries, publishers, and bookstores have made it possible to disseminate them relatively widely. But such physical books of annotations have now become more and more expensive to produce and buy. For example, the first volume of a two-volume commentary on the first four books of the *Histories* of Herodotus (in other words, only half of the work) published by Oxford University Press now retails for £238 or \$400. Now, however, with digital technology, we are working to increase access massively, and we can augment the old stream of annotations with new ones created by new communities. Furthermore we can share a growing corpus of annotations to an unprecedented degree, because each of the three potential aspects of digital technology has been at least to some extent realized:

a) For the first, the ubiquity of information technology and free and open access to publication of research that it affords, there is now the Open Access movement and the increasing success of unfettered publication of research in higher learning.

b) For the development of protocols and software for open access, federated annotation of the objects of higher learning through annotation with enhanced technologies such as geolocation, ontological tagging, sharing in social networks, along with powerful pedagogical methods for assessment with rubrics (Cebrian-de-la-Serna & Bergman, 2014), there are now the Open Video Annotation project<sup>4</sup> and the integration of tools like Annotators into the edX platform that has recently been accomplished (Cebrian-Robles & Desenne, 2014).

c) Lastly, for the ability of digital technology to create communities of learners, researchers, and teachers around the world, there is now the advent of MOOCs, which have arisen in a very short time and have opened universities to modern societies at all levels (Liyanagunawardena, Adams & Williams, 2013; Ebbena & Murphyab, 2014).

MOOCs are a crucial piece in the implementation of this vision of democratized education via annotation. A course called *The Ancient Greek Hero*, CB

22x, has now been offered by Professor Gregory Nagy and a team from Harvard University and the Center for Hellenic Studies twice (March-July, 2013 to 43K participants; again, in September-December, 2013 to 16K participants). A third version is under development and is likely to be offered in September, 2014.

For the first two iterations of *The Ancient Greek Hero*, the pedagogical staff had only a semblance of annotation tools, because at the time the edX platform had a limited implementation of an annotation system for teaching and learning. Despite this, voluminous sources for the *Ancient Greek Hero* project were made available for learners to annotate inside the MOOC. Unfortunately, there was no way for participants to explore their peers' annotations, nor to share or export their own annotations. Secondly, and perhaps more importantly, we worked with the technical team to implement the first phase of a set of tools to enable self-assessment through annotation but not the second phase in the development of those tools. That second phase would have allowed participants to create, retrieve, and share annotated assessments.

Under these constraints, we created self-assessment exercises on the model of an annotation exercise and on the model of an ontological tagging exercise because in fact we had software implementations of neither. All that we had in the way of technology for interactive testing was the ability to mark an answer to a multiple choice question as correct, half-correct, or incorrect, and then to provide information about the possible answers. For each of the twenty-four 'hours' or sections of the course, the instructor, Professor Gregory Nagy, created a Close Reading Exercise based on a focus passage, a translated text of Greek literature usually not more than a page long. The participants were instructed to think of these exercises as a way to learn to read slowly, borrowing that concept from Friedrich Nietzsche's description of philology in the beginning of *Daybreak*, and above all to learn how to read out of the text instead of reading into the text one's own preconceived ideas (Nietzsche, 1982). Each focus passage contained four differently colored, highlighted sections, each with a question linked to it like an annotation that pops up when the user lets the cursor hover over (mouseover) the highlighted text, as in figure 4 below.

When the person taking the exercise clicks on «Reply to Annotation» at the bottom of the Question one/Annotation window, the screen moves down to this section of the online exercise, right after the end of the focus passage, as in figure 5 below.

whom he had courted and married in the proper way. She was the beautiful Kleopatra, |557 whose mother was Marpessa, the one with the beautiful ankles, daughter of Euenos, |558 and whose father was Idēs, a man most powerful among those earthbound men |559 who lived in those times. It was he [= Idēs] who had grabbed his bow and had stood up against the lord |560 Phoebus Apollo, and he [= Idēs] had done it for the sake of |561 Kleopatra [= Marpessa]. |561 She [= Kleopatra] had been given her name back then [when she was growing up] in the palace of her father and name for her, because she was a Ceryonian bird, known for her many sorrows [penthos]. |562 She was seized and carried away by the one who has far-reaching power, Phoebus Apollo. |565 So, right next to her [= Kleopatra], he [= Meleagros] lay down, nursing his anger [kholos] - an anger that brings pains [olgea] to the heart [thūmos]. |566 He was angry [kholōsthai] about the curses [ārai] that had been made by his own mother. She [= Meleagros's mother Althaea] had been praying to the gods, |567 making many curses [ārūsthai] in her sorrow [akhos] over the killing of her brother [by her son Meleagros]. |568 Many times did she beat the earth, nourisher of many, with her hands, |569 calling upon Hādēs and on terrifying Persephone. |570 She had gone down on her knees and was sitting there; her chest and her lap were wet with tears |571 as she prayed that they [= the gods] should consign her son to death. And she was heard by a Fury [Erinys] that roams in the mist, |572 a Fury heard her, from down below in Erebus - with a heart that cannot be assuaged. |573 And then it was that the din of battle rose up all around the gates [of the people of Calydon], and also the dull thump |574 of the battering against their walls. Now he [= Meleagros] was sought out by the elders |575 of the Aetolians [= the people of Calydon]; they were supplicating [lissesthai] him, and they came along with the best priests of the gods. |576 They were supplicating him [= Meleagros] to come out [from where he was lying down with his wife] and rescue them from harm, promising him a big gift. |577 They told him that, wherever the most fertile plain in the whole region of lovely Calydon may be, |578 at that place he could choose a most beautiful precinct [temenos] of land, |579 fifty acres, half of which would be a vineyard |580 while the other half would be a field open for plowing. |581 He was also supplicated many times by the old charioteer Oineus, |582 who was standing at the threshold of the chamber with the high ceiling |583 and beating at the locked double door, hoping to supplicate him by touching his knees. |584 Many times did his sisters and his mother the queen |585 supplicate [lissesthai] him. But all the more did he say "no!" Many times did his comrades [hetairoi] supplicate him, |586 those who were most cherished by him and were the most near and dear

**Question 1**

How is the kholos or 'anger' of Meleagros comparable to the kholos of Achilles?

Apply to Annotation

Figure 4. CB 22.1x, Close Reading Exercise, step 1.

It repeats the highlighted text and the question, and there is a textbox for the participant to write a response to the question that popped up. We wanted the person doing these self-assessment exercises to think through and write out a response to the question, which was not a question of fact but a question of interpretation – in other words, what we asked the participants to do was to create an interpretative annotation on the highlighted text as a way to regulate their own learning by way of technological enhancements (Carneiro, Lefrere, Steffens & Underwood, 2011; Panadero & Alonso-Tapia 2013). In a project like this, that is the kind of writing and thinking that we wanted to stimulate and encourage, in the long historical line of interpretive annotations of Greek poetry. In figure 6, the question asked is about the meaning of the Greek word «kholos» (anger) that occurs in the highlight and that is important in the Iliad as a whole. In point of fact, we had no way to read and respond to any of the participants' annotation-responses. Instead, we thought up a way to make each participant discover how her or his annotation related to the lines of interpretation taken in the textbook and the videos that form the content of the project by Professor Nagy. Such a procedure was consistent with the kind of idealism that we tried to cultivate in this project as a whole: the point was not to get

the right answer, but to learn how to read and to articulate responses to Ancient Greek poetry. In other words, we opted for self-assessment as the tool of choice, in the absence of viable alternatives. First we narrowed down the basic point of the annotation exercise into a key concept, and then we asked the students to choose from among three semantic tags to apply to their response, to choose the one that would best reflect the understanding that they had achieved and articulated through their annotation process. Without a full implementation of annotation tools, we made a multiple-choice list of tags that reflected better and worse

ways of reading or misreading the poetic text.

So to sum up, we asked the participants in our MOOC to annotate a highlighted text and then to tag their annotation from a mini-ontology of semantic tags. Once the participant submitted a choice of tag, she

pleasing [kharēntos] things that they had offered. But, in any case, he protected them from the evil event. |600 As for you [= Achilles], don't go on thinking [noēn] in your mind [phrenēs] the way you are thinking now. Don't let a superhuman force [daimōn] do something to you |601 right here, turning you away, my near and dear one [philo]. It would be a worse prospect |602 to try to rescue the ships [of the Achaeans] if they are set on fire. So, since the gifts are waiting for you. |603 get going! For if you do that, the Achaeans will honor [timein] you - same as a god. |604 But if you have no gifts when you do go into the war, that destroyer of men, |605 you will no longer have honor [time] the same way, even if you have succeeded in blocking the [enemy's] forces of war.

Iliad IX.550-605

QUESTION 1 (3 points) (view log)

**Question 1** Return to Annotation 1

[565 So, right next to her [= Kleopatra], he [= Meleagros] lay down, nursing his anger [kholos] - an anger that brings pains [olgea] to the heart [thūmos]. |566 He was angry [kholōsthai] about the curses [ārai] that had been made by his own mother.

How is the kholos or 'anger' of Meleagros comparable to the kholos of Achilles?

Type your response below:

In your response to this first question, how do you understand the meaning of the word kholos? (choose only ONE tag, here and elsewhere):

kholos - a special kind of anger, with dire consequences

kholos - any kind of anger

kholos - either of the above

Final Check   You have used 0 of 1 submissions

Figure 5. CB 22x, Close Reading Exercise, step 2.

received a visual response: either a pale green check mark or a solid green check mark, or, something that we were forced to accept and unable to do away with, a bright red X. And once the participant submitted electronically their choice of a semantic tag and saw a check mark or an X next to their choice, a complete explanation written by Professor Nagy about the choice of semantic tags appeared, explaining why each one was better or worse than the others and why, and why two betrayed less careful readings or even misreadings whereas one read out of the text what it was telling us. So there was instant feedback from the instructor of the project for each participant about the whole exercise.

The participants soon figured out that we were not able to read their annotations – that was literally true, because the software was unable to retrieve the annotations for the participants or for the pedagogical staff. It is our hope that we will have more complete and sophisticated assessment and feedback tools once we have a fully-fledged annotation system, thanks to the work of Cebrian-Robles and Desenne (2014) in integrating open standards-based tools into the platform of a MOOC system. If participants' annotations had been preserved, and if both we and the participants could have reviewed them, we would have shared the best responses among the participants. Furthermore, we would have guided discussions of them on the forum to which all participants were automatically subscribed. In other words, we could have made them immediately part of the communal learning experience which is such a vital and powerful part of the MOOC concept. In addition, once we create an ontology of semantic tags for all of the source material, we expect to be able to generate much more interesting and complex data about the close readings of each participant. In effect, we can make self-assessment exercises part of all of the reading in the project instead of only a single close reading exercise for each chapter of the textbook. Despite its limitations the annotation and tagging that our exercises have already afforded has been an astonishingly effective way to enhance the reading habits of our participants, as we learned by monitoring the discussion that they shared about their experiences with these tools and by the skills that they continue to practice in a site for alumnae/i of the course<sup>5</sup>. Self-assessment turned out to be a powerful way to learn and practice complex skills like close reading in a huge community as long as there are clear and compelling models that qualify a range of responses for the learners assessing themselves. Our team consciously rejected the approach that other humanities

MOOC have taken, which is to «crowdsource» the assessment process. From our experience teaching people to read texts from a culture that is not their own, that would only encourage people to read into the texts what is familiar from their own cultural backgrounds. So we modeled the process of reading out of the texts instead.

## 5. Conclusions

The concept of textual annotation has been the essential tool for transmitting knowledge and understanding of Ancient Greek texts in the past. Even with a limited system, our experience with the HarvardX/edX MOOC on The Ancient Greek Hero also shows that annotation stands to flourish for such purposes now in a digital age. Annotation is not only a means to communicate understanding that results from close reading. It also can become a vital way for people to educate themselves in the art of close reading and then to build community as they share readings by annotating. In other words, annotation can become a way for learners in this digital age to become participants in an ancient tradition of sharing knowledge that goes back to the song culture of the 5<sup>th</sup> Century BCE and, by way of MOOCs, Open Access, and open annotation software, to disseminate humanistic knowledge and skills on a global scale.

## Notes

- <sup>1</sup> Sourcebook of Original Greek Texts Translated into English (<http://goo.gl/WkDGNM>).
- <sup>2</sup> The Homer Multitext project seeks to present the Homeric Iliad and Odyssey (<http://goo.gl/CdmwV1>).
- <sup>3</sup> For photographs of Escorial Y1.1. Venetus A. The Homer Multitext Project (<http://goo.gl/EbjjG8>).
- <sup>4</sup> Cebrian-Robles, D. & Desenne, P. (2014). Open Video Annotation (<http://openvideoannotation.org>).
- <sup>5</sup> Hour 25: A sequel to the Ancient Greek Hero (<http://hour25.heroes.chs.harvard.edu>).

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