

Review of Perseus Digital Library

Perseus Digital Library. <http://www.perseus.tufts.edu/hopper/> (Last Accessed: 2017-12-10). Reviewed by Sarah Lang (Zentrum für Informationsmodellierung (ZIM-ACDH)), sarah [dot] lang [at] uni-graz [dot] at.

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Abstract

Perseus Digital Library is a well-established Digital Humanities project providing a library of out-of-copyright editions of canonical world literature with a focus on the Classical languages while expanding its scope beyond its original field. Apart from being a text collection, *Perseus* also provides a plethora of tools for the analysis of its text material and builds upon a sound base of methodological grounding. The digital library is made up of one main collection (Greek and Roman materials) and several smaller sub-collections spanning a range of other subjects. Data acquisition is achieved semi-automatically. The contents of the library consist of out-of-print text editions, dictionaries and commentaries being enriched by the supply of digital tools for analysis. *Perseus Digital Library* is reviewed as a whole but a special focus of the review lies on the Greek and Roman sub-collection and sub-projects.

Introduction

**PERSEUS DIGITAL LIBRARY**
GREGORY R. CRANE, EDITOR-IN-CHIEF
TUFTS UNIVERSITY

("Agamemnon", "Hom. Od. 9.1", "denarius")
All Search Options [view abbreviations]

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Welcome to Perseus 4.0, also known as the Perseus Hopper.
Read more on the [Perseus version history](#).
New to Perseus? [Click here](#) for a short tutorial.

Perseus Updates

- January 9, 2017: Update on the new MA in Digital Tools for Premodern Studies at Tufts**
In September 2016, we announced the creation of a new MA at Tufts University which will begin in Fall 2017. [Read more ...](#)
- December 22, 2016: A New Version of Perseus and Academic Partnerships**
An earlier blog entry pointed to a draft description of work on a new Perseus that we expect will appear, in some fashion, as a formal Request for Proposals from Leipzig in early January 2017. One reason to circulate this description is to get feedback. A second is to be able to explore different approaches before any formal RFP emerges. [Read more ...](#)
- December 21, 2016: Draft for a Request for Proposals for a new Perseus Digital Library**
We expect that Leipzig University will release a formal RFP early in January. Until and unless Leipzig University does so, there are no promises or guarantees of any kind. Our goal is to give the community a chance to comment and potential contractors an opportunity to begin thinking about what they might do. [Read more ...](#)

For more [read the full Perseus blog](#)

Release Announcements

- October 2013
New texts: the [English Bohn](#) and [Greek Kaibel](#) editions of Athenaeus' *Deipnosophists* and *Harpocration*.
Corrections to Greek and Latin lexicons, Oppian, Smith's *Geography*, Pausanias, Cassius Dio.
CIDOC RDF download links added for Art and Architecture data.
- June 17, 2013
The navigation bar and text sidebars now include links to the [Perseus Catalog](#).
- April 30, 2013
We have released fixes to typos and other errors in various texts.
- February 27, 2013

Popular Texts

- Caesar, *Galllic War* (English, Latin)
- Catullus, *Carmina* (English, Latin)
- Cicero, *In Catilinam I* (English, Latin)
- Vergil, *Aeneid* (English, Latin)
- Herodotus, *Histories* (English, Greek)
- Homer, *Odyssey* (English, Greek)
- Plato, *Republic* (English, Greek)
- Tom Martin, *Overview of Classical Greek History from Mycenae to Alexander* (English)

Art and Archaeology


Aegina, Temple of Aphaia


Silver obol from Athens


Satyr on Attic red figure vase


The Bartlett Head

Exhibits


The Ancient Olympics


Greece's Greatest Hero

Featured Sites

- Open Access Publication

Perseus home page.

The *Perseus Digital Library* ^{*} is a collection of out-of-copyright late 19th century to early 20th century text editions, started at the Department of Classics at Tufts University at Medford, Massachusetts (US). The current version is *Perseus 4.0*, also known as the *Perseus Hopper* (Fig. 1). Formerly known as the ‘Perseus Project’, *Perseus* defines and classifies itself as a digital library that collects primary and secondary text sources.

Following in the footsteps of 3rd century BCE scholars at the library of Alexandria, the self-defined mission of *Perseus* is ‘to make the full record of humanity – linguistic sources, physical artifacts, historical spaces – as intellectually accessible as possible to every human being, regardless of linguistic or cultural background’.^{*} *Perseus* thus targets research-driven academic audiences just as much as the general public. Furthermore, its purpose is the promotion of Digital Humanities research as much as the democratization of cultural heritage through improved accessibility. Beside human readable information as provided throughout the various text collections, *Perseus* aims at creating a network of machine-actionable as well as machine-generated knowledge, as they state in their project description.

PERSEUS DIGITAL LIBRARY
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Browse the Collections

Greek and Roman Materials
Primary and secondary sources for the study of ancient Greece and Rome

Art & Archaeology Artifact Browser
Look through a massive library of art objects, sites, and buildings. The library's catalogs document 1305 coins, 1909 vases, 2003 sculptures, 179 sites, 140 gems, and 424 buildings. Each catalog entry has a description of the object and its context; most have images. Descriptions and images have been produced in collaboration with many museums, institutions, and scholars. Catalog information and keywords have been taken from standard sources, which are cited in the entries for each object.

Arabic Materials
Arabic language documents

Germanic Materials
Materials for the study of the Germanic Peoples

19th-Century American
Sources on the history of the 19th-century United States.

Renaissance Materials
Primary and secondary sources in early modern English literature

Richmond Times Dispatch
Issues of the Richmond Times Dispatch.

Humanist and Renaissance Italian Poetry in Latin
Latin poems produced in Italy or in Italian cultural environments during the period starting from around the birth of Dante until the first half of the sixteenth century.

External Collections
These collections are no longer hosted by the Perseus Digital Library.

[Duke Databank of Documentary Papyri](#)

[Bolles Collection](#)

Word Counts by Text Collection

Collection	Word Count
Classics	68,925,971 words
Arabic	5,646,735 words
Germanic	955,696 words
19c. Am.	58,332,095 words
Renaissance	7,774,357 words
Rich. Times	19,413,332 words
Poeti d'Italia	2,802,940 words

View a map of the most frequently mentioned places in the Perseus Digital Library.

Or by collection:

- Greek and Roman Materials
- 19th-Century American
- Renaissance Materials
- Richmond Times Dispatch

Overview of the collections.

The digital library itself now contains, in addition to the original base of Greek and Roman materials Arabic, Germanic, Renaissance and 19th century American documents, Italian poetry in Latin as well as papyri (Fig. 2). As a part of the digital library, *Perseus* offers a digital collection of museum objects, the *Art & Archaeology Artifact Browser*. The scope of each component is visualized in a ‘Word Count per Text Collection’ Graph showing that after Classics (68 million words), 19th Century American (58 million words) and Rich Times Dispatch Issues (19 million words) dominate the overall collection. The opening of the project past the Western cultural sphere has begun with the inclusion of Arabic materials.

Responsibilities in the project are fairly transparent. Among others, Gregory Crane (Editor –in-Chief), Marie-Claire Beaulieu (Associate Editor), Bridget Almas (Software Developer), Alison Babeu (Digital Librarian) and collaborators from external institutions are mentioned. An extensive overview of past grants and projects documents the projects' resources. Originally started at the Classics Department of Tufts University in 1985, *Perseus* of today features a great magnitude of cooperation partners and extended its scope way past the

original field of Classics. The project has collected a number of science and government funds alike as well as private donations. Thus it was able to adopt a broader research agenda in 1998 (Digital Library Initiative Phase 2). Its goal was to create a digital library for the humanities as a whole which would enlarge the digital infrastructure with a mass of non-text materials and side-projects supplying Digital Humanities technologies. A plethora of child projects has sprouted from *Perseus* (such as the *Perseus Catalog*,^{*} the *Perseids Project*,^{*}) and the project now starts to span the world with greater international cooperation and a second base at Leipzig University (*Ancient Greek and Latin Dependency Treebank*,^{*} *Leipzig Open Fragmentary Texts Series*,^{*} *Open Greek and Latin Project*,^{*} *Open Persian*^{*}). While every generation of *Perseus* texts followed a different paradigm of production, the fourth generation collections (beginning in 2006) now integrate not only transcribed texts and original page images but forms of deeper annotation and TEI-compliant mark-up. The catalogue aims for a standards-compliant library infrastructure and a Canonical Text Services Protocol (see section 3 on related projects) starts to provide new means of reference apart from the already supported conventional scholarly citations.^{*}

Aims and Content

Aims

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Your current position in the text is marked in blue. Click anywhere in the line to jump to another position.

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book:card:

This text is part of:

- Greek and Roman Materials
- Greek Hexameter
- Greek Poetry
- Greek Texts
- Homer
- Homer, *Odyssey*

Search the Perseus Catalog for:

- Editions/Translations
- Author Group

View text chunked by:

- book
- line

Table of Contents:

- book 1
 - lines 1-43
 - lines 44-79
 - lines 80-124
 - lines 125-177
 - lines 178-229
 - lines 230-279
 - lines 280-324
 - lines 325-364
 - lines 365-420
 - lines 421ff.
- book 2
- book 3
- book 4
- book 5
- book 6

Hom. Od. 1.1

Click on a word to bring up parses, dictionary entries, and frequency statistics

ἄνδρα μοι ἔννεπε, μοῦσα, πολύτροπον, ὃς μάλα πολλὰ
πλάγχθη, ἐπεὶ Τροίης ἱερὸν ποταμὸν ἔπλεον:
πολλῶν δ' ἀνθρώπων ἴδεν ἄστεα καὶ νόον ἑγὼ,
πολλὰ δ' ὅ γ' ἐν πόντῳ πάθεν ἄλγεια ὅν κατὰ θυμόν,
ἀρνύμενος ἥν τε ψυχὴν καὶ νόστον ἐταίρων.
ἀλλ' οὐδ' ὥς ἐτάρους ἐρρύσατο, ἰέμενός περ:
αὐτῶν γὰρ σφρετέρῃσιν ἀτασθαλίῃσιν ὀλοντο,
νῆπιοι, οἳ κατὰ βοῦς Ὑπερίονος Ἥλιος
ἦσθον; αὐτὰρ ὁ τοῖσιν ἀφείλετο νόστιμον ἦμαρ,
τὼν ἀμόθεν γε, θεᾶ, θύγατερ Διός, εἰπέ καὶ ἡμῖν.

ἐνθ' ἄλλοι μὲν πάντες, ὅσοι φύγον αἰτῖν δλεθρον,
οἴκοι ἔσαν, πολέμον τε πεφευγότες ἦδὲ θάλασσαν:
τόν δ' οἷον νόστου κεχηρμένον ἠδὲ γυναικῶς
νύμφη πότνι ἔρυκε Καλυψὼ δια θεᾶων
ἐν σπέσσι γλαφυροῖσι, λυλαυμένη πόσιν εἶναι.
ἀλλ' ὅτε δὴ ἔτος ἦλθε περιτλομένων ἐνιαυτῶν,
τῷ οἱ ἐπεκλώσαντο θεοὶ οἰκόνδε νέεσθαι
εἰς Ἰθάκην, οὐδ' ἐνθα πεφυγμένους ἦεν ἀέθλων
καὶ μετὰ οἷσι φίλοισι. θεοὶ δ' ἔλεαιρον ἅπαντες
νόσφι Ποσειδάωνος, ὃ δ' ἄσπερχές μενείανεν
ἀντιβῶ Ὀδυσσεύῳ πάρος ἦν γαίαν ἰκέσθαι.

ἀλλ' ὁ μὲν Αἰθίοπας μετεκίαθε τηλόθ' ἔόντας,
Αἰθίοπας τοὶ διχθὰ δεδαΐαται, ἔοχατο ἀνδρῶν,
οἳ μὲν δυσόμενον Ὑπερίονος οἳ δ' ἀνιόντος,
ἀντίων ταύρων τε καὶ ἀρνείων ἑκατόμβης.
ἐνθ' ὁ γ' ἑτέρπετο δαῖτι παρήμενος: οἳ δὲ δὴ ἄλλοι
Ζηνὸς ἐνὶ μεγάροισιν Ὀλυμπίῳ ἀθροοὶ ἦσαν.

Notes (W. Walter Merry, James Riddell, D. B. Monro, 1886)

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ἔννεπε is the assimilated form of *ἐννεπε* (from stem *νεμ-*), as the Aeolic aorist *ἔνενα* stands for *ἔνενα*. We may compare the Lat. word *insepe*, which is actually used in the translation of this line by Livius Andronicus, "*Virum mihi, Camena, insepe versutum*."

μῶσα is enclitic, = 'priethee'; as distinguished from the emphatic dative *μῶσα καὶ ἡμῖν*, l. 10. For the order observed as to the place and succession of Enclitics in Homeric Greek, see *Monro, Homeric Grammar, Append. E*.

Μοῦσα = "*Μοντία, Μονσα*", from root **μεν-*, 'to think.' In l. 10 the muse is called "*θύγατερ Διός*", as in *Il. 2. 494* "*Ὀλυμπιάδης Μοῦσαι Διὸς αἰγυγίοιο θυγατέρες*". They are represented as nine in number in *Od. 24. 607*, but their names are first given in *Hesiod*.

πολύτροπον, 'of many devices,' *versutum*. This epithet of Odysseus recurs only *Od. 10. 330*; but it has many equivalents in *Iland Od.*, e. g. "*πολύμητις, πολύφρων, πολυμήχανος, ποικιλόμητις*", the general sense of which seems to fix its meaning. Cp. the phrase by which Odysseus characterises himself, *Od. 9. 19* "*εἴμ' Ὀδυσσεύς Λαερτιάδης ὃς πᾶσι δόλοισιν*".

"ἀνθρώποισι μέλω", Nitzsch explains it as equivalent to "*πολύπλαγκτος*", and takes the words "*ὃς μάλα πολλὰ πλάγχθη*" as its exegesis. Cp. *inf. 300* "*πατροφρονῆα ... ὃς οἱ πατέρα κλυτὸν ἔκτα*", *Od. 18. 1* "*πρωχὸς πανόδημος ὃς κατὰ ἄστυ πτωγεύεσκε*", *Il. 5. 631; 9. 124; 11. 473; 12. 293; 43. 452* which suggests that the Homeric usage is, in some cases, to repeat some portion of the word, at least, in the exegetical clause. See *Lehrs, Rhein. Mus.*, 1864, p. 303; and *Nitzsch, De Odysseae Epyllio*, Hannover. 1824.

English (Samuel Butler, Based on public domain edition, revised by Timothy Power and Gregory Nagy, 1900)

focus load

English (1919)

focus load

References (27 total)

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- Commentary references to this page (7):
 - Sulpicia, *Carmina Omnia*, 1
 - Thomas W. Allen, E. E. Sikes, *Commentary on the Homeric Hymns, HYMN TO APHRODITE*
 - W. Walter Merry, James Riddell, D. B. Monro, *Commentary on the Odyssey* (1886), 1, 300
 - W. Walter Merry, James Riddell, D. B. Monro, *Commentary on the Odyssey* (1886), 1, 328
 - Walter Leaf, *Commentary on the Iliad* (1900), 1, 1
 - Walter Leaf, *Commentary on the Iliad* (1900), 2, 484
 - Thomas D. Seymour, *Commentary on Homer's Iliad, Books I-III*, 1, 3
- Cross-references to this page (6):

View of a primary text in Perseus.

The digital library classifies itself primarily as a research project, providing services alongside their internal research, such as the aggregation of primary texts (Fig. 3) and related, tough out-of-date commentaries. Formerly a Classics project, *Perseus* has evolved into a Digital Humanities dominated project, exploring the limits of the known world like the ancient hero the project was named after – as they state in their self-description.^{*} Providing new content does not seem their primary focus anymore but rather the provision of means to make use of the resources already present using Digital Humanities technologies and the automation of the creation of new content. The FAQ clearly state the research focus of the project as

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opposed to being a pure service provider. Paradoxically, they state as well that personalization features are one of *Perseus*' main endeavours at the moment, which might be due to the slightly confusing and seemingly out-of-date project descriptions.

Perseus Editor-in-Chief Gregory Crane stresses that 'access to the cultural heritage of humanity is a right, not a privilege' (Crane 2002, 626-63). The project does not want to continue restriction of academic resources to institutions paying expensive fees and thus feed information to a limited audience. *Perseus Digital Library* thus represents a democratization of cultural heritage which is being made accessible to everyone. Already in the early 2000s it disseminated its contents 'far beyond traditional academia' (Crane 2002, 626-63). Crane also points out the need for user customization of digital library contents for diverse audiences in general. A logistic problem with this is that the practical use of libraries as places for reading for the public can sometimes conflict with the internal needs of cataloguing and organizing the material (Crane 2002, 626-63). *Perseus Digital Library* is showing good efforts in both user-customization and advanced forms of internal organization.

Corpus Design and Representativeness of the Corpus

The purpose of *Perseus* is to make texts in the field of the Humanities available online in a very complete way. The criteria for text selection seem to be the popularity and the (canonical) status of the texts. It is not specified, however, whether works largely ignored to this day are going to follow, such as, for example, early modern Latin literature that has not been re-edited ever since its beginnings. *Perseus* so far provides texts which were edited in the 19th century and beyond and which are in circulation. *Perseus* does not represent a library of rare works, but rather of commonly found ones in specialized academic libraries. Seeing that the canonical versions of ancient texts, sectioned according to today's accepted order were established mostly in the 20th century, it can sometimes be problematic that *Perseus Digital Library* uses old text versions from the late 19th century. While certain text versions have undergone thorough corrections and intense research since the late 19th century, others have stayed virtually the same since then. Also, the exact wording isn't perceived as essential for every research purpose. In these cases, the 19th century version remains the current accepted version until now. In the case of these not frequently re-edited, less frequently read ones especially – which might for that reason be more difficult to acquire and less available for a potential non-academic user (such as Dionysius of Halicarnassus, for example) –, *Perseus Digital Library* is a very valuable tool. *Perseus Digital Library*'s selection criteria are the epoch and the representativeness of the texts in the sense of being part of canonical 'world literature'.

If the goal of *Perseus* is to provide a complete Digital Library for the Humanities, they have of course not yet reached a high degree of completeness. *Perseus Digital Library* remains a work in progress and further development can be expected. Compared to other text collection projects,^{*} however, *Perseus* is an extraordinarily broad and 'complete' collection. In terms of representativeness, *Perseus* provides a good representative sample of Classical texts, which after all was the primary purpose of the now very much expanded collection. While being fairly representative of the Classical world, it has to be noted that the term 'representative' operates within the scope of the canonical Classical literature having been the focus of research until today. However, it is less balanced towards less frequently read works. Therefore the question of whether *Perseus* is a well-balanced text collection remains unsolved and depends largely on the definition of what is chosen as a point of reference for what we consider as *the corpus* of Classical language literature in the whole.

The texts *Perseus* offers outside its Classical collection cannot yet be considered representative or balanced within the ideological framework of a library for the Humanities in general. However, certain sub-collections are representative of their sub-fields,* such as the *19th century American materials*, the *Richmond Times Dispatch* and the *Humanist and Renaissance Italian Poetry in Latin* collection as their scopes are defined in a more narrow way. The Arabic collection contains only the Quran, the general *Renaissance materials* section contains 7 million words and well-known works but yet can be considered neither representative nor balanced nor complete. The *Germanic* collection though seems already fairly well developed considering the fact that this one is probably the globally least widely studied topic of the selection *Perseus* provides so far.

The *Perseus* collection is dynamic and growing, though the Classical literature part might be considered fairly complete.* It has, however, to be stressed that the *Perseus* project already now offers three sub-collections that can claim relative completeness, balance and representativeness in a general sense. *Perseus* is very extensive and even very complete depending on the definition of completeness. It is rich in content, functionalities and sub-projects. It has reached sufficient maturity and consistency to serve as a base for further research and the integration of further sub-collections.

Usage scenarios

The Roman and Greek materials collection could be defined as a digital access to late 19th, early 20th century editions of Latin and Greek primary texts where each segment can be viewed in the context of its translations and dictionary entries. This provides a good base for studying the primary texts and probably the best one can possibly get without bigger copyright issues or more generally, for free. However, it has to be mentioned that the critical apparatus from the original editions is not contained in *Perseus*. Depending on the research interests in working with the material, the reused editions might not be sufficient in every case. From personal interviews, I received the feedback that scholars of ancient history see no problem whatsoever in citing *Perseus* texts in scientific publications, whereas Classics scholars with interest in literary texts insist that the provided editions are too old to be used in a philological publication, especially as the main portion of material deals with well-researched texts where there would be newer, more text critical editions available. For Classical philology, the *Perseus Digital Library* is a great study tool to be used in learning and teaching ancient languages but not of sufficient quality in order to do qualitative research on a certain text. An exception to this are the treebanks and linguistic features of course, although they provide a very specific type of research opportunity where they are immensely useful for quantitative research and the analysis of certain recurring grammatical structures. This is a very specialized branch of Classical philology where the *Perseus* project is a scientific pioneer but this cannot be said of Classics as a whole discipline.

Related projects

The *Perseids* side-project provides a platform for collaborative editing, annotation, and publication of born-digital editions of source documents in the classics' coupling different tools and services, inspired among others by the Harvard Homer Multitext Project which has laid the foundations for the Canonical Text Services (CTS) protocol, of which the CTS URNs are a part (Berti et. al. 2014, 3; Smith 2009). The CTS is built upon FRBR metadata. It allows for the citation of single verses and serves as the link between *Perseus Catalog* and the TEI XML based textual content of the *Perseus Digital Library*.

The *Leipzig Open Fragmentary Texts Series* (LOFTS) is developed in conjunction with *Perseus Digital Library*. Texts from fragmentary Greek historians in the LOFTS project were obtained by OCR processing of scans of the Internet Archive.* The error-prone Greek output was first corrected semi-automatically and

completely rectified manually in the encoding process where the output was integrated in a *Perseus Digital Library* and *Leipzig Open Greek and Latin* (OGL) Project compatible EpiDoc template (Berti et. al. 2014, 14). The Perseus Library data are reused by other projects, though mostly in the associated ones briefly described in this review.

Research uses of *Perseus* span from first quantified studies of Greek grammar (Celano 2014, 97–110) and morphology via treebanking and the creation of extensive digital libraries in general. Further uses also include social networks for the characters of Greek tragedy (Rydberg-Cox 2011) and the implementation of historical and geospatial data (Smith & Crane 2001, 127–136).

Data model

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <TEI.2><text><body><div1 n="1" type="Book" org="uniform" sample="complete"><milestone n="1" unit="card" ed="p" />
3 <1>ἀνδρᾶ μοι ἐννεπε, μοῦσα, πολύτροπον, ὃς μάλα πολλὰ</1>
4 <1>πλόγχῃθι, ἐπεὶ Τροίης ἱερὸν πτολίεθρον ἔπερσεν:</1>
5 <1>πολλῶν δ' ἀνθρώπων ἴδεν ἄστεα καὶ νόον ἑγών,</1>
6 <1>πολλὰ δ' ὃ γ' ἐν νότῳ πάθεν ἄλγεα ὃν κατὰ θυμόν,</1>
7 <1 n="5">ἀρνύμενος ἥν τε ψυχὴν καὶ νόστον ἐταίρων.</1>
8 <1>ἀλλ' οὐδ' ὣς ἐτάρους ἐρρύσατο, ἰέμενός περ:</1>
9 <1>αὐτῶν γὰρ σφετέρῃσιν ἀτασθαλίῃσιν ὀλοντο,</1>
10 <1>νήπιοι, οἳ κατὰ βοῦς Ὑπερίονος Ἠελίοιο</1>
11 <1>ἦσθιον: αὐτὰρ ὁ τοῖσιν ἀφείλετο νόστιμον ἦμαρ.</1>
12 <1 n="10">τῶν ἀμόθεν γε, θεᾶ, θύγατερ Διός, εἰπὲ καὶ ἡμῖν.</1>
13 <1><milestone unit="para" ed="P" />ἐνθ' ἄλλοι μὲν πάντες, ὅσοι φῶγον αἰπὺν ὀλεθρον,</1>
14 <1>οἴκοι ἔσαν, πόλεμόν τε πεφρυγότες ἤδ' ὀδύρην</1>
15 <1>τόν δ' οἶον νόστου κεκρημένον ἤδ' ὀδυρόμενον</1>
16 <1>νύμφη πότνι' ἔρυκε Καλυψὼ δῖα θεῶν</1>
17 <1 n="15">ἐν σπέσσι γλαφυροῖσι, λιλαιομένη πόσιν εἶναι.</1>
18 <1>ἀλλ' ὅτε δὴ ἔτος ἦλθε περιπλομένων ἐνιαυτῶν,</1>
19 <1>τῷ οἳ ἐπεκλώσαντο θεοὶ οἰκόνδε νέεσθαι</1>
20 <1>εἰς Τθάκην, οὐδ' ἐνθα πεφυγμένους ἦεν ἀέθλων</1>
21 <1>καὶ μετὰ οἷσι φίλοισι. θεοὶ δ' ἔλλαιρον ὅπαντες</1>
22 <1 n="20">νόσφι Ποσειδάωνος: ὃ δ' ἄσπερχές μιν εἰσένειν</1>
23 <1>ἀντιθέξῃ Ὀδυσσεὶ πάρος ἦν γαῖαν ἰκέσθαι.</1>
24 <1><milestone unit="para" ed="P" />ἀλλ' ὁ μὲν Αἰθίοπας μετεκίαθε τηλόθ' ἔδοντας,</1>
25 <1>Αἰθίοπας τοὶ δὲ χθὰ δεδαίεσθαι, ἔσχατοι ἀνδρῶν,</1>
26 <1>οἳ μὲν δυσσέμενος Ὑπερίονος οἳ δ' ἀνιόντες,</1>
27 <1 n="25">ἀντιῶν ταύρων τε καὶ ἀρνείων ἐκατόμβης.</1>
28 <1>ἐνθ' ὃ γ' ἐτέρπετο δαίτι παρήμενος: οἳ δὲ δὴ ἄλλοι</1>
29 <1>Ζηνὸς ἐνὶ μεγάροισιν Ὀλυμπίου ἀθρόοι ἦσαν.</1>
30 <1>τοῖσι δὲ μῦθον ἤρχε πατὴρ ἀνδρῶν τε θεῶν</1>
31 <1>μνήσασα γὰρ κατὰ θυμόν ἀμύμονος Αἰγίσθοιο,</1>
32 <1 n="30">τὸν ῥ' Ἀγαμέμνονι δὴς τηλεκλυτὸς ἔκταν' Ὀρέστης:</1>
33 <1>τοῦ δ' ὅ γ' ἐπιμνησθεὶς ἔπε' ἀθανάτοισι μετηύδα:</1>
34 <1><direct="unspecified"><1><milestone unit="para" ed="P" />ὦ πόποι, οἶον δὴ νῦ θεοὺς βροτοὶ αἰτίωνται:</1>
35 <1>ἐξ ἡμῶν γὰρ φασὶ κάκ' ἔμμεναι, οἳ δὲ καὶ αὐτοὶ</1>
36 <1>σφῆσιν ἀτασθαλίῃσιν ὑπὲρ μόνον ἄλγε' ἔχουσιν.</1>
37 <1 n="35">ὡς καὶ νῦν Αἰγίσθος ὑπὲρ μόνον Ἀτρεΐδας</1>
38 <1>γῆμ' ἄλογον νουσιτῆν, τὸν δ' ἔκτανε νοστήσαντα,</1>
39 <1>εἰδὼς αἰπὺν ὀλεθρον, ἐπεὶ πρὸ οἳ εἶπονεν ἡμεῖς,</1>
40 <1>ἔομεναι πέμψαντες, ἔσχατον ἀργεῖφόντην,</1>
41 <1>μῆτ' αὐτὸν κτείνειν μῆτε νύκασθαι ἀκοιτιν:</1>
42 <1 n="40">ἐκ γὰρ Ὀρέστας τοῖσις ἔσσεται Ἀτρεΐδας,</1>
43 <1>ὀππότε' ἂν ἤβῃσιν τε καὶ ἤς ἡμῖν ἔσται αἴψα.</1>
```

Base XML of Homer's *Odyssey*.

General Search Tools

Search the collections [hide](#)

Search all text in the Perseus Digital Library using a specific language. This search will also return links to entries in language dictionaries (Lewis & Short, LSJ, Buckwalter, etc.)

Search in English ▾

containing *all* of the words

☐ Search for all possible forms

containing the *exact phrase*

containing at *least one* of the words

☐ Search for all possible forms

without the words

☐ Search for all possible forms

[Clear this search](#)

Limit Search to:

- ☒ Greek and Roman Materials
- ☒ Arabic Materials
- ☒ Germanic Materials
- ☒ 19th-Century American
- ☒ Renaissance Materials
- ☒ Richmond Times Dispatch
- ☒ Humanist and Renaissance Italian Poetry in Latin

English-to-[Language] lookup [show](#)

Dictionary Entry Lookup [show](#)

Art & Archaeology Search [show](#)

Named Entity Search Tools

Search places [show](#)

How to enter text in Greek:

Greek	α β γ δ ε ζ η θ ι κ λ μ ν ξ ο π ρ σ τ υ φ χ ψ ω
Ionic/Graecae	Ͱ ͱ Ͳ ͳ ʹ ͵ Ͷ ͷ ͸ ͹ ͺ ͻ ͼ ͽ Ϳ ̀ ́ ͂ ̓ ̈́ ͅ ͆ ͇ ͈ ͉ ͊ ͋ ͌ ͍ ͎ ͏ ͐ ͑ ͒ ͓ ͔ ͕ ͖ ͗ ͘ ͙ ͚ ͛ ͜ ͝ ͞ ͟ ͠ ͡ ͢ ͣ ͤ ͥ ͦ ͧ ͨ ͩ ͪ ͫ ͬ ͭ ͮ ͯ
acc * for	ͰͱͲͳʹ͵Ͷͷ͸͹ͺͻͼͽͿ͇͈͉͍͎̀́͂̓̈́͆͊͋͌ͅ͏͓͔͕͖͙͚͐͑͒͗͛ͣͤͥͦͧͨͩͪͫͬͭͮͯ͘͜͟͢͝͞͠͡
capital letter	ͰͱͲͳʹ͵Ͷͷ͸͹ͺͻͼͽͿ͇͈͉͍͎̀́͂̓̈́͆͊͋͌ͅ͏͓͔͕͖͙͚͐͑͒͗͛ͣͤͥͦͧͨͩͪͫͬͭͮͯ͘͜͟͢͝͞͠͡

Hans. II. 1.1 ὑμῖν εὖτε θεο Πηληϊάδεω Ἀχιλῆος
mh=nin a)/eide qea\ 'phili+=a/dew 'Axilhi=os

Word Study Tool [hide](#)

Get Info for in Greek ▾

Vocabulary Tool [lin](#)

View of the Perseus search, at the left-hand side, word study and vocabulary tools.

Perseus offers computationally processable text and specifies the creation of machine-readable and even machine-created knowledge as core goals. Engagement with the text of the Roman and Greek materials happens mostly in sub-projects or associated projects and not so much in the main library where we primarily find a broad text base that is provided book-wise or chapter-wise. It is integrated in a user interface with visualization and analysis tools and as XML documents with basic, mostly not semantically very rich, mark-up. Every word contains a link to its respective dictionary entry which probably is the greatest innovation, though these annotations are all stand-off and not part of the XML base of data (Fig. 4). The link will trigger a dictionary search, not the word itself is annotated or referenced. This feature makes of *Perseus* a text collection following the digital paradigm in the way that it links different materials, makes them searchable (Fig. 5) and machine-processable, even while it sticks closely to the form of the books which served as a text base.

All mark-up and annotations are created automatically which explains the not very rich mark-up in older generation texts, but shows impressive results in newer parts of the collection. A good example for this is the mark-up of historical names and places in the 19th century American materials section. Stable identifiers are available in the form of four different URIs (text, citation, work, catalog record) containing URNs. The choice to use a TEI-compliant SGML format was meant as a commitment to long-term usability. Ancient Greek is stored as beta code. Maybe Unicode would be a better option here. One regrettable fact regarding the XML representation is the lack of a TEI-header containing bibliographical information and metadata about the respective source. Although admittedly this information can be found in the *Perseus Catalog*, metadata and transcription of a source should be stored together in a single file.

The actual text presentation is segmented in books, chapters and sections – full text versions are not available due to copyright reasons. The segments however include notes, a bibliographic reference of the resource, display preferences, a vocabulary tool, translations, commentaries and different versions of the text. The segments are enhanced further, if available, with stable identifiers, a Creative Commons licence and a TEI XML version of varied quality.

User Interface

The text collection provides a user interface where segments of primary texts can be viewed side by side with their translations and commentaries (if available). Apart from that, the word study tool and thereby dictionary entries are accessible. Notes from the used edition are also represented. The *Perseus* text collection engages with its texts in various ways but texts are not associated with their material carriers – *Perseus* is in that respect a library following the digital paradigm as opposed to a digitized library focusing on facsimiles or text presentation of the base documents.

Works (original and related) can be found via the list of authors as well as the simple (metadata, not full text) search. Once one version of a text is found, one can comfortably switch to related versions or access commentaries and the like. The simple search does not always yield results straightaway – if for example the user does not enter the English naming conventions for ancient names and titles –, and so it can sometimes be difficult to find the text one was looking for. The ‘view abbreviations’ link does help here though.

The help section features a *Perseus 4 Quick Start Guide*, information on copyright and reuse as well as an FAQ page last updated in May 2016. It also suggests starting points for the exploration of the platform as well as help with the texts, the vocabulary tool and *Perseussearch*. With the lookup tool, *Perseus* provides a map to its own contents, enabling users to search topics they are interested in.

The user interface combines the view of the primary text with study tools such as translations, comments and the word study tools even if the project description stresses the fact that *Perseus Digital Library* focuses on their own Digital Humanities research over services for an audience. *Perseus* does not provide introductory texts but it provides old commentaries to primary sources. Further introductions of the *Perseus* editors to the text collection could, however, still improve the overall impression and usability of resource.

Vocabulary Tool			hide			
Currently showing the top 50% of words sorted by weighted frequency. Study all vocabulary in this passage.						
Word	Definition	Key Term Score	Min Freq	Max Freq	Weighted Freq	
et	and	0,0018	3	3	3	
ille	that	0,0029	1	1	1	
condo	to put together, make by joining, found, establish, build, settle	0,0118	1	1	1	
ob	towards, to	0,0193	1	1	1	
unde	Relat., from which place, whence	0,011	1	1	1	
vis	strength, force, vigor, power, energy, virtue	0,0063	1	1	1	
infero	to bring in, introduce, bring to, carry in	0,0193	1	1	1	
deus	a god, deity	0,0044	1	1	1	
urbs	a walled town, city	0,0068	1	1	1	
Juno	the planet Venus	0,0269	1	1	1	
Roma	Rome, the mother city	0,0165	1	1	1	
terra	the earth	0,0058	1	1	1	
ira	anger, wrath, rage, ire, passion, indignation	0,012	1	1	1	
atque	and	0,0036	1	1	1	
venio	to come	0,0039	1	1	1	
saevus	raging, mad, furious, fell, fierce, savage, ferocious	0,0145	1	1	1	
primus	the first, first	0,0053	1	1	1	
Italia	adapted to the climate of Italy	0,0225	1	1	1	
ab	all the way from	0,003	1	1	1	
profugus	that flees, fugitive, in flight	0,0336	1	1	1	
litus	to labor in vain, take useless pains	0,0143	1	1	1	
Albanus	the peace between the Romans and Albans	0,044	1	1	1	

Word count tool result for the beginning of Vergil's Aeneid.

The word study tool provides statistical word counts (Fig. 6). Visualization is provided with word counts, but user empowerment in the form of personalization is provided only by the ability of adding additional materials to the primary texts by adding them to the view.

Navigating *Perseus* in its full complexity is not intuitive and does take some getting used to. This is partly due to the vastness and complexity of the collection but it still could be improved by a clearer layout. The visual patterns of *Perseus* also seem a bit old-fashioned and – while the project stresses the research focus over the presentation for the audience – it still is one of the biggest and best funded Digital Humanities projects out there and some more effort on the visual side would be desirable. While functional, the layout diminishes usability in parts, and especially the organization of the main navigation containing the ‘About’ sections is very confusing. It seems redundant and is not intuitively logical. A user new to *Perseus* will have a very hard time finding orientation and will probably overlook good parts of the project trying to get to the desired content as fast as possible.

Perseus does not encourage accidental findings by browsing very much. The fact that one finds ‘news’ from 2009 on the page for current research is a bit irritating, especially as the project is in fact still very active today. It has to be admitted though that the publications section is perfectly up-to-date and provides the newest research papers on and by *Perseus*. But as even the sections supposed to explain the project are a bit confusing and although one usually finds what one was looking for in the end, there definitely is room for improvement.

Provision and sustainability

XML documents can be downloaded for single text segments, automated downloading is not permitted. *Perseus* offers download packages for their public materials and does not allow automated downloading so as not to endanger restricted items, such as images under reuse from external rights holders that *Perseus* offers in the *Artifact Browser*. Every single text segment has its own Creative Commons rights information indicating the conditions of reuse. But not all texts contain this information and, wherever it is not available, XMLs aren't for download either. There is no other way of (automated) downloading such as an API.* But each text as well as bundles of text (sub-collections) can be downloaded.*

In terms of reliability and sustainability, the *Perseus* project is convincing by its long history and the resulting vast amount of experience. The fact that the project has now spread from its base at Tufts to a whole network of institutions vouches for more sustainability. The *digital library* is also mirrored by the University of Chicago.* In terms of long-term preservation, a Fedora backend is supposed to facilitate data management and thus – according to *Perseus*' self-description – provide the base for good long-term preservation.*

The *Perseus Hopper* (the current version, released in 2007) is available as Open Source Java code that has been built with extensibility in mind, but the site also states major restructuring work since 2016 that is supposed to result in a completely new version.*

Conclusion

Perseus Digital Library is a well-established Digital Humanities project providing a library of out-of-copyright editions of canonical world literature with a focus on the Classical languages. Furthermore, it is expanding its scope way beyond its original field of Classics. *Perseus Digital Library* has lots of goals just as impressive as they are noble and shows great productivity in achieving them, thus creating – step by step – a digital library of and for the Humanities as well as humanity as a whole.

Suggestions for improvement

The Vocabulary tool already provides great help in language education but it would be nice to have a more print-friendly output available for the results of the word count tool as to make use of it for vocabulary building. It might also be interesting to provide a print-friendly option that includes a chosen segment of text and its vocabulary list which could serve as an automated work sheet-generator in teaching. Knowing from personal experience that *Perseus* is already now established as an irreplaceable tool in teaching Classical languages, I think that this is a great functionality and field of use of the library and am happy to see that this aspect is already being extended in the *Leipzig Open Greek and Latin Project*.

Text selection criteria of such an important library do actively judge the texts it provides and de-value those not chosen for publication in this digital library of the Humanities. It has to be noted that so far *Perseus* is a collection of canonical world literature mostly and so reinforces the paradigm of a canonical world literature. Works which do not fall into this narrowly defined scope remain endangered as a work not re-edited is prone to getting lost over time. *Perseus* could and should make a step in the direction of active preservation of less read, 'rare' texts by making room in its selection criteria for works that might be considered less representative but which are in danger of being lost or forgotten. Adopting the archival practise of including random samples might be an approach worth considering.* Still, I encourage the project to broaden its

definition regarding the question what the cultural heritage of humankind is, what the responsibility of an influential project like *Perseus Digital Library* could be in that context, and to reflect on whether they really want to 'write the history of the winners' only.

Synopsis

The amount of material already available in *Perseus Digital Library* is vast; sub-collections can claim relative completeness and representativeness. Apart from the textual material made available, *Perseus* excels in its initiatives to provide tools for deep analysis of these texts. The project can already now look back on 30 years of experience and a wealth of ground-breaking achievements and publications in the promotion and theoretical grounding of Digital Libraries for the Humanities. *Perseus* remains one of the most interesting projects in the Digital Humanities and has been so for a long time. The project has had a great methodological impact on the discussion of best practises for the Digital Humanities and has been a pioneer of the field.

To sum it all up: *Perseus Digital Library* is a big and important Digital Humanities text collection project with lots of methodological background research, a good choice of texts available, and provides a very well-known and established online resource for learners and academics alike. The project involves a plethora of very interesting functionalities and data. *Perseus* already now is a most powerful tool and any further development is highly anticipated.

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Figures

Perseus home page.

Overview of the collections.

View of a primary text in Perseus.

Base XML of Homer's Odyssey.

View of the Perseus search, at the left-hand side, word study and vocabulary tools.

Word count tool result for the beginning of Vergil's Aeneid.

Notes

To be found at: <http://www.perseus.tufts.edu/hopper/>, archived link: <https://web.archive.org/web/20171210180948/http://www.perseus.tufts.edu/hopper/>.

See <https://web.archive.org/web/20171210181632/http://www.perseus.tufts.edu/hopper/research>.

<https://web.archive.org/web/20171210181722/http://catalog.perseus.org/>.

<https://web.archive.org/web/20171210181806/http://sites.tufts.edu/perseids/>.

https://perseusdl.github.io/treebank_data/ [Accessed 02.10.2017].

<https://web.archive.org/web/20171210182005/http://www.dh.uni-leipzig.de/wo/lofts/>.

<https://web.archive.org/web/20171210182145/http://www.dh.uni-leipzig.de/wo/projects/open-greek-and-latin-project/>.

<https://web.archive.org/web/20171210182305/http://www.dh.uni-leipzig.de/wo/open-philology-project/open-persian/>.

See <https://web.archive.org/web/20171210182441/http://www.perseus.tufts.edu/hopper/research/current>, <https://web.archive.org/web/20171210182638/http://www.perseus.tufts.edu/hopper/research/background>.

<https://web.archive.org/web/20171210182638/http://www.perseus.tufts.edu/hopper/research/background>.

See other projects reviewed in the RIDE digital text collection issue.

As far as the author of this review is qualified to judge. The Digital Library however does not explain how they understand completeness and what degree of representativeness they want to reach in the end.

Even though it lacks certain works of even Aristotle and Plato, probably no other similar text collection can claim Perseus' degree of completeness and representativeness.

<https://archive.org/> [Accessed 02.10.2017].

<https://web.archive.org/web/20171210184220/http://www.perseus.tufts.edu/hopper/help/faq>.

<https://web.archive.org/web/20171210184603/http://www.perseus.tufts.edu/hopper/opensource/download>.

To be found at: <https://web.archive.org/web/20171210184634/http://perseus.uchicago.edu/>.

<https://web.archive.org/web/20171210184755/http://www.perseus.tufts.edu/hopper/research/current>.

<https://web.archive.org/web/20171210184809/http://www.perseus.tufts.edu/hopper/opensource>.

This sample could, for example, be taken from the libraries and institutions providing the base (text) material.

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