The Corpus of Greek Medical Papyri and Digital Papyrology: new perspectives from an ongoing project

Nicola Reggiani

[slide 2] Three years ago, in Oslo, during one of the first official presentations of the project Corpus of the Greek Medical Papyri Online held at the University of Parma, now flown into the DIGMEDTEXT project, funded by the European Research Council (http://www.papirologia.unipr.it/ERC)¹, I advanced a range of trends, problematic in some ways, arisen by the digitisation of the Greek medical papyri (cf. N. Reggiani, A Corpus of Literary Papyri Online: the Pilot Project of the Medical Texts via SoSOL, "Antike Lebenswelten Althistorische und papyrologische Studien", hrsgg. R. Lafer und K. Strobel, Berlin-New York, De Grutyer, 2015, 341-52). It is indeed a corpus of very peculiar texts, which beside the well-known features of papyrus documents, implies issues connected to their special technical nature — which explains, if not justifies, their quasi-systematic exclusion from the usual documentary databanks and arises interesting questions on the digital edition of papyrus texts. Since then much has been endeavoured, both by the Parma team and on other frontlines, and it seems to me useful to present here a provisional appraisal, taking into account the current state of the art and stimulating further reflections on problems and difficulties not yet completely solved.

[slide 3] A first, more general issue was adapting the current platform for digitising papyri to the needs of a composite corpus containing also literary and "semi-literary" texts. The architecture of the *Papyrological Editor* was indeed designed to fulfil the needs of Greek and Latin documentary papyri: the XML skeleton based on a selection of the TEI standards already developed by Epidoc for the digital edition of ancient documents; the metadata taken from the HGV (later also from Trismegitos); the markup language Leiden+ designed to ease autonomous submissions by the community of the papyrologists. That issue has been absorbed by the very recent project Digital Corpus of Literary Papyri, started at the University of Heidelberg, of which the CPGM Online is a partner and a testing ground since the beginnings. The problems of how to encode textual or paratextual features almost absent from the documentary papyri (critical or diacritical marks, punctuation, marginal writings, graphical layout features, and so on), how to integrate the purely literary elements of a critical edition (textual variants, parallels, etc.), how to grasp the metadata from literary databases like the LDAB ([slide 4]), have been started up and are now in a process of proposal, discussion and solution by the team involved in building the new DCLP. Many encoding features already existing in Epidoc's XML schemes need to be recovered and possibly translated into Leiden+ language, others have to be created

¹ This paper was given within the framework of the said project (ERC-AdG-2013-DIGMEDTEXT [Prof. I. Andorlini], Grant Agreement No: 339828).

anew. Still open questions concern, for example, the markup of the different typologies of abbreviation, the possibility to search for such features, the possibility to link parallels and quotations to other online resources like the Perseus digital library or the TLG.

[slide 5] Another perspective I pinpointed to enhance the analytical power of a database of medical papyri is the application of a linguistic annotation on multiple layers. Annotating is a fundamental practice in the linguistic study of a corpus of texts: it allows to describe, record, interpret and analyse linguistic information at several levels, in which each layer corresponds to a particular category of relevant information. On the theoretical and practical correctness of treating Greek medical papyri as a true textual corpus I think there must be no doubt: a linguistic corpus is usually intended as a selection of sample texts representative enough of a language, and though the medical papyri at our disposal come from a random and incomplete selection, they can be considered as the entire reference population rather than as a sample of a larger group, so that linguistic annotation seems to me absolutely feasible. The basic annotation layer, related to the analysis of the parts of speech (the one also known as treebanking because it is usually represented with a tree graph) would allow to conduct an extensive lexical, phraseological-formulaic and syntactic analysis on the corpus, aimed also (but not only) at discovering styles and writing strategies specific of the medical texts, both literary and documentary: think only of the possibility to find out influences or interpolations between authors, or the presence of literary echoes in technical or documentary texts. To analyse in depth and comprehend the syntactic structure of texts would allow also to solve problems of interpretation, or even only to understand the exact meaning of a text (let us consider for instance the case of a schematic recipe as P.Oxy. 1088 ([slide 6]), where implicit verbs and asyndetic syntax would have to be made explicit). In the field of classical philology such linguistic analyses are now at a very advanced level, and in the meantime papyrology too has made important progress, visible now in the interesting project Sematia, conducted at the University of Helsinki by Marja Vierros and her colleagues (http://sematia.hum.helsinki.fi), aimed at facilitating the linguistic tagging of digitised documentary papyri ([slide 7]). There are still some open problems, like how to integrate annotation layers in the current SoSOL platform or how to treat fragmentary words or multiple alternatives of supplement, but we register undoubtful progress in this field too ([slide 8]).

[slide 9] There are also other annotation layers that might enhance our corpus furthermore. Layers of normalisation or regularisation (in morphology, syntax, vocabulary, phonology, orthography) are already provided by the SoSOL platform, in the form of "corrections" of various types. However, a more systematic analysis of such pieces of information might lead to design an annotation layer related to the different typologies of linguistic variations, to a systematic study of them, and to the definition of schemes and models which could bring, for example, interesting statistical

considerations on the doctors' cultural level. In this case too have been made some attempts to extract and analyse data concerning linguistic variants from what was already encoded in the existing databases ([slide 10] M. Depauw, J. Stolk, *Linguistic Variation in Greek Papyri: Towards a New Tool for Quantitative Study*, GRBS 55 (2015), 196-220; http://www.trismegistos.org/textirregularities): the advantages of an extensive integration of such an annotation layer in any database are apparent.

[slide 11] An annotation layer of "lemmatisation", that is the reduction of a declined or conjugated word to its original lemma, would prove essential in defining and analysing a specialised technical vocabulary like the one employed in the medical papyri, and it would represent an important bridge to connect the textual database to the related project Medicalia Online, consisting in an extensive lexical reference tool for ancient medical technical terms. From this viewpoint, a basic lemmatisation method is provided by the SoSOL platform through a glossary tool allowing to mark some keywords, of which brief definitions or explanations are inserted and displayed in popup boxes. A possible improvement of this type of annotation, with reference to the medical papyri, might lead to systematic connections to the lexical cards of Medicalia Online.

[slide 12]

[slide 13] A very interesting issue is the application to the medical papyri of the idea of transtextuality, defining the various possible relations among texts, as it has been recently analysed by Monica Berti: this does not relate only to the network of quotations and parallel passages, which we already considered earlier with reference to the possible improvement of the critical apparatus, but also to the aspect of fragment which very often the papyrus, be it literary or documentary, acquires. We can define the fragmentary character of the papyrus as a sort of "non-voluntary quotation", selected by the chance and by the material circumstances rather than by the will of an author. The transtextual link will be given in that case by the "virtual" existence of a hypertext (the original document, lost, more or less recoverable in a philological way) and the concrete one of a hypotext (our fragment). This perspective would bring innovative solutions to the current question of how to treat textual variants. A problem came up while defining the new encoding rules for the ongoing DCLP is indeed how to choose and represent the philological variants of a text: which critical edition to choose for reference, whether and how to represent the attested variants, how to consider a papyrus containing a textual variant unattested in the manuscript tradition, and so on. If we give up to consider a variant as a "wrong version" to be corrected and normalised, we can overcome the deadlock by looking at the set of variants as a network or a system, and by thinking the digital edition as a multitext, a place for a dynamic collation of several editions or versions, stratified in the time ([slide 14]). The Homer Multitext Project by the Center for the Hellenic Studies goes indeed along this path.

[slide 15] A last – but not least – aspect to be considered is the global one of the digital edition itself. The SoSOL platform, as is known, offers, beside a basic critical apparatus, the possibility to enhance the text with an introduction (called front matter), a line-by-line commentary, and a translation in one or more modern languages. Leaving aside the translation, however, a papyrus already published elsewhere is very seldom digitised in this complete way (an example of the most common appearance of a papyrus in the current databank: http://www.papyri.info/ddbdp/p.oxy;2;293). On the contrary, the medical corpus, though including published texts, aims at providing an overview as complete as possible for each text, where the reference to the paper edition is still unavoidable, but a first digital foretaste of it is given (http://www.papyri.info/editor/publications/45620/ddb identifiers/103498/preview). This is, in my opinion, an important step towards those "complete" digital editions of which a recent seminar held at the University of Heidelberg is producing the first examples: unpublished or just described papyri published entirely and directly online, with the possibility of applying further improvements or corrections in the same way (http://www.papyri.info/ddbdp/p.got;;29dgtl). Despite some scholars still see in the paper edition an essential scientific goal, online publication is in fact one of the most stimulating perspectives of digital papyrology and, in general, of the entire field of digital humanities, because it combines the old problem of the "digital critical edition", object of long-standing philological debates, with the dynamic and innovative view of an open-access and collaborative platform like the Papyrologycal Editor. Likely we will never go as far as declaring obsolete glorious paper tools like the Berichtigungsliste or the Sammelbuch, but in projects just like the CPGM new spaces can open for entirely online, open-access, dynamic and interactive new textual editions.

The Corpus of Greek Medical Papyri and Digital Papyrology: and Digital Papyrology: new perspectives

from an ongoing project]

Wir laden herzlich ein zu unserer Konferenz mit Workshops: Altertumswissenschaften in a Digital Age: Egyptology, Papyrology and Beyond Leipzig, 4.-6. November 2015 Hashtag: #DHEgypt15 Annotated Corpora | 3D | Input of Hieroglyphics, Demotic, Greek, Coptic Hassan Aglan | Lajos Berkes Monica Berti | Stefan Beyer Marc Brose | Giuseppe G.A. Celano Gregory R. Crane | Vincenzo Damigni Camilla Di Biase-Dyson | Holger Essler Frank Feder | Usama Gad Simone Gerhards | Tom Gheldof Josephine Hensel | Anne Herzberg Julia Jushaninowa | Jannik Korte Aris Legowski | Claudia Maderna-Sieben So Miyagawa | Franziska Naether Mark-Jan Nederhof | Rebekka Pabst Dietrich Raue | Nicola Reggiani Felix Schäfer | Matthias Schulz Simon Schweitzer | Stephan Seidlmayer Gunnar Sperveslage | Jochen Tiepman Lucia Vannini | Nina Wagenknecht Christopher Waß | Felicitas Weber Fabian Wespi | Polina Yordanova Felix-Klein-Hörsaal, Paulinum, Augustusplatz 10, 4. Stock Ägyptisches Museum im Kroch-Hochhaus, Hörsaal 8, Hörsaalgebäude der Universität Leipzig, Universitätsstraße 7 www.dh.uni-leipzig.de/wo/dhegypt15/ www.aegyptologisches-institut.uni-leipzig.de

[Nicola Reggiani]

Digitising medical papyri

The digital encoding of medical papyri raises special problems, due to their particular nature of technical/professional («paraliterary») texts.



N. Reggiani

A Corpus of Literary Papyri Online: the Pilot Project of the Medical Texts via SoSOL "Antike Lebenswelten Althistorische und papyrologische Studien", hrsgg. R. Lafer und K. Strobel, Berlin-New York, De Grutyer, 2015, 341-352.

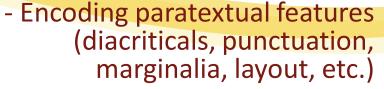
Existing platforms and new needs

The Papyrological Editor: designed for documentary papyri

 A selected set of TEI/EpiDoc features translated into Leiden+ markup



- Metadata from the HGV (later also Trismegistos)



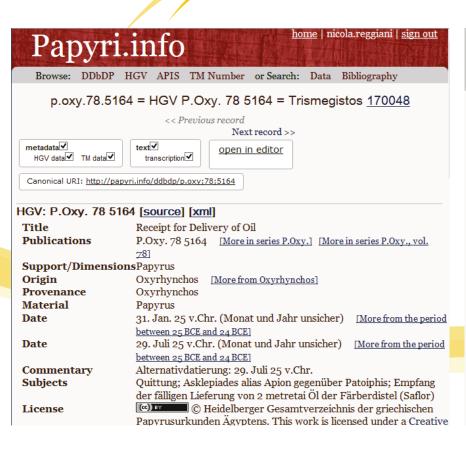
- Metadata from the LDAB
- Further philological issues (variants etc.)





The Digital Corpus of Literary Papyri project

Existing platforms and new needs



Papyri.info

Editor not available

Trismegistos <u>99548</u> = <u>LDAB 10735</u>

881 - 909 - Found: Middle Egypt (U, Egypt); written: Middle Egypt (U, Egypt)

metadata♥ text♥ Canonical URI:

DCLP data transcription

DCLP/LDAB Data [xml]

Principal Edition P. Lond. Copt. 514

Fragments London, British Library Or 4718 (4)

Support/Dimensionspapyrus

Date 881 - 909 [More from the period between 881 CE and 909 CE]

Origin Found: Middle Egypt (U, Egypt); written: Middle Egypt (U, Egypt)

[More from Found: Middle Egypt (U, Egypt); written: Middle Egypt (U,

Egypt)]

Form and Layout papyrus sheet (columns: 1)

Genre liturgic; list; prayer

CulturereligionReligionchristian

Print Illustrations P. Lond. Copt., pl. 6a

Availability The source data for this page does not contain any information

concerning its copyright, license, or availability. It should be considered "all rights reserved" until proven otherwise.

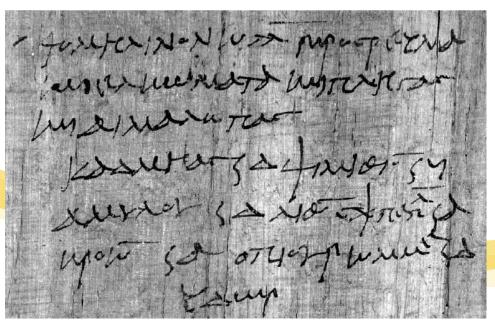
Multi-layer linguistic annotation

A basic part-of-speech annotation (treebanking) allows extensive lexical, phraseological (formulaic) and syntactic analyses on the textual corpus, and might lead to pinpoint styles and writing strategies specific of medical texts, or to find influences and interpolations of various types.

Problems: how to integrate in Papyri.info? how to annotate broken tokens (non-supplied words, words with multiple alternatives)?

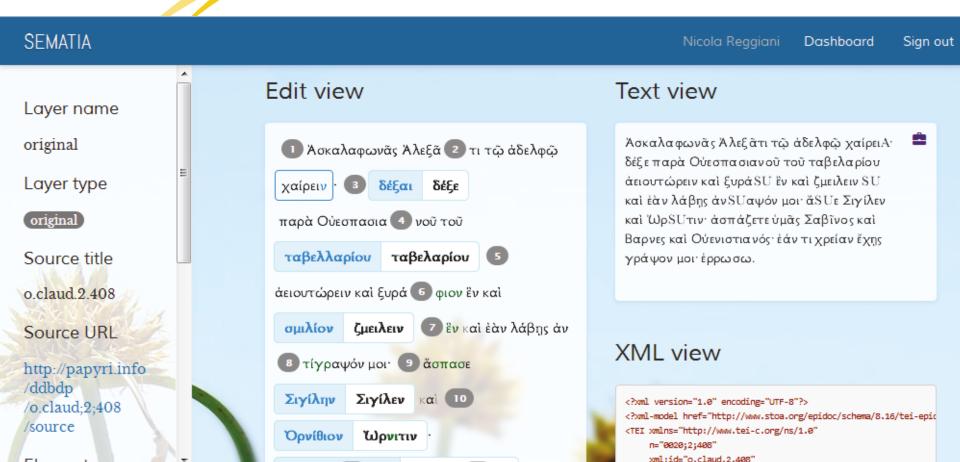
Multi-layer linguistic annotation

P.Oxy. VIII 1088, i, 1-5, recipe from receptarium, I cent. AD ex.



τὸ μήλινον κολλ(ύριον)· πρὸς ῥεῦμα καὶ ἐλκώματα καὶ πληγὰς καὶ αἰμάλωπας· καδμήας § δ ψιμιθίο(υ) § η 5 ἀμύλου § δ λίθ(ου) σχι(στοῦ) πεπλ(υμένου) § α κρόκο(υ) § α ὀπίου / κόμμε(ως) § δ ὕδωρ.

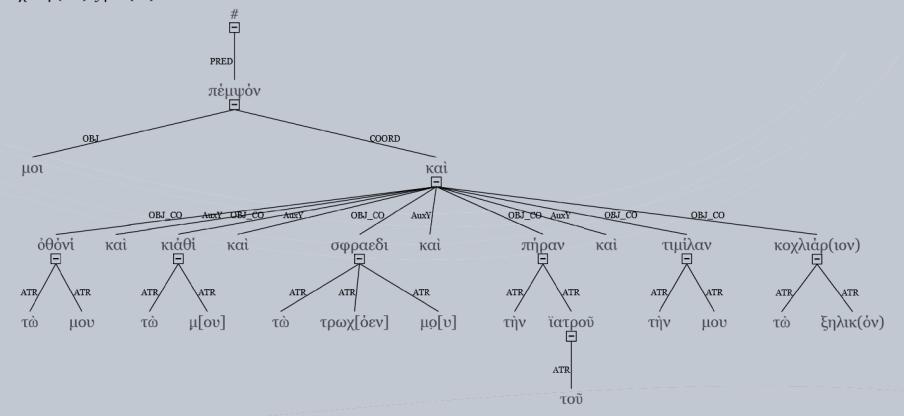
Yellow-coloured salve: for discharges, wounds, bruises, and weals: calamine 4 drs., white lead 8 drs., starch 4 drs., purified schist 1 dr., saffron 1 dr., opium 3 obols, gum 4 drs., water.



Multi-layer linguistic annotation

Sample treebanking of GMP II 10

πέμψόν μοι τὰ ὀθόνί μου καὶ τὰ κιάθί μ[ου] καὶ τὰ τρωχ[ὀεν] σφραεδι μο[υ] καὶ τὴν πήραν τοῦ ϊατροῦ καὶ τὴν τιμίλαν μου καὶ τὰ κοχλιάρ(ιον) ξηλικ(ὀν)



Annotation of linguistic variants

Morphological, syntactic, lexical, phonological, orthographic «regularisations» currently available in the PE as «corrections»

† πέμψον μου(*)
τω(*) οθονι(*) μου
καὶ τω(*) κιαθι(*) μ[ου]
καὶ τω(*) τρωχ[όεν]
5 σφραεδι(*) μο[υ]
καὶ τὴν πήραν
τοῦ ἱ(*) ατροῦ(*) καὶ τὴν
τιμιλαν(*) μου
καὶ τω(*) κωχλιαρ(ιον)(*)
10 ξηλικ(όν)(*)



The Trismegistos database of text irregularities

Apparatus

- ^ 1. I. µor
- ^ 2. I. TÒ
- Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
 Δ
- ^ 3. I. тò
- ^ 3. Ι. κυάθιόν
- ^ 4. l. tò
- _ 5. Ι. σφραγίδιόν
- ^ 7. corr. ex []ατρο(û) : ϊατρου papyrus
- ^ 8. Ι. σμίλην
- ^ 9. l. tò
- 4 9. Ι. κοχλιάρ(ιον), corr. ex [χ]ωχλιαρ(ιον)4 10. Ι. ξυλικ(όν)

Apparatus

[http://www.trismegistos.org/textirregularities]

M. Depauw, J. Stolk, Linguistic Variation in Greek Papyri: Towards a New Tool for Quantitative Study, GRBS 55 (2015), 196-220

The SEMATIA project (M. Vierros)

[http://sematia.hum.helsinki.fi]



Text irregularities

TM Home

About Contact

TEXT IRREGULARITIES

Search

Search result

» 51 text irregularities found:

Irregular form	Corrected form	Error type	Frequency	Publication	Pessage	Date
μεσω*	1. μέσος	ω instead of 0ς	51	PSI 9 1022	B.18.	BC 106 May 7
φακω*	corr. ex ουκω, l. φακὸς	ω instead of 0ς	51	P. Tebt. 2 316 col. 2	2.18.	AD 99 Dec 10
φακω*	corr. ex ουκω, l. φακὸς	ω instead of 0ς	51	P. Tebt. 2 316 col. 3	2.18.	AD 99 Dec 11
φακω*	corr. ex ουκω, l. φακὸς	ω instead of 0ς	51	P. Tebt. 2 316 col. 4	2.18.	AD 99 Dec 11
μεταξ[α]ντω*	l. μεταξάντο(ς)	ω instead of 0ς	51	SB 18 13766	2.32.	AD 100 - 299
Ούαλερίω*	1. Ούαλέριος	ω instead of 0ς	51	BGU 1 344	2.3.	AD 100 - 299
πράγματω*	l. πράγματος	ω instead of 0ς	51	O. Did. 380	concave.11.	AD 110 - 115 about b
Σαβεινω*	1. Σαβεῖνος	ω instead of 0ς	51	O. Claud. 3 454	1.	AD 137 about
Άντωνίω*	Ι. Άντώνιος	ω instead of 0ς	51	O. Claud. 2 381	1.	AD 150 - 199
Ζευτλω*	1. Ζεῦτλος	ω instead of oc	51	O. Narm. Gr. 1 27	2.	AD 150 - 225

M. Depauw, J. Stolk, Linguistic Variation in Greek Papyri: Towards a New Tool for Quantitative Study, GRBS 55 (2015), 196-220

Lemmatisation and the technical terms

Annotating lemmas might allow an extensive interconnection with lexical repositories like the Medicalia Online lexicon. The PN used to provide a basic «lexical tool» with simple explanations of technical terms.

BGU I 4

```
<sup>1</sup> An Severus Iustus, den centurio,

<sup>2</sup> von Aurelius Abûs, dem Verenden 3 Ale ich Mülandichtet eistete, Herr, in Pêlûsion, gab ich einem ge Freund, Gegenstände im Wer Aufbewahrung.

<sup>9</sup> Ich wurde i ihm wegen dieser Dinge eine Einheit.

Entlassung, machte er mir keine Aurechnung. Thermit ersuche ich, wobei ich als Zeugen Syriôn, Sohn des Is[i]dôros, aus K[aran]is habe , der (mir) zustimmte, darum, [daß sie Dir vorgeführt werden ——]
```

A very tentative example of annotation of a medical papyrus: GMP II 10.

ID = Identifier; T = Tokenization; PoS = Part of Speech; H = Syntactic head; R = Syntactic relation [H + R + ID = Syntactical annotation]; N = Normalization; E = Kinds of errors [VE = vowel exchange; BD = broken diminutive; ML = missing letter; EC = error corrected; CE = consonant exchange]; L = Lemmatization; TT = Technical terms; A = Abbreviations; M = (Dia)critical marks and punctuation [The other levels of annotation do not apply to this instance. Note that PoS and syntactical taggings are simplified for reason of space]. I am very grateful to Dr. Giuseppe G.A. Celano for his essential help in the grammatical/linguistic annotation.

ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14
T	πέμψόν	μοι	τὼ	ὀθόνί	μου	καὶ	τὼ	κιάθί	μ[ου]	καὶ	τὼ	τρωχ[όεν]	σφραεδι	μο[υ]
PoS	verb	pron.	art.	noun	pron.	conj.	art.	noun	pron.	conj.	art.	adj.	noun	pron.
H	0	24	4	24	4	24	8	24	8	24	13	13	24	13
R	PRED	ATR	ATR	OBJ_CO	ATR	AuxY	ATR	OBJ_CO	ATR	AuxY	ATR	ATR	OBJ_CO	ATR
N			τò	ὀθόνιόν			τò	κυάθιον			τò		σφραγίδιόν	
E			VE	BD			VE	VE+BD			VE		AS+VE+ BD	
L				ὀθόνιον				κύαθος					σφραγίς	
TT				instrument				container					instrument	
A					·									
M														

ID	15	16	17	18	19	20	21	22	23	24	25	26	27
T	καὶ	τὴν	πήραν	τοῦ	[.]ϊατρο ^ῦ	καì	τὴν	τιμίλαν	μου	καì	τò	[χ]κοχλιάρ/(ιον)	ξηλικ/(όν)
PoS	conj.	art.	noun	art.	noun	conj.	art.	noun	pron.	conj.	art.	noun	adj.
H	24	17	24	19	17	24	22	24	22	1	26	24	26
R	AuxY	ATR	OBJ_CO	ATR	ATR	AuxY	ATR	OBJ_CO	ATR.	AuxY	ATR	OBJ_CO	ATR.
N				τοῦ	ἰατροῦ			σμίλην			τò	κοχλιάριον	ξυλικόν
E					EC(?)			CE+ML+VE			VE	EC(CE)	VE
L			πήρα		ἰατρός			σμίλη				κοχλιάριον	
TT			instrument		gen.term			surgery				container	
A				superscr.	superscr.							slanting stroke	slant.stroke
M					diaeresis						·		

Transtextuality and the fragments

The papyrus fragment is a sort of «accidental quotation» the transtextual network of which is included between a «hypertext» (the original document) and a «hypotext» (the actual scrap). From this viewpoint it is possible to think of the digital edition as a multitext, in which the textual variants (even unattested in the manuscript tradition) are not to be subordinated to a «normal» version, but parts of a dynamic network.

M. Berti, Citazioni e dinamiche testuali. L'intertestualità e la storiografia greca frammentaria, in Tradizione e trasmissione degli storici greci frammentari II. Atti del Terzo Workshop Internazionale (Roma 2011), c. V. Costa, 2012, 439-458.

M. Berti, *Fragmentary Texts and Digital Libraries*, in *Philology in the Age of Corpus and Computational Linguistics*, eds. G. Crane, A. Lüdeling, M. Berti, CHS Publication, forthcoming.

M. Berti, M. Romanello, A. Babeu, G. Crane, *Collecting Fragmentary Authors in a Digital Library*, in *Proceedings of the 2009 Joint International Conference on Digital Libraries (Austin, TX)*, New York 2009, 259-262.

M. Berti, M. Romanello, F. Boschetti, A. Babeu, G. Crane, Rethinking Critical Editions of Fragmentary Texts by Ontologies, in Proceedings of 13th International Conference on Electronic Publishing: Rethinking Electronic Publishing: Innovation in Communication Paradigms and Technologies (Milan), Milano 2009, 155-174.

P.Aberd. 124 = GMP I 2, Hp. De fracturis, II cent. AD

column i **Variant reading** [-ca.?- ἐπὶ τῷ μεγέ]θ̞ε[ι] <u>(*)</u> [ἢ τὸ τοῦ βραχίονο]ς καὶ δι-[καίην φύσιν μο] ῦνον ἔχο[ν] [καὶ ταύτην περιφ]ερέα· τὸ δὲ Text divergent from codd. [βραχίονος ἄρθρον](*) μέγα τε [καὶ βαθμίδας πλε]ίονας ἔχον. [πρὸς δὲ τούτοις τὰ] μὲν τῆς [κνήμης ὀστέα παραπ]λήσια μή-**Dialect: koine** [κος ἐστι καὶ σμικρό]ν τι(*) οὐκ 10 [ἄξιον λόγου τὸ] ἔξω ἀστέον ὑ-[περέχει οὐδενὸ]ς μεγάλου κω-[-ca.?-] ου<u>(*)</u> πέφυκεν [ὁ ἔξω τένων ὁ π]αρὰ τὰν ίγνύ-**Apparatus** [ην· τὰ δὲ τοῦ π]ήχεως (*) ὀστέα 15 [ἀνισά ἐστι, καὶ] τὸ βραχύτερον(*) [παχύτερον συχ]νῷ, τὸ δὲ λεπτό -Δ i.1. Hp, Fract. 37 (3.540.16 L); ἐπὶ μεγέθει Withington, LCL \triangle i.4-5/τὸ δὲ τοῦ βραχίονος ἄρθρον μέγα codd., GalLemm. (6)13.7 K), edd.; τοῦ om. M (Paris. column ii 2247 ap. Littré, et pap. spat. rat. [τερον -ca.?-] i.β. ἐστιν Kühl., σμικρόν τε Withington, LCL vac.ca.55 lines 1 11-12. or κώ|[λυμα ἐόν, ἀφ' ὁκ]οίου, or κώ|[λυμα ἐόν, ἀπ' ἐλεί]νου GMP 1,1, [-ca.?-] ιου prev. ed. : κώλυμα ἐόν, ἀφ' οὕ πέφυκεν codd., GalLemm. (618.13 K), edd.; GalComm. (619.5-6 K [-ca.?- προσ-] ούδενὸς μεγάλου κωλύματος) βάλλο[ντα ώθεῖν, τῆ δ' ἑτέρη] Δ i.14. πήχεος codd., edd. (Ionic Greek); -χεως pap. (Koine Greek) ἀντωθε[ῖν -ca.?-](*) ^ i.15. ἐστιν L, Kühl., Withington, LCL <u>^</u> ii.56-58. Hp. Fract. 39 (3.546.6-7 L)

The digital edition

Though existing in the PE, the tools for creating introductions and commentaries are poorly used for the <u>currently extant digitised papyri</u>. Their regular use for the <u>medical papyri</u> might be a step towards <u>true digital editions</u> of unpublished texts.

http://www.papirologia.unipr.it/ERC