

The Challenge of Text-Reuse

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1 Abstract

In this article we discuss ongoing work on documenting text-reuse in the *Deipnosophistae* of Athenaeus of Naucratis. We present a data model for identifying uniquely instances of text-reuse that are as specific or non-specific as necessary, that can include types of reuse from direct quotation, through paraphrase, to allusion, including instances where the re-used text is non-contiguous. We illustrate our discussion with examples from our work. Our data model consists of seven fields, and we argue that each of these seven if necessary, and that together they are sufficient.

2 Athenaeus and the *Deipnosophistae*

Athenaeus of Naucratis is the author of the *Deipnosophistae* (i.e., the learned banqueters), which is a fictitious account of a symposium held in Rome at the house of Larensius. [1] We know almost nothing about Athenaeus except for the Byzantine lexicon *Suda* (s.v. Ἀθήναιος, 731) that describes him as coming from the Egyptian city of Naucratis (cf. Ath., *Deipn.* 3.73a = 3.2, 7.301c = 7.60, 11.480d = 11.60), being a grammarian (γραμματικός), and living at the time of the emperor Marcus Aurelius (161-180 CE). A reference to Commodus in the text and other considerations have led scholars to date the composition, or at least the completion, of the *Deipnosophistae* no later than in the reign of Septimius Severus (193-211 CE). [2, 3]

According to internal references of the text, Athenaeus was also the author of a work on the Syrian kings (περὶ τῶν ἐν Συρίᾳ βασιλευσάντων: *Deipn.* 5.211a-d = 5.47 = *FGrHist* 166 F 1 = *BNJ* 166 F 1) and of another one about Thracian women (περὶ Θραττῶν: *Deipn.* 7.329c = 7.138). [4] Athenaeus presents himself as participating in the symposium described in the *Deipnosophistae* with other twenty-two sophists (σοφισταί) and the interlocutor of his account of the banquet is his friend Timocrates (*Deipn.* 1.1c-2a = 1.2-3). [5]

2.1 THE TEXT OF THE *DEIPNOSOPHISTAE*

The text of the *Deipnosophistae* has been transmitted in two forms:

1. A mutilated copy of the original (*Venetus Marcianus* 447), where the first part of the work until 3.73e (= 3.4) and other scattered folios are lost.
2. An epitome of the whole work in four copies. [6][7][8][9][10]

This complex and fascinating work is not only an erudite and literary encyclopedia of a myriad of curiosities about classical antiquity, but also an invaluable collection of quotations of ancient authors, ranging from Homer to tragic and comic poets and lost historians. Since the large majority of the works cited by Athenaeus is nowadays lost, this compilation is a sort of reference tool for every scholar of Greek theater, poetry, historiography, botany, zoology, and many other topics. [3, 4] [2, 9]

2.2 EDITIONS AND CITATION SCHEMES OF THE *DEIPNOSOPHISTAE*

In spite of the debate about a possible division of the *Deipnosophistae* into thirty books [11][9], modern editors have been using two different systems for citing the content of the fifteen books of the text of Athenaeus. After the reference to the book number (1-15), the two systems differ in the division into paragraphs:

1. The first system dates back to the edition of the text by Isaac Casaubon, published in Lyon in 1657, where the scheme follows the pagination of the edition with an arabic numeral referring to the page of Casaubon followed by a letter (ranging from a to f) corresponding to the subdivision of the page into paragraphs of about ten lines each (e.g., *Deipn.* 15.683b). [12].

2. The second system was introduced by Georg Kaibel in his 1887 Teubner edition, where each book is logically divided into paragraphs corresponding to units of sense and the paragraphs are referred to with arabic numerals whose numeration starts again at the beginning of each book (e.g., *Deipn.* 12.40). [13]

3 The Challenge of Text Reuse

As far as concerns ancient Greek literature, most of the texts are irremediably lost and are preserved only through quotations and text reuses by later authors. In the last two centuries scholars have been looking for traces of lost authors and works in surviving texts and they have been producing many collections of the so-called fragmentary authors and works. [14][15] Based on a Thesaurus Linguae Graecae (TLG) search, for the period between the 8th century BC and the 3rd century CE included, 59% of the authors is preserved only in fragments, 12% is known both from entirely preserved works and fragmentary ones, while 29% is represented by surviving works. [16] Such percentages reveal the great shipwreck of Greek ancient texts and the challenge of working with innumerable pieces of information about lost authors and works that are randomly preserved in our textual tradition.

The term *fragment* is the result of a long tradition of print editorial practices, where the contexts preserving traces of lost authors and works are extracted from their sources and reprinted in separate collections. Even if such editorial workflow has given an incomparable contribution to the reconstruction of the personalities of lost intellectuals, the concept of textual *fragment* remains quite problematic and misleading. As a matter of fact, it includes a wide range of many different kinds of text reuses and it always implies a certain degree of originality, which is very difficult to assess because the original text from which the reuse derives is always influenced and determined by the *cover text*, i.e. by the intention of the quoting author and the characteristics of the context where the text reuse is preserved [17][18][19][20]

This is the reason why we prefer to adopt the expression *text reuse* especially in a digital environment, where it is possible to represent references to authors and works inside their context of transmission and therefore as contextualized annotations. Such annotations include not only the portion of text that can be considered a reuse, but also names and geographic and scholarly provenance of reused authors with variants, titles and/or descriptions of the content of reused works, *verba dicendi*, expressions of literary criticism and many other linguistic and morphosyntactic features. [21]

3.1 TEXT REUSE IN THE *DEIPNOSOPHISTAE*

The text of the *Deipnosophistae* is a huge mine of citations of Greek authors. In the *index scriptorum* of the Teubner edition Georg Kaibel lists 809 entries, while in the last edition of the Loeb Classical Library collection Douglas Olson has produced an index including *authors, texts, and persons* with 2572 entries. [13][22]

Olson labels personal names with brief identifiers that help to reach an estimate of the number of occurrences of authors and works mentioned and quoted in the *Deipnosophistae*. According to this index and their identifiers, it is possible to get the following numbers for some of the most quoted authors in the text: 227 historians, 118 comic poets, 91 philosophers, 74 grammarians and 34 tragic poets. Even if such identifiers derive not only from Athenaeus' information but are also the result of modern classifications and there are authors who can be inserted into more than one genre (as for example Hegesianax of Alexandria Troas, who is la-

beled as tragic poet, actor, and historian), these numbers are nevertheless useful to get an idea of the importance of the *Deipnosophistae* for the reuse of Classical authors.¹

If the number of authors quoted by Athenaeus can be reached with a certain precision thanks to the explicit references to them within the *Deipnosophistae*, more difficult is to estimate the number of reuses of textual works. Especially in the case of paraphrases and allusions, this number depends on many different possible interpretations of the context, as we will see in the next parts of this paper where we show examples for documenting Homeric reuses in the *Deipnosophistae*.

The text of Athenaeus is important not only for the number of authors and works he quotes, but also for the kind of quotations he preserves. [4] Athenaeus' standard citation includes the name of the author with additional information like ethnic origin and literary category, the title of the work, and the book number (e.g., *Deipn.* 2.71b = 2.84). He often remembers the amount of papyrus scrolls of huge works (e.g., *Deipn.* 6.229d-e = 6.15-16; 6.249a = 6.54), while distinguishing various editions of the same comedy (e.g., *Deipn.* 1.29a = 1.52; 4.171c = 4.71; 6.247c = 6.51; 7.299b = 7.54; 9.367f = 9.5) and different titles of the same work (e.g., *Deipn.* 1.4e = 1.7). He also adds biographical information to identify homonymous authors and classify them according to literary genres, intellectual disciplines and schools (e.g., *Deipn.* 1.13b = 1.22; 9.387b = 9.37). He provides chronological and historical indications to date authors (e.g., *Deipn.* 10.453c = 10.79; 13.599c = 13.72), and he often copies the first lines of a work following a method that probably goes back to the *Pinakes* of Callimachus (e.g., *Deipn.* 1.4e = 1.7; 3.85f = 3.31; 8.342d = 8.28; 5.209f = 5.45; 13.573f-574a = 13.33). [24][25][10]

3.2 HOMERIC REUSE IN THE *DEIPNOSOPHISTAE*

In the index of the *Deipnosophistae* Douglas Olson labels 20 authors as epic poets, who are mentioned and quoted by Athenaeus.² Among them appears also Homer, whose name is cited 34 times with 220 quotations of the *Iliad* and 225 quotations of the *Odyssey*.³ Athenaeus defines Homer as divine (*Deipn.* 2.41a = 2.13; 5.185a = 5.1) and the king of the poets (*Deipn.* 2.40a = 2.11). In the account of the banquet the Naucratis shows a deep knowledge of Homer and his scholarship, and the *Deipnosophistae* is a very important source for detecting reuses and linguistic interpretations of the Homeric poetry. [26][27]

We have decided to start annotating the reuses of the *Iliad* in the text of Athenaeus for different reasons, beside the importance of this author in the *Deipnosophistae* in particular and in Greek culture in general:

- The Homeric poems are still surviving works and the comparison of these texts with their reuses in the *Deipnosophistae* helps to better investigate and understand the attitude of Athenaeus to quoting and reusing other authors.

¹On the issue of adopting modern genre categories for classifying ancient authors and in particular fragmentary ones, see [20]. For a recent deep analysis of the quotations of Athenaeus concerning the topic of *corrupting luxury*, see [23]

²On the problematic category of epic poet in Athenaeus, see [26].

³On the difficulty of getting a precise number of Homeric quotations in Athenaeus, see [27].

- The possibility of aligning Athenaeus' reuses to the Homeric texts shows the challenges that philologists have to deal with when trying to establish a rigorous method for annotating text reuse phenomena.
- This paper aims at describing ongoing work on documenting and producing citable analyses of text reuse in the *Deipnosophistae* of Athenaeus of Naucratis, using and implementing a model that has been originally developed for the **Homer Multitext Project**.

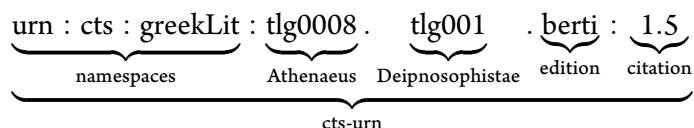
4 Data Model

4.1 HOW WE CITE ATHENAEUS

We use Kaibel’s citations. They are truly canonical, that is, independent of any particular manifestation of the text; they apply equally well across editions, and to translations. Causabon citations are, by definition, tied to a particular edition and are therefore not *canonical* (even though they are *traditional*). Kaibel citations—book, section—are well suited to our digital environment, and in particular to the CTS protocol, which is the basis for our data-model.

CTS, for Canonical Text Services, is a protocol for identifying and retrieving passages of text based on concise, machine-actionable canonical citation. It is based on the observation by Smith and Weaver that a “text” can be modelled as “an ordered hierarchy of citation objects”.[28]

CTS-URN citations are in URN format and allows us to capture the semantics of a passage of text.[29] For example, *Deipnosophistae* 1.5 can be cited:



CTS URNs can identify passages more grossly or more finely; they can identify a range of passages at various levels of specificity; by the addition of an *indexed substring*, a CTS URN can identify a particular string within a passage of text.

URN	Identifies...
urn:cts:greekLit:tlg0008.tlg001.berti:1	<i>Deipnosophistae</i> , Book 1
urn:cts:greekLit:tlg0008.tlg001.berti:1.18	<i>Deipnosophistae</i> , Book 1, Section 18
urn:cts:greekLit:tlg0008.tlg001.berti:1.18-1.19	<i>Deipnosophistae</i> , 1.18 through 1.19
urn:cts:greekLit:tlg0008.tlg001.berti:1.18-2	<i>Deipnosophistae</i> , 1.18 through (all of) Book 2
urn:cts:greekLit:tlg0008.tlg001.berti:1.18@καί[17]	<i>Deipnosophistae</i> , the 17th instance of καί in 1.18
urn:cts:greekLit:tlg0008.tlg001.berti:1.18@καί[17]-1.18@αὐτοί[1]	<i>Deipnosophistae</i> , a range of text within 1.18

CTS is one component of a larger digital library architecture, developed for the *Homer Multitext* and called CITE, for “Collections, Indices, Texts, and Extensions”.[30]

4.2 HOW WE DOCUMENT TEXT REUSE

Documenting text-reuse declaratively requires us to cite imprecisely and precisely, and to work with real texts and notional texts, by turns. An instance of text-reuse may appear in a span of text that includes other words—particles, *verba dicendi*, etc. We need to cite that span of Athenaeus’ text as containing the text-reuse, even if the containing span includes words that

are not re-used from the original source. At the same time, we need to document the text-reuse with precision. We are working specifically with Homeric text-reuse, and so to justify our identification of language as text-reuse we need to cite an edition of the *Iliad* or *Odyssey* as evidence in support. Our earlier complete edition of the *Iliad* dates from the 9th Century CE, and so we must inevitably recognize, and document, the fact that Athenaeus was not re-using any specific edition of the *Iliad* that we can identify.

The CTS protocol serves our needs well, as it allows us to work with both notional works (“*Iliad*”) and specific editions of works, and to identify text according to the edition’s citation hierarchy (“*Iliad* 1.20”) or according to specific spans of text-content. CTS alone is not sufficient. To document text-reuse our data model specifies six pieces of information:

1. **Analysis Record URN.** Every documented instance of text-reuse has a CITE URN, uniquely identifying this instance in a CITE collection. *E.g.* urn:cite:opdata:ahri:100 (“item 100 in the ahr collection [Athenaeus’ Homeric Reuse: *Iliad*], in the opdata namespace”).
2. **Sequence Number.** The collection of instances of Homer text-reuse is an *ordered collection*; each item has a sequence number, reflecting the item’s sequence in the text of the *Deipnosophistae*. This value is programmatically generated by a CTS-aware script before publication of the collection.
3. **Analyzed Text.** A CTS URN defining, as precisely *or imprecisely* as necessary, the span of text in the *Deipnosophistae* that is the subject of this analysis of text-reuse. The scope of the Analyzed Text is determined by the nature of the text-reuse.
4. **Reused Text.** While the **Analyzed Text URN** (above) identifies a coherent and contiguous span of text, as it appears in the Edition being analyzed. The **Reused Text** is a string identifying only the text being reused. The **Analyzed Text URN** provides context and a basis for alignment, while the **Reused Text** gives us the flexibility to call out non-contiguous text, to normalize text, or even to promote morphological forms determined by indirect statement to those appropriate for direct speech, without doing violence to our source-Edition.
5. **Alignment URN.** This collection documents re-use of Homeric poetry, for which we have extant editions with canonical citation. The Alignment URN is a CTS URN pointing to one specific edition of the *Iliad* that (a) justifies our claim of text-reuse, and (b) is the basis for attaching an Iliadic citation to this analysis.
6. **Analytical Edition URN.** The collected instances of Iliadic text-reuse in the *Deipnosophistae* represent a new edition of the *Iliad*, whose text-content is based on our analysis of our project’s edition of Athenaeus. The Analytical Edition URN is a CTS URN to an “Athenaeus Edition” of the *Iliad*; the citation-value is based on that of the **alignment URN**; the text-content of this edition is the **reused text** in Athenaeus.

These seven pieces of information document uniquely and precisely each instance of text-reuse that we have analyzed while maintaining a separation of concerns and the integrity of our data. While each analysis is an interpretive act, these seven pieces of information allow subsequent readers to evaluate and criticize each analysis with full access to its context.

5 Examples & Discussion

5.1 EXAMPLE: HOMERIC ETYMOLOGIES OF INDIVIDUAL WORDS

Athenaeus draws on Homeric poetry in discussions of the etymologies of particular words. In these cases, our documentation of text-reuse must capture (a) the contextual passage in Athenaeus, (b) the specific word under discussion in Athenaeus, (c) the one (or more!) examples he points to in Homeric epic. For example, in his discussion of the Greek word κισσύβιον, a kind of drinking cup, Athenaeus offers several speculative etymologies. The one that concerns us here is the association of κισσύβιον with the Epic word χειή, a serpent's lair.

εἰκάσειε δ' ἂν τις τὸ κισσύβιον τὸ πρῶτον ὑπὸ ποιμένων ἐργασθῆναι ἐκ κισσίνου ξύλου. ἄλλοι δὲ ἐτυμολογοῦσιν αὐτὸ ἀπὸ τοῦ χεῖσθαι, τὸ δ' ἐστὶ χωρεῖν — οὐδὲς δ' ἀμφοτέρους ὁδε χεῖσεται — καὶ ἡ τοῦ ὄφεως κατάδυσις χειή, ἡ καταδεχομένη τὸ ζῶν. καὶ κήθιον τὸ χήτιον τὸ χωροῦν τοὺς ἀστραγάλους. Διονύσιος δ' ὁ Σάμιος ἐν τοῖς περὶ τοῦ Κύκλου τὸ Ὀμηρικὸν κισσύβιον κυμβίον ἔφη γράφων οὕτως: καὶ αὐτὸν Ὀδυσσεὺς ὁρῶν ταῦτα ποιοῦντα πληρώσας τοῦ οἴνου κυμβίον δίδωσι πιεῖν.
— Athen. 11.53

One may speculate that the *kissybion* was originally made by shepherds out of ivy wood. But others etymologize it from *cheisthai*, and that is “to contain” — “This threshold will contain us both.” — and **the hiding-place of a serpent is a “cheiē”**, the thing which shelters the animal. And there is the *kēthion*, the box (*chētion*) that contains (*chōreō*) the dice. And Dionysius the Samian in *On the Cycle* says that the Homeric *kissybion* is a *kymbion*, writing thus: When Odysseus saw him doing that, he filled a kymbion with wine and gave it to him to drink.”

The source for this Homeric etymology is a three-line passage in the *Iliad*, 22.93–22.95:

ὥς δὲ δράκων ἐπὶ χειῇ ὀρέστερος ἄνδρα μένησι
βεβρωκῶς κακὰ φάρμακ', ἔδου δέ τέ μιν χόλος αἰνός,
σμερδαλέον δὲ δέδορκεν ἐλίσσόμενος περὶ χειῇ.
— *Iliad* 22.93–22.95

As when a mountain **serpent in its lair** awaits a man
having grazed on evil herbs, and dread wrath has come upon him,
and he looks terrible, coiled around in his **lair**.

To capture the context of this specific text-reuse, our **Analyzed Text URN** will identify the large passage in Athenaeus, discussing the word and its various possible etymologies. As editors, we are asserting an association between Athen. 11.53 and this passage of the *Iliad*. Athenaeus mentions a “serpent's lair” and so does Homer; we need to make the association precise and complete, and this requires three analysis records, each of which points to the same **Analyzed Text URN**. The first associate's Athenaeus' word for “serpent” (ὄφεως) with Homer's (δράκων). The second and third associate the *same* word in the Athenaeus passage, χειή, with the *two* instances of that in *Iliad* 22.93–22.95.

Instance	Field	Value
A	Analysis Record URN ⁴	urn:cite:opdata:ahri:100
A	Sequence ⁴	100
A	Analyzed Text URN	urn:cts:greekLit:tlg0008.tlg001.berti:11.53 @εικάσειε[1]-11.53@πινειν[1]
A	Reused Text	ὄφρων
A	Alignment URN	'urn:cts:greekLit:tlg0012.tlg001.perseus- grc1:22.93@δράκων[1]
A	Analytical Edition URN	urn:cts:greekLit:tlg0012.tlg001.ogl01:22.93

Instance	Field	Value
B	Analysis Record URN ⁴	urn:cite:opdata:ahri:101
B	Sequence ⁴	101
B	Analyzed Text URN	urn:cts:greekLit:tlg0008.tlg001.berti:11.53 @εικάσειε[1]-11.53@πινειν[1]
B	Reused Text	χειρή
B	Alignment URN	urn:cts:greekLit:tlg0012.tlg001.ogl01:22.93
B	Analytical Edition URN	urn:cts:greekLit:tlg0012.tlg001.perseus- grc1:22.93@χειρή[1]

Instance	Field	Value
C	Analysis Record URN ⁴	urn:cite:opdata:ahri:102
C	Sequence ⁴	102
C	Analyzed Text URN	urn:cts:greekLit:tlg0008.tlg001.berti:11.53 @εικάσειε[1]-11.53@πινειν[1]
C	Reused Text	χειρή
C	Alignment URN	urn:cts:greekLit:tlg0012.tlg001.ogl01:22.95
C	Analytical Edition URN	urn:cts:greekLit:tlg0012.tlg001.perseus- grc1:22.95@χειρή[1]

We can read the three records thus: The passage in Athenaeus 11.53, from “One may speculate...” to “...to drink”, reuses language from the Homeric *Iliad* to propose an etymology; the word ὄφρων in Athenaeus corresponds to δράκων in *Iliad* 22.93; we align Athenaeus’ χειρή with the instance of χειρή in (the Perseus edition of) *Iliad* 22.93 and that in 22.95. We thus have poetic lines in our notional “*Iliad* according to Athenaeus”. The first, 22.93, has textual content “ὄφρων χειρή”, and the second, 22.95, has textual content “χειρή”.

5.2 EXAMPLE: DIRECT QUOTATION (WITH A COMPLICATION)

At *Deipnosophistae* 1.18 Athenaeus discusses how Homer equates drunkenness with madness:

καὶ Ἀγαμέμνων δὲ λέγει πού περὶ αὐτοῦ ^A“ἀλλ’ ἐπεὶ ἀσάμην φρεσὶ λευγαλέῃσι
πιθήσας | ^Bἢ οἶνω μεθύων, ἢ μ’ ἔβλαψαν θεοὶ αὐτοί,” εἰς τὴν αὐτὴν τιθεὶς
πλάστιγγα τὴν μέθην τῇ μανίᾳ. — Ath. 1.18

And Agamemnon says, somewhere, about himself, “**But since I harmed him [Achilles], obeying my addled thoughts | ^Beither I was drunk with wine, or the gods themselves harmed me,**” placing drunkenness on the same balance as insanity.”

So the text under analysis here is more specific than “1.18”, and our **Analyzed Text URN** adds substring-references to focus more precisely:

urn:cts:greekLit:tlg0008.tlg001.berti:1.18@καὶ[17]-1.18@αὐτοί[1]

That is, “from the seventeenth instance of the string καὶ in 1.18 of this edition, through the first instance of αὐτοί in 1.18 of this edition.” The specific text under analysis here is “καὶ ... αὐτοί”. We begin from “καὶ Ἀγαμέμνων...” because the introductory clause is the signal that Athenaeus is quoting from Homer.

The passage contains two lines of dactylic hexameter poetry. It will yield two records in our text-reuse data, for this discussion, these will be (A) and (B). The first is most straightforward, being a direct quotation of Homer that matches established editions of the *Iliad*. We can begin by assigning an **Analysis Record URN** and fill in the other data fields thus:⁴

Instance	Field	Value
A	Analysis Record URN ⁴	urn:cite:opdata:ahri:100
A	Sequence ⁴	100
A	Analyzed Text URN	urn:cts:greekLit:tlg0008.tlg001.berti:1.18@καὶ[17]-1.18@αὐτοί[1]
A	Reused Text	ἀλλ’ ἐπεὶ ἀσάμην φρεσὶ λευγαλέῃσι πιθήσας
A	Alignment URN	urn:cts:greekLit:tlg0012.tlg001.perseus-grc1:9.119
A	Analytical Edition URN	urn:cts:greekLit:tlg0012.tlg001.ogl01:9.119

The first line of poetry in this passage of Athenaeus is found *verbatim* in *Iliad* 9.119, when Agamemnon is expressing remorse for the quarrel with Achilles. This will be the 100th instance of text reuse in our collection of Iliadic Text Reuse in Athenaeus. This instance of reuse emerges when we analyze the passage that begins “And Agamemnon says, somewhere...”. The specific reused text in the passage under analysis is “ἀλλ’ ... πιθήσας”. This instance aligns with 9.119 in

⁴ In this description, the Analysis Record URNs, Analysis Object URNs, and Sequence Numbers are placeholders; real values for these will be generated as part of an automated process of validation.

the Perseus edition of the *Iliad*. In the “*Iliad* according to Athenaeus’ *Deipnosophistae*, we can identify this text as 9.119, following the canonical citation of the poem.

The second instance is more complicated, since Athenaeus is quoting a line that does not appear in any (other) edition of the *Iliad*. It will share some data values with (A), but differ in others. The fields that differ are in bold-face, below:

Instance	Field	Value
B	Analysis Record URN ⁴	urn:cite:opdata:ahri:101
B	Sequence ⁴	101
B	Analyzed Text URN	urn:cts:greekLit:tlg0008.tlg001.berti:1.18@καὶ[17]-1.18@αὐτοί[1]
B	Reused Text	ἦ οὔνῳ μεθύων ἦ μ’ ἔβλαψαν θεοὶ αὐτοί
B	Alignment URN	urn:cts:greekLit:tlg0012.tlg001.perseus-grc1:9.119
B	Analytical Edition URN	urn:cts:greekLit:tlg0012.tlg001.ogl01:9.119a

In our editorial judgement, the dactylic hexameter text, “ἦ ... αὐτοί”, is an instance of Homeric text-reuse. It is assigned its own **Analysis Record URN**. This finding is the result of our analysis of the text at:

urn:cts:greekLit:tlg0008.tlg001.berti:1.18@καὶ[17]-1.18@αὐτοί[1]

So (B) shares the same **Analyzed Text URN** as (A). The text of (B) is after that of (A) in the text of Athenaeus, so (B) has a **Sequence** number one higher than that of (A). The **Analyzed Text** passage, in our judgement, present (A) and (B) as a natural sequence, rather than two quotations juxtaposed by Athenaeus.⁵ Because we have an **Alignment URN** that locates (A) in the *Iliad*, and because the **Analyzed Text** unites (A) and (B), we can use urn:cts:greekLit:tlg0012.tlg001.perseus-grc1:9.119 as the **Alignment URN** for (B) as well. However, in our “Athenaeus Edition” of the *Iliad*, (B) is an additional citeable passage, which we identify as 9.119a.

5.3 EXAMPLE: REORDING AND COLLISION

At *Deipnosophistae* 1.5 Athenaeus provides advice for wealthy hosts; the advice consists of an assemblage of clauses, phrases, and words reused from various places in the *Iliad*.

τοιούτους ἔδει καὶ τοὺς λοιποὺς εἶναι πλείους ὥς τοῖς γε μὴ τοῦτο ποιοῦσιν ἔρει τις τί
 μικρολόγος εἶ; ^Aπλεῖαί τοι οἶνον κλισίαι· ^Bδαίνυ δαῖτα γέρουσι ^Cθάλειαν· ^Dἔοικέ
 τοι. — Ath. 1.5

⁵Athenaeus says of the second line, “This verse (τὰ ἔπη) was cited (προηγέκατο) by Diocorides, student of Isocrates.” (Athenaeus 1.18).

The rest of your rich men ought to be like that. For to those who do not practice such hospitality one may say, “Why are you so stingy? ^A**Surely your tents are full of wine;** ^B**spread for the elders a feast,** ^C**a bountiful one.** ^D**It is fitting for you.’**”

Three of these are found in *Iliad* 9.70–9.72:

^Bδαίνυ δαῖτα γέρουσιν: ^Dἔοικέ τοι, οὐ τοι ἀεικές.

^Aπλεῖαί τοι οἶνον κλισίαι, τὸν νῆες Ἀχαιῶν
ἡμάτιαι Θρήκηθεν ἐπ’ εὐρέα πόντον ἄγουσι:

— *Iliad* 9.70–9.72

^B**Give a banquet for the elders;** ^D**it is fitting,** and not at all unseemly. ^A**The tents are full of wine,** which the ships of the Achaeans, on a daily basis, from Thrace upon the wide sea convey.

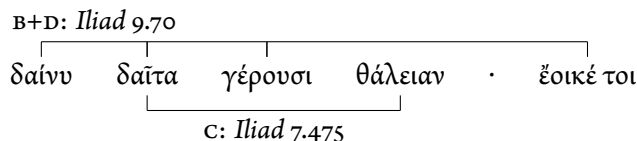
Athenaeus adds the adjective θάλειαν, “bountiful”, to the word “feast” (δαῖτα); this noun-epithet pair does not occur in 9.70–9.72, but does occur at the end of the long passage on the logistics of wine in the Achaean camp, from *Iliad* 7.466–7.475:

ἐνθεν οἰνίζοντο κάρη κομόωντες Ἀχαιοί,
ἄλλοι μὲν χαλκῷ, ἄλλοι δ’ αἶθωνι σιδήρῳ,
ἄλλοι δὲ ῥινοῖς, ἄλλοι δ’ αὐτῇσι βόεσσιν,
ἄλλοι δ’ ἀνδραπόδεσσι: τίθεντο δὲ ^Cδαῖτα θάλειαν [3].

— *Iliad* 7.472–475

From these ships, the long-haired Achaeans bought wine,
Some for bronze, some for shining iron,
Some for hides, some for whole cattle,
Others for slaves. And they laid out a ^C**bountiful feast** [3].

This text-reuse is straightforward, in that it consists of direct quotation. It is complex in that the quotations are small portions of the source text and do not follow the source-text’s order. Furthermore, (B+D) and (C) collide:



Our data model allows us to capture these four instances of re-use, with specificity, retaining their sequence according to Athenaeus and their sequence in the *Iliad*, recording the fact that δαίνυ δαῖτα γέρουσι is a direct quotation from one *Iliadic* passage, and δαῖτα θάλειαν is a direct quotation from another:

Instance	Field	Value
A	Analysis Record URN ⁴	urn:cite:opdata:ahri:200
A	Sequence ⁴	200
A	Analyzed Text URN	urn:cts:greekLit:tlg0008.tlg001.berti:1.5@πλεῖαί[1]-1.5@κλισίαι[1]
A	Reused Text	πλεῖαί τοι οἴνου κλισίαι
A	Alignment URN	urn:cts:greekLit:tlg0012.tlg001.perseus-grc1:9.71@πλεῖαί[1]-9.71@κλισίαι[1]
A	Analytical Edition URN	urn:cts:greekLit:tlg0012.tlg001.ogl01:9.71

(A) is the most straightforward example: a contiguous passage from the *Iliad*, quoted directly by Athenaeus.

Instance	Field	Value
B,D	Analysis Record URN ⁴	urn:cite:opdata:ahri:201
B,D	Sequence ⁴	201
B,D	Analyzed Text URN	urn:cts:greekLit:tlg0008.tlg001.berti:1.5@δαῖνυ[1]-1.5@τοι[1]
B,D	Reused Text	δαῖνυ δαῖτα γέρονσι ξοικέ τοι
B,D	Alignment URN	urn:cts:greekLit:tlg0012.tlg001.ogl01:9.70@δαῖνυ[1]-9.70@τοι[1]
B,D	Analytical Edition URN	urn:cts:greekLit:tlg0012.tlg001.perseus-grc1:9.70@δαῖνυ[1]-9.70@τοι[1]

Here the **Analyzed Text** is the string δαῖνυ... τοι in 1.5, (B) and (D) above; this includes the word θάλειαν. The **Reused Text** that we define for this instance of re-use, however, does not include θάλειαν, but only the text found in *Iliad* 9.70.

Instance	Field	Value
C	Analysis Record URN ⁴	urn:cite:opdata:ahri:202
C	Sequence ⁴	202
C	Analyzed Text URN	urn:cts:greekLit:tlg0008.tlg001.berti:1.5@δαῖτα[1]-1.5@θάλειαν[1]
C	Reused Text	δαῖτα θάλειαν
C	Alignment URN	urn:cts:greekLit:tlg0012.tlg001.ogl01:7.475
C	Analytical Edition URN	urn:cts:greekLit:tlg0012.tlg001.perseus-grc1:7.475@δαῖτα[1]-7.475@θάλειαν[1]

This instance of text-reuse maps specifically to the noun-epithet “δαῖτα θάλειαν” in Athenaeus 1.5, and the same string is the **Reused Text**. We associate this *Iliad* 7.475, where that noun-epithet pair occurs.

With these three records, we have documented completely this cluster of text-reuse in Athenaeus 1.5. The sequence and integrity of Athenaeus’ text is preserved; we have clear and specific mappings to an edition of the *Iliad*; and we have an unambiguous statement of the reused textual content for each instance.

5.4 EXAMPLE: DIRECT QUOTATION WITH AUTHOR’S ANALYSIS

We are concerned to be precise about *identity*. At *Deipnosophistae* 1.20, Athenaeus discusses how a line of the *Iliad* should be punctuated (at stake is the proper time to remove the tables during a dinner party):

τῷ δὲ μὴ αἵρεσθαι τὰς τραπέζας ἐναντιοῦσθαι δοκεῖ τὸ ἐν Ἰλιάδι: ^Aἔσθων καὶ πίνων, ἔτι καὶ παρέκειτο τράπεζα. ἀναγνωστέον οὖν οὕτω: ^Bἔσθων καὶ πίνων ἔτι, καὶ παρέκειτο τράπεζα, ἢ τὸν καιρὸν αἰτιᾶσθαι τὸν παρόντα δεῖ. — Ath. 1.20

That the tables were removed seems to be refuted by this part of the *Iliad*: ^A**He had been eating and drinking, with the table still standing beside him.** And so it ought to be read: ^B**He had been eating and drinking still, while the table stood beside him,** or we must judge this to be a special case.

The two poetic lines, marked (A) and (B) above, are two different interpretations of *Iliad* 24.476. We clearly have *two* instances of text-reuse here. At the same time, Athenaeus clearly considers these two to be the *same* line of the *Iliad*; the difference is in Athenaeus’ text, his punctuation, not in the Iliadic text. Because our data model separates concerns, we can document this thus:

Instance	Field	Value
A	Analysis Record URN ⁴	urn:cite:opdata:ahri:300
A	Sequence ⁴	300
A	Analyzed Text URN	urn:cts:greekLit:tlg0008.tlg001.berti:1.20@ἔσθων[1]-1.20@τράπεζα[5]
A	Reused Text	ἔσθων καὶ πίνων ἔτι καὶ παρέκειτο τράπεζας
A	Alignment URN	urn:cts:greekLit:tlg0012.tlg001.perseus-grc1:24.476
A	Analytical Edition URN	urn:cts:greekLit:tlg0012.tlg001.og101:24.476

Instance	Field	Value
B	Analysis Record URN ⁴	urn:cite:opdata:ahri:301
B	Sequence ⁴	301

Οἱ δὲ θεοὶ παρ Ζηνὶ καθήμενοι ἡγορόωντο
 χρυσέῳ ἐν δαπέδῳ, μετὰ δὲ σφισι πότνια Ἥβη
 νέκταρ ἐοινοχόει· τοὶ δὲ χρυσεοὶς δεπάεσσι
 δειδέχατ' ἀλλήλους, Τρώων πόλιν εἰσορόωντες·
 — *Iliad* 4.1–4.4

And the gods, sitting in the presence of Zeus, on the golden floor, were conversing, and among them Queen Hēbē was pouring nectar. And indeed they were greeting each other with golden cups, looking down on the city of the Trojans.

To document this instance of text-reuse, we must align the sentence in Athenaeus with two lines of the *Iliad*. We want to assert that, in Athenaeus, both ποτήριον and δεπάεσιν are ‘mapped’ to the Homeric δεπάεσσι at *Iliad* 4.3. We also want a precise alignment between χρυσεοὶς, δεπάεσιν, and ἀλλήλους, which are direct matched between the Homeric text and Athenaeus (although in different order), and between δεξιούνται in Athenaeus and the elided form δειδέχατ’ at *Iliad* 4.4. We capture five records of text-use in our data.

For each of the five our **Analyzed Text URN** will be the same:

urn:cts:greekLit:tlg0008.tlg001.berti:11.16@καὶ[6]-11.16@δεξιούνται[1]

The five will have, as their **reused text** the five words from Athenaeus, with their order in the Athenaeus text captured by a sequence number. We begin by aligning Athenaeus’ ποτήριον with δεπάεσιν at *Iliad* 4.3. We also align Athenaeus’ “χρυσεοὶς” and “δεπάεσιν”. Our **Alignment URN** for both of these is urn:cts:greekLit:tlg0012.tlg001.ogl01:4.3, in effect asserting that “In the ‘*Iliad* according to Athenaeus’ there is an instance of line 4.3, whose textual content is ‘ποτήριον χρυσεοὶς δεπάεσιν.’”

6 Conclusions

6.1 VIEWS & ANALYSIS

The six data records give us wide latitude for citing, manipulating, visualizing, and navigating our documented instances of text-reuse in the *Deipnosophistae*. Any specific instance of re-use can be cited, and through a CITE-service resolved with all associated data, using the **Analysis Record URN**. Because these instances are in a collection ordered by the **Sequence** property, we can retrieve a range of instances, or order by sequence (in the text of Athenaeus) any subset of instances retrieved by a query.

The **Analytical Edition URN** allows us to construct an edition of the *Iliad*, according to the text of Athenaeus, cite it and use it as we would any other CTS text. For example, based on the last example above, we can cite “Athenaeus’ edition of the *Iliad*, Book 24, line 476” as `urn:cts:greekLit:tlg0012.tlg001.ogl01:24.476`, which resolves to “ἔσθων καὶ πίνων ἔτι καὶ παρέκειτο τράπεζα”. We could likewise ask for “Athenaeus’ edition of the *Iliad*, Book 24” with the CTS-URN `urn:cts:greekLit:tlg0012.tlg001.ogl01:24`, and retrieved all reused text from *Iliad* 24, as documented in the *Deipnosophistae*, in Iliadic text sequence.

Combining the properties of **Reused Text** and **Alignment URN** would allow us to generate a hybrid edition of the *Iliad* that contains the Perseus/Allen text *where Athenaeus is silent*, but substitutes Athenaeus’ text where he reuses the *Iliad*. We can likewise perform a `diff` operation on the Perseus/Allen text, *versus* Athenaeus’ text, with precision. For example, querying our data for re-use that aligns with `urn:cts:greekLit:tlg0012.tlg001.perseus-grc1:9.119` would show us that the Perseus/Allen text has:

ἀλλ’ ἐπεὶ ἀασάμην φρεσὶ λευγαλέησι πιθήσας

while Athenaeus has:

ἀλλ’ ἐπεὶ ἀασάμην φρεσὶ λευγαλέησι πιθήσας | ἢ οἶνω μεθύων ἢ μ’ ἔβλαψαν θεοὶ αὐτοί

This data model may strike readers as verbose. But brevity is not a virtue if it comes at the expense of comprehensive documentation. Text-reuse is complex, and documenting it requires us to capture details of two texts while aligning their textual semantics on two axes: the vertical (the citation-hierarchy) and the horizontal (the contents of a citable nodes). We are still in the early stages of our work on Athenaeus, but our progress to date has allowed us to explore the continuum of text-reuse from straightforward direct quotation, aligning 1:1 with a source edition, through paraphrase, to tenuous references to shared topics, and to examine in each instance the extent and nature of reuse. What follows is discussion of three examples which, by virtue of our data model, have yielded research questions that we hope to pursue further.

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