Fragments are much more important than books because they testify to texts potentially at the apex of an ancient period and now, for whatever reason, no longer extant. The claim of a wisdom from the ancient period extant only in fragments represents a secret apologetic weapon directed against the supremacy of the majority. [...] Fragments of ancient wisdom constitute that literary past which the libraries want to canonize in their attempt to establish their supremacy over other cultural moving forces of ancient society.¹

Ancient medical prescriptions (usually also known as ‘recipes’) are a very peculiar text typology. They are at the same time therapeutical / pharmaceutical indications delivered by practicing physicians to the users (whether patients, colleagues, or pharmacists)² and ways of handing down an articulated set of knowledge.³ Based as they are on both scientific experience and practical know–how, they essentially aim at preserving and transmitting diagnostic–therapeutic records for future replication. It is apparent that such reference tools are subject to modifications, adaptations, and updates according to actual clinical cases and individual expertise.⁴ Medicine is not an exact, established science, but an evolving set of strategies that imply theoretical reflection and practical action, both of

¹ Veltri (2006) 91. The present contribution stems from the project ‘Online Humanities Scholarship: A Digital Medical Library Based on Ancient Texts’ (ERC–2013–AdG DIGMEDTEXT, Grant Agreement no. 339828, Principal Investigator Prof. Isabella Andorlini) held at the University of Parma on funding of the European Research Council (see http://www.papirologia.unipr.it/ERC).
³ The most complete structure of a recipe usually comprises, after the title (prographe) with the name of the remedy (usually after its shape, format, or original author), the therapeutical indication (epangelia), a pharmacological section describing its composition in details (synthesis or symmetria), and practical directions for preparation and administration (skeuasia): cf. Marganne (2004) 78–79 and Andorlini (2007) 26. They can be more or less abridged according to their final destination – the plain lists of ingredients, with very quick reference to composition and therapy, are the closest to our concept of ‘recipe’.
which must be adjusted and fine-tuned on the ground of experience. It is, in a sense, a ‘reperformance’, and even when this complex of ‘liquid’ knowledge is entrusted to writing, this happens in fragmented textual forms that resemble very much the oral discourse. ‘Fragment’ is, indeed, the baseline keyword to understand the textual transmission of medical recipes in the papyri: prescriptions, under whichever format they may come, are always fragments of an oral discourse, subject to adaptations and updates, and they keep this distinct appearance even in their written form. This will be the general bottom line of the present contribution, which will be focused on the transmission of medical prescriptive texts as attested by the papyrological sources from Graeco–Roman Egypt, as a key to understand also the earlier phases of the process, as well as its contemporary outcome in terms of digital representation.

An early stage of oral transmission of medical prescriptions can be ascertained from the survival of characteristic expressive modules in the later extant texts, repeated according to precise and constant schemes (formulaic structures, technical language) – a feature that occurs also in magical–religious rituals and juridical regulations, which partake in the same global set of knowledge that can be defined as ‘performative wisdom’. When, at some point, they are entrusted to writing on material supports, it is mainly for practical purposes, which influence the mechanics of their transmission. Hieratic Papyrus Ebers, dated to as early as the last quarter of the 16th century BC, is a huge repertory (108 columns) of recipes

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6 I borrow this term from the studies about the interplay between text transmission and representation in classical drama; see recently Finglass (2015).


9 On the origin of the earliest technical manuals composed of rules, prescriptions, and practical recommendations, see Cambiano (1992). At any rate, ‘the fact that there was a tradition of pharmacological knowledge is much more important than whether this tradition took a written or oral form’: Totelin (2009) 17.
– loosely classified by diseases – and clinical cases, likely collected along with anatomical sections in a sort of reference manual for practicing physicians.\textsuperscript{10}

Even in written form, however, medical prescriptions maintain their oral aspect, not only in the textual clues that I mentioned few lines above, but also in a set of graphic and layout features, the purpose of which is patently to preserve the shape of ‘fragment’ that each prescription acquires as a basic unit of discourse. Thus, in the Ebers papyrus itself, we can see each textual unit distinguished by a heading coloured red, and some other display devices, like variations in the column widths and displacements of text portions to distinguish different contents (e.g. lists of ingredients),\textsuperscript{11} which must be kept in mind for subsequent observations (see Picture 1).

\textbf{Picture 1:} Papyrus Ebers compared with PSI 10.1180.

Another striking feature, which illustrates the still active role played by actual practice in the transmission of medical prescriptive knowledge even in written

\textsuperscript{10} On Papyrus Ebers see recently Scholl (2002), with earlier bibliography.

form, is represented by the annotations that we sometimes find added to the margins of the main text, recording the physicians’ individual experience (‘really effective’).12

At the incipit of Papyrus Ebers, we read that ‘Thoth [the well–known Egyptian god of wisdom and writing] is the guide, he who causes the script speak. He is who elaborates the receptarium (lit. ‘completions of writings’), who imparts force to the scholars and to the physicians, his followers’.13 Thus, the earliest transcriptions of medical writings are sacred in scope, and take place in temple environments. This is somehow implicit in the well–known sacred status of writing in ancient Egypt14, but also corresponds to the idea that ancient medicine initially developed – mostly or totally – around sanctuaries. This argument has been claimed by Lorenzo Perilli with particular reference to ancient Greece,15 but the same observations can easily be applied to the Egyptian context as well.16

In the ancient Greek world, we do find indeed early attestations of medical writings in temple settings. Strabo, writing under Augustus, says apropos of Epidaurus:

καὶ αὕτη δ’ οὐκ ἄϲημοϲ ἡ πόλιϲ καὶ μάλιϲτα διὰ τὴν ἐπιφάνειαν τοῦ Ἀϲκληπιοῦ θεραπεύειν νόϲουϲ παντοδαπὰϲ πεπιϲτευμένου, καὶ τὸ ἱερὸν πλῆρεϲ ἔχοντοϲ ἀεὶ τῶν τε καμνόντων καὶ τῶν ἀνακειμένων πινάκων, ἐν οἷϲ ἀναγεγραμμέναι τυγχάνουϲιν αἱ θεραπεῖαι, καθάπερ ἐν Κῷ τε καὶ Τρίκκῃ.

(Strab. 8.6.15.5–10)

The city was renowned, in particular because of Asclepius’ reputation: it was believed that he healed any type of illness, and his temple was always crowded with sick people and full of votive tablets attached to the walls, on which the medical treatments used to be transcribed, just as in Cos and Tricca.

Strabo attests to a very traditional and long–standing practice, connected to the sanctuaries of the healing gods,17 which we know was already stabilized at least

13 I take this translation from Tanja Pommerening’s lecture delivered at the International Conference ‘Parlare la medicina: tra lingue e cultura, nello spazio e nel tempo’ held in Parma on September 5–7, 2016 in the framework of the DIGMEDTEXT project, cf. Pommerening (2018). The wording is slightly adapted in accordance to Andorlini (2006) 143.
in Hippocrates’ times (around 5th century BC). The famous father of Western medicine is indeed in the centre of a controversial episode involving temple medical writings, as recounted (among others) by Pliny the Elder in his *Natural History*:

> is, cum fuisset mos, liberatos morbis scribere in templo eius dei quid auxiliatum esset, ut postea similultudo profoiceret, exscriptisse ea traditur atque, ut Varro apud nos credit, templo cremato (i)is instituisse medicinam hanc, quae clinice vocatur.

(Plin. *HN. 29.4.4–8*)

It has been passed down that since there [sc. in Cos] the people who had been freed from the illnesses used to write in his [sc. Asclepius’] temple what had been of help to them [sc. the remedies that healed them] so that it could be useful for future circumstances, he [sc. Hippocrates] transcribed them and, as Varro believes among us, *templo cremato*, with them established the medicine, which is called ‘clinical’.

Depending on the correct translation of the ablative absolute *templo cremato*, interpretation is twofold: some believe that Hippocrates himself set fire to the temple, in order to remain solely depositary of that science; others have a bias towards an accident. At any rate, whatever it was, the bottom line of the story is the foundation of Hippocratic medicine on a well-established tradition of depositing and safekeeping medical writings in sanctuaries (mostly *Asklepieia*), which contained detailed descriptions of therapeutical procedures, as professional records of clinical cases to be kept reserved in order to transmit relevant knowledge to whom would face similar circumstances in the future, and eventually re-elaborated in votive dedications to the healing god:

> repertori, cartelle cliniche ante litteram, nelle quali registrare la ricca casistica che si offriva alla considerazione dei medici, e che è alla base delle testimonianze superstiti, epigrafiche e non. Schede di questo genere dovettero costituire il nucleo di repositori, dai quali si originarono più tardi le biblioteche dei santuari di Asclepio, costituite verosimilmente, soprattutto nella fase più antica, da materiali specialistici per uso interno, sia professionale che didattico.

18 The tradition about Hippocrates’ alleged arson is complex: it is not registered by Pliny only, and other sources give partially different details; see Von Staden (1999) 149–57 for a full picture of the matter.


20 Cf. Perilli (2007) 67 for some reference to extant votive inscriptions, which he argues to have derived from professional medical records, likely deprived of the most technical medical details for celebrative purposes.

This can be connected to the background issues related to the earlier transmis-

sion of recipes as investigated by Laurence Totelin (2009), who in the first three

chapters points out how some Hippocratic treatises containing prescriptions,

whether embedded in the text or listed in homogeneous sections, could stem

from ‘smaller catalogues’ integrated with oral sources. It is in fact possible to ver-

ify Totelin’s picture on the ground of the epigraphical and papyrological sources

at our disposal. As attested by Strabo, the earliest medical writings appeared in

the form of \textit{pinakes}, i.e. inscribed tablets,\textsuperscript{22} and indeed we find some similar ref-

erences in fourth–century temple inventories recorded on inscriptions from the

\textit{Asklepieion} of Athens. \textit{IG} II.2.1533 (dated to ca. 329/8 BC) reports a list of medical

objects and surgical instruments kept at that temple: at lines 116–7, a [\textit{ἰατρικὸν γραμματε}](\textit{ἀίον} (‘medical tablet’) is mentioned. Whether the listed items were \textit{ex voto} dedications or actual equipment belonging to the operating temple doctors,\textsuperscript{23} this epigraph attests to the existence of medical tablets in sacred environments. A similar inventory, \textit{IG} II.2.47 (dated to the early 4\textsuperscript{th} century BC as well), recording \textit{πινάκια} (‘tablets’, l. 18) among different objects labelled as \textit{σιδηρᾶ} (‘iron things’), would speak in favour of dedications, since dedications of metal tablets are at-

tested elsewhere.\textsuperscript{24} Again, details are perhaps irrelevant for our sake: suffice it to stress that the first stage of written transmission of Greek medical prescriptions, as snapshots of an oral knowledge in progress, took place within the temples and in a tablet format.

The collocation in temples is a fundamental means for assuring the sacred-

ness of written objects in a cultural environment where writing is ‘laic’ and de-

sacralized.\textsuperscript{25} Moreover, the tablet format corresponds to the types of supporting

media that were specifically devoted to record transient discourses with immedi-

acy, for ease of reference and use. Antiquity indeed seems to articulate its phe-

nomenology of writing into two big categories, which we can label ‘canonized

\textsuperscript{22} Cf. Degni (1998) 11ff.


\textsuperscript{24} For example, Pausanias (9.31.4) was showed by the Boeotians a lead tablet, which contained Hesiod’s \textit{Works and Days} and was dedicated near a sacred spring. However, Perilli (2007) 62–64 does not completely exclude that such iron tools could have pertained to everyday medical prac-

tice. A distinction is probably to be made between \textit{grammateia} and \textit{pinakia}, also on the ground of \textit{IG} I.2.91.11 (Callias’ financial decrees, dated to the early Thirties of the 5\textsuperscript{th} century BC) referring to \textit{τά τε πινάκια καὶ τά γραμματεία}, seemingly as two different entities, but this discourse must be undertaken elsewhere.

\textsuperscript{25} For the secularity of Greek script in relation to medical writings cf. Marganne (2004) 18; for the enshrinement of Greek writings in temples see Perilli (2007) \textit{passim}. 
writings’ and ‘offhand writings’. The former are accomplished written expressions aimed at lifelong preservation and textual canonization (mainly papyrus rolls); the latter are extemporaneous and temporary written expressions intended to be quickly discarded, updated, or modified somehow, and mostly for internal use (mainly tablet-like supports). Interactions between both typologies are somehow well attested, and are particularly striking as to the dynamics of textual transmission. The most appropriate to be mentioned here is probably the testimony provided by Diogenes Laertius (3.1.37), who reports that according to some sources Philip of Opus ‘transcribed’ (μετέγραψεν, certainly on papyrus rolls) Plato’s Laws, which had been left on waxed tablets (ἐν κηρῷ). The passage clearly deals with transmission stages of an oral discourse: for practical purposes (preliminary versions of works to be corrected and refined), the utterance is first transcribed on tablet-like supports, which for technical reasons look like the preferential media for ephemeral writings, provisional sketches, and then flow into papyrus rolls, for authoritative canonization and preservation. Thus medical prescriptions, expressions of a ‘fluid’ science and always subject to adaptations and updates, are preferentially transmitted through the former means: originally, wooden waxed tablets or the like. This fact, in a sense, offsets the strong concreteness of the usual Greek term indicating a medical recipe: γραφή, that is ‘writing’ tout court.

‘Hippocrates’, in whatsoever manner, broke a long-standing tradition by taking medical written transmission out of the temple. In doing so, however, he did not dare to change the transmission medium. Indeed, it seems that he retained the pinakia as the preferential writing media for medical knowledge. A subsection of the sixth book of the Epidemics exhibits the heading τὰ ἐκ τοῦ

26 For more detailed discussion see Reggiani (2018b); see already Reggiani (2010) passim.
27 A similar statement has been made by Calame (2011) on the difference between Orphic texts on tablets, intended for an ‘internal’, mystic use, and Orphic texts on rolls like the Derveni papyrus, intended for an ‘official’, religious use.
28 We know from other sources (i.e. Quint. Inst. 1.8.64; Dion. Hal. Comp. 25) that Plato did use to take notes on tablets, as also other authors did: cf. Dorandi (2007) 13–28ff.
30 See for instance Gal. Comp. med. gen. 13.676.2–4 K.: ἡ τοῦ φαρμάκου γραφή, ‘the prescription of the medicine’.
31 For the possible religious implications of some Hippocratic recipes see Totelin (2009) 111–39. Of course, here I am using ‘Hippocrates’ in a mere metaphorical sense, being well aware of the complex authorial issues of the so-called Corpus Hippocraticum.
Some people, whom by the way I believe have better understood the power of those books [sc. the Epidemics], think that five have been written by Thessalus [i.e. Hippocrates’ son], while two are of the great Hippocrates himself, and that for this reason they were titled ‘from the small tablet’. The provenance from a small tablet seems to act as a stylistic brand of Hippocrates’ writing authority, failed to have been re–elaborated into more ‘literary’ an appearance. In fact, the clinical cases described in the section of Epidemics introduced by the said caption appear as brief notes, almost lacking syntactic structure, in a juxtaposition of data that has been described as quasi–stenographic. The lack of any literary refinement immediately gives the impression of being a quick jotting down of oral considerations and practical experiences, or at least the transcription of ephemeral annotations. Apparently, the first written transmission of medical prescriptions – which we may identify with Laurence Totelin’s ‘smaller catalogues’ – takes the shape of schematic clinical repertoires aimed at safekeeping and future reference. This must have been the appearance of the medical pinakia kept in the temples – whether votive accounts or actual reference files – and preserved in Hippocrates’ annotations.

The oral and fragmentary aspect of prescriptive texts, as we perceive it through the disrupted yet formulaic syntax of Hippocratic ‘annotations’, corresponds with what is found in later times: symbols, abbreviations, and a rather

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32 The same observation is contained in Galen’s commentary to Hippocrates’ Epidemics (Gal. In Hp. Epid. 7.441.18–20 Pfaff = CMG 5.10.2.2), which is preserved in Arabic translation only: cf. Marganne (2007) 324 n. 43; Perilli (2007) 65.
tachygraphical handwriting constantly characterize the ‘graphic and expressive jargon’\textsuperscript{37} of medical recipes as preserved by Graeco–Roman papyri from Egypt (an example among many possible others: P. Oxy. 8.1088, from the 1st century AD;\textsuperscript{38} Picture 2) and as attested by coeval literary sources. Galen (\textit{Comp. med. sec. loc.} 12.423.13ff. K.) writes of a friend and colleague of his, Claudianus, who found some recipes belonging to a third colleague, then deceased, transcribed ‘in symbols’ (ϲυμβολικῶϲ δὲ γεγραμμένον: \textit{ibidem} 424.1–2) almost incomprehensible, which forpictuced him to countless single–step attempts in order to understand and decode them (\textit{ibidem} 424.2–4).

\textbf{Picture 2:} P. Oxy. 8.1088

Galen’s testimony depicts a further stage in the transmission of medical recipes. Now they are passed on, whether intentionally or not, among practicing physicians, in written form yet even more contributing to the ‘fluid’ appearance of the matter, because each user is compelled to customize the texts according to his own personal experiences or needs.\textsuperscript{39} The strong presence of technical writing

\textsuperscript{37} Andorlini (2006).


\textsuperscript{39} ‘Some degree of information sharing must have taken place in regard to initially unfamiliar drugs, though subsequently adapted by individual physicians to particular needs and experi-
devices such as symbols, abbreviations, special terms, tachygraphy, is itself indication of a circulation among specialized circles, as much as ‘Hippocratic’ or temple *pinakes* were reserved to single closed ‘schools’.  

L’osservazione di tali fenomeni, e del loro riproporsi costantemente nella tradizione dei testi medici greci su papiro, permette di riconoscere diverse fasi e livelli in cui il sapere tecnico contenuto nella ricetta medica veniva materialmente veicolato al lettore/consumatore attraverso moduli espressivi e dispositivi tecnici, visivi, fisici, che formano una sorta di *koiné*, un tutt’uno tra lingua tecnica e scrittura speciale dei testi. Di qui la suggestione di rintracciare una specie di ‘gergo’ nei connotati di quel particolare linguaggio criptico, grafico ed espressivo, che comunica all’interno di una determinata categoria professionale: il medico, gli altri medici (i colleghi), il farmacista, il commerciante di farmaci, il paziente. Si tratta di modi speciali di usare parole e segni attraverso i quali le competenze medico–terapeutiche tendono a specializzarsi all’interno di una corporazione di addetti alla professione medica.

It must not be underestimated that it is seemingly from the first centuries of the Roman Empire onwards that we find annotated evaluations of efficacy resembling those of the Papyrus Ebers, while the practice of indicating precise quantities for ingredients seems to date back to just few centuries before, to second–century BC Alexandria. Both of them may be regarded as new features, operational for a more widespread circulation of written medical prescriptions. This

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*ence*: Lang (2013) 181. ‘However communicated, empirical constraints and variation in the experiential use of medical recipes produced a considerable degree of adaptation, alteration and personalization among professionals, folk healers, and self–medicating users’: Lang (2013) 180. A nice case of self–medicating learned layman might be the Psenpaapis of O. Claud. 2.220 (ca. AD 137–145), who asks his brother Gemellus to go to the doctor to get some saffron and to send it to him, because he did not receive the medicinal *kollyria*; it seems apparent that he is willing to reproduce the eye–salve by himself: cf. Hanson (2010) 192 and 199, where she evokes laymen interested in self–medication as possible holders of single prescriptions.  


Cf. Lang (2013) 180 n. 164: ‘Similar claims in the Greek medical corpus before the early 2nd century CE are rare. *Diseases of women* 1.78 is a possibly unique example: ‘You will not find anything better’’.  

Cf. Lang (2013) 181–2. At any rate, the issue of quantifying measures is complex, as is shown in Reggiani (2015) and (2016) *passim*.  

Totelin (2009) 17 notes that Hippocratic compilers never name the sources of their recipes. This is in countertrend with what we know from the Greek papyri, and perhaps this change can be ascribed to the new transmission stage.
new transmission stage involves some further relevant issues, pinpointed by Galen himself – who, as a matter of common knowledge, carried on an important work of retrieval and collection of medical prescriptions – as follows:45

инои κακῶϲ εἰϲ γεγραμμέναι, τινῶν μὲν ἐν τῷ τοῖϲ αἰτήϲαι διδόναι τὰϲ γραφὰϲ ἐκοντὶ ἑλκωτικὰς, ἕνων δὲ καὶ διαστρεφόντων ἀ αἰτῆϲιν ἔλαβον ἀντίγραφα. τὰ δὲ δὴ βιβλία τὰ κατὰ τὰϲ βιβλιοθήκαϲ ἀποκείμενα, τὰ τῶν ἄριθμῶν ἔχοντα σημεία, ῥᾷδιωϲ διαστρέφεται

(Gal. Antid. 1.5 = 14.31.10–15 K.)

Some prescriptions are transcribed wrongly, because some people alter them intentionally when they give them to whom requested them, while others distance themselves from the copies received; and indeed the books kept at the libraries, those containing the symbols for the dose figures, are easily forged.

Forgery of medical prescriptions is a by–consequence of this new stage of transmission: circulation among physicians could harm the ‘intellectual copyright’ of the original developer of a remedy, so that he altered intentionally his written annotations (or made them unintelligible, as in the case of Claudianus’ colleague) in order to prevent unauthorized uses and to remain solely depositary of his own inventions (a concern that, as we saw, was attributed – in ‘flaming’ terms – to the same Hippocrates). At any rate, even intentional circulation of recipes was prone to corruptions and misunderstandings, as the following case – a letter sent by a doctor, Chairas, to a colleague of his, Dionysios, in AD 59 – clearly illustrates:46

ἀντιρ̣άφια (l. ἀντιγράφια) δέ μοι δύο ἔ̣πεμψαϲ, | τὸ μὲν τῆϲ Ἀρχαγαθῆϲ (l. –είου) τὸ δὲ τῆϲ | ἑλκωτικὴϲ. ἡ μὲν Ἀρχαγάθοϲ ὑγιῶϲ | περιέχει, ἡ δὲ ἑλκωτικὴ ῥητ{ε}ίνηϲ | ςυνϲταθμίαν οὐ περιέχει. ἐρωτῶ | δὲ ςε περὶ ἑ̣λκωτικῆϲ γενναίαϲ | δυναμένηϲ ἀκινδύνωϲ πέλμα(α) | ἐλκῶϲα· ... χ[ά]ρ [ξ][α]τ’ ἀνάγκην | ἐπείγομαι

(P. Mert. 1.12.13–21)

45 Cf. Marganne (2004) 79. See also Gal. Comp. med. gen. 4.7 = 13.726 K., where Galen again stresses some issues in deciphering symbols and conventional indications in medical prescriptions, praising the possibility to understand the differences between remedies and ingredients as one of the benefits of medical knowledge. On tachygraphical manuals comprising medical vocabulary see Marganne (2004) 85–86.

You sent me two copies [i.e. of recipes], one of Archagathus’ plaster, the other one of the cicatrizant. Archagathus’ one is correctly composed, while the cicatrizant lacks the resin dosage. Please let me know of a strong cicatrizant that can scar [the sores in] the foot planum, because I urgently need it.

This stage of transmission does not take place on wooden tablets any more. The recipes that belonged to the late colleague of Galen and Claudianus, in the above-mentioned passage, are said to be written ἐν π(τ)υκτίδι διψθέρᾳ, ‘on a folded parchment’ (Gal. Comp. med. sec. loc. 12.423.13–15 K.). This mention is paralleled by other passages by the same Galen, who in the recently discovered treatise De indolentia describes the loss of his own books in the AD 192 fire in Rome and, along with them, of a considerable collection of pharmacological recipes, which had been carefully kept κατὰ δῶο διψθέρας π(τ)υκτάϲ, ‘in two folded parchments’ (Gal. Indol. 33). The reference is overtly to those ‘notebooks’ made up of parchment sheets folded and bound together, the diffusion of which in the first centuries of the Roman Empire is now a fact. Such parchment notebooks, seemingly a Roman innovation (after the papyrus shortage occurred in 170–168 BC due to the invasion of Egypt by Antiochus V – so runs the vulgate), were meant to bear the very same function of the codices of bound wax tablets that are attested in the ancient Mediterranean since earlier times. Terminology is striking: as early as Homer, πτυκτίς is used to define such a tablet codex (ἐν πίνακι πτυκτῷ, Hom. Il. 6.168–9: Bellerophon’s ‘folded’ tablet). This makes clear that (a) the singular form could conceal a binding of more than one tablet (this can perhaps explain how Hippocrates’ clinical records could have fit ‘one’ tablet), and (b) parchment

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48 Boudon–Millot–Jouanna (2010) 103–5 and 108 argue that what Galen is describing in the two passages are parchment codices of large format, not just notebooks. This is a matter of interpretation, which deserves a longer and deeper discussion to be undertaken elsewhere – see Reggiani (2018b). The editors also discuss the meaning of the term πτυκτίς, and identify one of these two ‘codices’ with Claudianus’ one.
49 Cf. e.g. Roberts–Skeat (1987) 15–23. We should not underestimate the fact that Galen, as well as the other people involved in his exchange of parchment dossiers, came from Pergamum, which is the alleged motherland of parchment itself.
notebooks were regarded as belonging to the same bibliological category as tablet codices,\textsuperscript{51} and therefore used for the same purposes – ephemeral transcriptions of discourses subject to adaptations, modifications, updates.\textsuperscript{52}

At this stage, single medical prescriptions seemingly circulated in the form of small papyrus slips, purposely cut from larger sheets or rolls: they are what Isabella Bonati calls ‘etichette–ricetta’ (recipe labels) because they closely resemble, in shape and purpose, the ‘labels’ that were used to tag containers of medications.\textsuperscript{53} What is striking of such items is that when they flow into personal collections, for the sake of safekeeping, reference, and further transmission (as the examples cited above show), they are transcribed on those parchment notebooks,\textsuperscript{54} some examples of which came down to us – namely P. Ryl. 1.29 (mid 3\textsuperscript{rd} century AD) and PSI 6.718 = SB 26.16458 (4\textsuperscript{th} century AD: Picture 3) – and maintain their original aspect of unitary fragments, which is indeed unavoidable to ensure a correct, yet specialis circulation, as well as the preservation of scholarly authority, as the frequent mention of the inventors’ names apparently indicates.\textsuperscript{55}

Thus the writers deploy an entire set of graphic and layout devices with the sole aim of preserving the unity of each single recipe: separating lines (\textit{paragraphoi},\textsuperscript{56} forked \textit{paragraphoi}), indented/extended heading lines (\textit{eisthesis}/\textit{ekthesis}), blank spaces, line fillers, as well as formulaic verbal expedients. This fact is comprehensible on one hand, because it was important to keep each prescription well separated to avoid dangerous confusions in a writing system that did not envisage word breaking as a rule (\textit{scriptio continua}); but is remarkable on the other hand, since it is a requirement of such fragmentary textual categories that were closer to the parameters of ‘liquid’ transmission.

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\textsuperscript{51} Striking are Martial’s references to parchment notebooks as \textit{pugillares membranei} (‘tablets of parchment’, 14.7; cf. 14.184, and see also his famous \textit{hos eme, quos artat breuibus membrana tabellis}, ‘buy those, which parchment wraps in small tablets’, 1.2). For discussion of these attestations, which stand at the very birth of the parchment \textit{codex}, see e.g. Roberts–Skeat (1987) 24–29 and Degni (1998) 55–59.

\textsuperscript{52} For Roman parchment booklet to be used for drafting see e.g. Hor. \textit{Sat.} 2.3.1–2; Id. \textit{Ars P.} 386–90.

\textsuperscript{53} Bonati (2016) part. 52–57. \textit{Ostraka} are other common written media for the circulation of single recipes; they were likely intended for a very quick use and soon discarded.


\textsuperscript{55} Cf. Hanson (1997) 303.

\textsuperscript{56} On the sign \textit{paragraphos} cf. Giangrande (1978); Barbis Lupi (1994).
Consequently, recipes acquired the status of ‘textual fragments’ to be quoted or re–used by medical authors or compilers of more articulated reference works, the catalogues also known as *receptaria*, which were transcribed in more ‘library’ bookforms such as papyrus rolls, though maintaining their fragmentary status. Among the numerous possible examples, P. Berl. Möller 13 is a stunning instance. This papyrus is a comparatively large portion of a roll coming from Hermoupolis Magna and palaeographically dated between the late third and the early 4th century AD.\(^5\) It is written on the recto along the fibres, which makes it clear that it was purposely produced as a collection of medical prescriptions, of which only two columns survive: the first one, fully preserved, is numbered ‘11’ on the top, indicating that it was preceded by ten other columns; the second one, the lines of which are almost completely lost in the right–hand break, should have been numbered ‘12’ accordingly. The first column contains a single prescription, on

\(^5\) The image is available online in the databank *Berliner Papyrusdatenbank* (http://ww2.smb.museum/berlpap). I follow text and translation as republished by Corazza (2016).
nine lines, preceded by a two–line heading slightly indented, which corresponds to the *epangelia* section, i.e. the therapeutic indication: πρὸς τὸ μὴ ἀπορρεῖν τὰς ἐν τῇ κε|φαillation τρίχαϲ, ‘to prevent hair loss on the head’. The recipe – which does not provide the synopsis of the ingredients but move directly to the *skeuasia*, the practical instructions – has been identified by Marganne (1980) as a prescription that Galen ascribes to Heras of Cappadocia, a pharmacologist active between 20 BC and AD 20. The text on the papyrus parallels Gal. *Comp. med. sec. loc. 12.430.8–15 K.* verbatim,58 while other variant versions of the same remedy are recorded by Galen himself (*ibidem* 12.435–6 K.) as antecedents of Heras’ one.59

The rest of the column is blank. Subsequently, Corazza (2016) discovered that also some remnants of the second column can be identified with other recipes by Heras, this time against headache, mentioned by Galen as well, with some wording variants.60 Some features of the papyrus are remarkable as they illustrate some basic characteristics of the transmission of this text typology. (a) The recipes of the second column are separated by a horizontal line (*paragraphos*) from one another, thus preserving the usual appearance of single textual units. The indented heading of the first column should have been replicated at the top of the second column, and since all the three identified recipes deal with headache, we may think that the they were titled with a collective caption explaining their common application;61 this use might be related to the fact that single prescriptions were often transcribed without their introductory sections.62 (b) Two of the

58 In fact there are some interesting variants, which as usual show how papyri can contribute to the history of the texts: in particular, at line 10 (καλοῦϲι pap.: καλοῦϲι καί Gal.) the papyrus offers a superior reading, since the conjunction is syntactically unfit; further discussion in Corazza (2016) ad locc.


60 In particular, the first prescription of the second column (ll. 1–3) parallels Gal. *Comp. med. sec. loc. 12.593.14 K.* verbatim, while the following two (ll. 4–8 and 9–15) show partial overlaps with *ibidem* 12.594.1–4 (= Aet. 6.50.75–9) and 12.594.7ff. K. All these recipes are ascribed to Heras. The remaining traces of fifteen lines, articulated in four more recipes, could not be identified with any known text.

61 Corazza (2016) does not mention this feature. Unfortunately, nothing certain can be said about the remaining four prescriptions of the second column. Some possible integrations, as already noted by Corazza (2016) *passim ad locc.* may be compatible with other headache remedies; on the other hand, it could be possible that the somehow larger interlinear space after the *paragraphoi* between ll. 15–6 and 22–3 conceal further headings of different thematic sections (*ibidem ad locc.*), though they appear narrower than the space at the top of the column.

62 The graphic and paratextual devices deployed by such collections of recipes to keep the original fragmentary unity of the texts is even more evident in PSI 10.1180. A papyrus roll from 1st / 2nd century AD Tebtunis. The prescriptions, here, are separated by *paragraphoi* as in P. Berl. Möller 13; moreover, their first line is always extended in *ekthesis*, and the ingredients are listed
recipes patently parallel Galen, but the papyrus is by no means a copy of *On the composition of medicaments by places*: they do not follow the canonical order in which they are cited in Galen’s treatise, clearly attesting a work of selection, extraction, and thematic re-arrangement, in which each recipe is treated as a unit to be managed on its own. Moreover, the other two identified prescriptions look like variants of Heras’ texts as reported by Galen, thus attesting a ‘fluid’ stage of transmission, in which recipes are modified and adapted according to the users (Galen himself, as we saw, attests some earlier versions of Heras’ recipe against hair loss). (c) Combining both of the preceding points, the explanation of the huge blank space in the first column becomes apparent. As already suggested by Corazza (2016) 41, this was likely ‘intended to contain further prescriptions against hair loss […], possibly taken from various sources’ or from the same Heras, whether through Galen or not.53

This case therefore perfectly illustrates how collections of prescriptions were ‘living texts’, as defined by Bonati (2016) 66, ‘fluid’ and open repositories of an ever-changing fragmentary knowledge rather than fixed containers of canonized texts, as more formalized treatises may have been even when they are transcribed on writing media of library tradition.64 The operation of collecting, comparing, and transcribing prescriptions – a fundamental step in the history of their transmission – is well attested in the everyday practice of ancient physicians, in the

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53 ‘This remedy against hair loss is likely to have been followed in the *Narthex* [sc. Heras’ pharmacological work] by another one (or more than one) for the same disease apparently not preserved in the papyrus, cf. Gal. *Comp. [med.] sec. loc.* [12,]430,[15–6] K.: ταῦτα περὶ τῆς προτέρας συνθέσεως εἰπὼν ὁ Ἡρας ἐφεξῆς γράφει ταῦτα’: Corazza (2016) 44. Corazza (2016) 41 mentions the possibility that the blank may have served as a separation between two different thematic sections of the collection, as attested elsewhere, and namely refers to P. Lit. Lond. 132. However, this is a very well-shaped collection of Hyperides’ orations, and the blank separates the orations from each other (cf. Caroli [2007] 263), which is something somehow different than our case. The blanks in the Hyperides roll are indeed subsequently treated as initial *agrapha*, where a second scribe adds the title of the successive oration (on the use of placing titles in the opening *agrapha* of bookrolls see e.g. Caroli [2007] 53–57), while in our *receptarium* the ‘titles’ are certainly placed at the top of the column.

64 I suspect that when such technical reference books show up in the format of papyrus roll, they come from a somehow ‘higher’ temple tradition. It is a hypothesis to be verified, but, for instance, PSI 10.1180, the *receptarium* roll mentioned above, also written on the recto, certainly comes from the temple of Soknebtunis at Tebtunis: cf. Andorlini (2004) 82–83. P. Oxy. 8.1088, cited above as well, comes from a papyrus roll cut off and reused on purpose, so it represents a slightly different case.
circulating *antigraphia* of the abovementioned letter by Chairas\textsuperscript{65} as well as by Galen himself, who after describing how he got in possession of the parchment dossier recounts:

> [... \(\text{πολίτην τε καὶ ςυμφοιτηὴν ἐμὸν ὀνόματι Τεύθραντα διατρίβοντα κατὰ τὴν πόλιν εὗρον \(\)) \(\text{δὲ διεδέκτο τάς Ἑὔμενοὺς τοῦ ἱατροῦ διφθέρας, ὄντος μὲν καὶ αὐτοῦ Περγαμηνοῦ, φιλοφαρμάκου δὲ καὶ πολυφαρμάκου πάντων τῶν ἱατρῶν μᾶλιϲ. καὶ αὐτὰ \(\) δὲ αἱ διφθέραι \(\) ἐν ἑνὶ ςχεδὸν \(\) ἐξ \(\) ὀλής τῆς οἰκουμένης ἦϲαν \(\) ςυνηθροιϲμέναι διὰ τὰϲ \(\) ἐπιγινομέναϲ \(\) ἀποδημίαϲ \(\) αὐτῷ \(\). \(\) \) ἐκ τούτων \(\) ὑϲ \(\) τῶν \(\) παραϲκευῶν, εἰ \(\) τὶ \(\) τῶν \(\) θαυμαϲίων \(\) εἶϲ \(\) φαρμάϲων, \(\) ἐλάμβανον \(\) οὔ \(\) χαλεπῶϲ, \(\) ἀντιδιδοϲ \(\) δὗ \(\) καὶ τρία \(\) τῶν \(\) ὁμοίων.\(\) (\textit{Gal. Indol.} 34–5)\)

I found a fellow citizen and pupil of mine, Teuthras, who was living in the city, and who had received the parchments of Eumenes the physician, who was from Pergamum as well, who loved medicines and was rich in medicines more than all physicians. Such parchments were collected in one [notebook?] – so to say – from all around the world, due to his travels, following one another [...]. From such sketches, if someone possessed an extraordinary medicine, I got it without difficulty, giving two or three similar recipes in exchange.

Such a circulation of collected, even swapped prescriptions takes place in the form of parchment sheets or notebooks, which we should imagine to have been gradually filled in as the holder found new interesting items.\textsuperscript{66} As a new stage of transmission, prescriptions are gathered in more structured ‘catalogues’, where the texts are usually organized and arranged thematically, though nonetheless maintain a certain openness to ‘modular’ additions, as we previously observed, and as is revealed by the wide variety of prescription versions and variants that we find in the *receptaria*:

> although individual recipes in a collection on papyrus often resemble items in the known authors, each extensive collection on papyrus has thusfar proved to be a unique assemblage.\textsuperscript{67}

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\textsuperscript{66} It is particularly remarkable the abovementioned PSI 6.718, where the prescriptions follow one another without any apparent thematic coherence: a recipe against enuresis, one against hoarseness, and a third one ‘for making old wine good’. No attention is usually paid to this last prescription by the editors, but note that aromatic wine could have had also a medical use (see e.g. Fournet–Magdelaine [2001] and Maravela [2010]; in general on wine in ancient medicine see Jouanna [2012] 173–93) and it seems likely that this recipe advised to spice the wine in some unknown way. This may account for its inclusion in such a collection of medical prescriptions.

\textsuperscript{67} Hanson (2010) 199.
The most suitable book format for such a ‘liquid’ typology of text seems to have been the codex, for its flexibility to accommodate in-text or marginal additions.\textsuperscript{68} The most intriguing example is the so-called ‘Michigan Medical Codex’ (P. Mich. 17.758),\textsuperscript{69} a receptarium on a small-format papyrus codex, dated to the 4\textsuperscript{th} century AD, of which thirteen leaves survive to an amount of twenty-six pages, in which numerous recipes are collected – seemingly – according to type of medication (pills and lozenges, then wet and dry plasters, at least in the extant pieces). As usual, recipes start with an indented heading, announcing the type of remedy, and are separated from each other with lines and small blank spaces; they typically contain the list of ingredients, followed by directions for composition and use. Many prescriptions are ascribed to famous doctors, and ‘the presence of plasters from a variety of different physicians suggests that the basic text of the codex was combining and taking its shape over considerable time’.\textsuperscript{70} They likely came from those personal notebooks, which were collected over the time, and then passed on. But an even striking feature is the intervention by the owner of the codex, certainly a practicing physician himself:

\begin{quote}
not only did he intervene in the text by correcting a few of the scribe’s obvious errors of copying, but he also squeezed into the copious bottom margins some twenty additional recipes on related topics, doubling the number of recipes in the preserved sections. Because empty space was limited, he emphasized separation between recipes through lines and marginal markers',\textsuperscript{71}
\end{quote}

contributing to build up an articulated network, in which the baseline concern was to keep the original fragmentary unit (and authoritativeness) of each prescription by the deployment of the usual paratextual devices.

The activity of the anonymous owner of the Michigan Medical Codex is a true ‘philological’ behaviour, the same that underlies Galen’s efforts to collect hundreds of prescriptions, and to collate library manuscripts, carefully considering all possible marginal annotations and textual variants, in order to compile his huge treatises,\textsuperscript{72} among which we must certainly situate the pharmacological compilations. These were intended to be circulating publications of canonized

\textsuperscript{68} Literature about the codex and its technical feature is immense; see at least Turner (1977), beside the bibliography collected by Reggiani (2010).
\textsuperscript{70} Hanson (1997) 303.
\textsuperscript{71} Hanson (1997) 303.
texts, and are therefore entrusted to more standardized book forms such as papyrus rolls. Indeed, in describing the AD 192 disaster, he clearly distinguishes three types of writing media, which patently exemplify the three different stages of transmission of medical prescriptions:

οὐ μόνον οὖν ἀπώλον κατὰ τὴν πυρκαίαν αἱ διφτέραι πάϲαι […] ἀλλὰ πραγματεία μοι γεγονυῖα μετὰ πολλῆϲ ἀκριβείαϲ, ἦ περὶ συνθέϲεωϲ φαρμάκων, ἐν ᾗ πῶϲ ἀν τιϲ αὖθιϲ συνθεῑ[v] φαρμάκων ὀλίγων γραφαὶ φθάνουϲαι δίδοϲθαι τοῖϲ ἑταίροιϲ

(Gal. Indol. 37)

Not only did perish in the blaze all the parchments […], but also a treatise composed by me with great care, the one On the composition of medicaments, in which I showed how the most celebrated remedies can be recomposed, and are preserved only the recipes of few medicines, which had already been given to my fellows.

The single recipes (graphai), likely on papyrus slips, and the parchment notebooks (diphtheriai) are clearly contrasted with the copies of the first two books of his De compositione medicamentorum per genera, which elsewhere he states to have been burnt in that occasion, referring to them as bibloi (Gal. Comp. med. gen. 13.362.1–5 K.). Working copies, most likely in the codex format just like the Michigan ‘book’, are not mentioned, though ‘l’uso dotto delle copie di lavoro doveva essere una modalità già praticata per la predisposizione e la fruizione del libro nella forma libraria del rotolo’. Such an editorial practice, necessarily in continuous development, unavoidably open to endless revisions, annotations, modifications, goes on until the very latest examples among Greek papyri. P. Ant. 3.186 is a very fragmentary large–format papyrus codex from Antinoupolis, dated to the 6th century AD on palaeographical grounds, and contains sections of Galen’s De compositione medicamentorum per genera. Some scanty marginal annotations survive, and typical layout devices like blank spaces and overlines are

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73 It seems to me that for Galen diphtherai means the single parchment sheets, which could be folded (ptuktis) and then gathered in one or more bounded notebooks (see above, ἐν ἐνὶ and κατὰ δύο διφθέραϲ π(τ)υτκτάϲ).


deployed to isolate the headings ἀλλὰ introducing new prescriptions in a homogeneous series (see e.g. fr. 8).\textsuperscript{76} This shows how even canonized texts were transformed into ‘living’ texts over and over again, not without remarkable effects on the medieval tradition of the ancient authors.\textsuperscript{77}

The following words by Ann Hanson best summarize the bottom line of textual transmission of medical prescriptions:

The appearance of the ancient catalogues underscores the potential frangibility of recipe collections, for their writers and scribes took specific care to articulate not only the rubrics under which a series of prescriptions were grouped, but also to articulate individual prescriptions, in order to maintain the recipe’s textual integrity in a scribal culture in which the majority of prose texts were written continuously, without word division or breaks at the end of sentences (scriptio continua). In the case of recipes it was, of course, crucial to show where one stopped and the new one began, to demonstrate which ingredients and which instructions must be understood together. The full range of articulating devices then in use are brought into play to highlight the beginning of a new recipe: ekthesis, or extension into the margin, and eisthesis, or indentation; paragraphoi, or other separating lines; on–line spaces; enlargement of the first word’s initial letter. Verbal separators, such as beginning a recipe with ‘If someone suffers from this, do that’, or, for the second and following recipes in a series, beginning with ‘another’, are both ubiquitous dividers, shared not only with earlier non–Greek medical traditions of the eastern Mediterranean, but passed on to the Greek manuscripts of the Byzantine tradition.\textsuperscript{78}

All of these considerations are basic to the evaluation of modern representation of such medical sources in electronic format. Papyrology, which admittedly has a long–standing familiarity with digital resources, in the last few years has built powerful textual databanks that have proven fundamental for enhancing scholarly research in the field.\textsuperscript{79} Digitisation is particularly important for textual identifications and reconstructions,\textsuperscript{80} but the traditional papyrological databases (namely, the Duke Databank of Documentary Papyri at http://papyri.info) have not been conceived to encode the so–called ‘literary’ and ‘paraliterary’ text categories, to which medical papyri (and prescriptions among them) belong. New

\textsuperscript{76} Andorlini (1992) 14–20 illustrates other similar cases from a different late papyrus codex from Antinoupolis (abbreviations, symbols, text displacements, etc.). On the context of the medical collection from Antinoupolis cf. Marganne (1984).


\textsuperscript{78} Hanson (1997) 302.

\textsuperscript{79} See now Reggiani (2017a) passim, in particular chapters 1 and 8.

\textsuperscript{80} Cf. Hanson (1997) 300–4 and (2002) 196 for some examples of an effective use of literary databases (namely the Thesaurus Linguae Graecae) in the study of medical papyri.
Digital platforms are currently being developed to fill in this gap – above all, the Digital Corpus of Literary Papyri (DCLP at http://litpap.info) – but are based on the already extant tools, which were designed to support documentary texts only. This raised the necessity to develop new scientific concepts and new technical schemes in order to face the peculiar features of such complex texts as the ones I presented in this contribution. Not by chance the medical papyri project held in Parma\textsuperscript{81} has been one of the first partners of DCLP.

As I underlined above, medical texts – and prescriptions above all – distinguish themselves for a strong fluidity, which is rather unfitted by the traditional way of representing ancient texts as deployed by the current databases, which still owe very much to the traditional critical edition as reconstruction of a fixed archetype, overcoming all possible variants as deviations from a canonical text, and which do not support a precise encoding of paratextual and layout features. On the contrary, as we saw, textual variants and individual idiosyncrasies get to be intimately part of the transmission of medical prescriptions, as the full set of paratextual devices deployed to keep the fragmentary unit of recipes do. The inadequacy of the traditional philological/stemmatological model to represent in full the textual features of these complex and fluid technical writings has already been pointed out by Hanson (2010) and Totelin (2009) part. 21–66. The ‘accretive model of composition’, advanced by the former to provide a suitable description of the phenomenon, which corresponds to the latter’s anthropological standpoint, is perfectly pertinent to a global rethinking of the matter, in search of new standards of representation of such ‘dynamic’ texts. I will not deal with merely technical information here\textsuperscript{82}, but with the theoretical concept that lies behind them. Essentially, when conceiving a digital edition, we ought not to focus on the sole text but must keep the complete dimension of the documentary object. Each ancient textual feature, which contributes intimately to its meaning and its cultural significance, deserves careful preservation. Therefore, we ought to re-establish the original concept of text fragmentation by developing and enhancing the current databanks, towards the ideal of a multitextual and comprehensive...

\textsuperscript{81} The DIGMEDTEXT Project is aimed at creating an online database of the Greek medical papyri: see at http://www.papirologia.unipr.it/ERC.

\textsuperscript{82} I refer to Reggiani (2018c), (2018b), and (2019b) for a deeper discussion of the technical issues.
digital critical edition\textsuperscript{83}. In other words, in the new multi–dimensional electronic environment a new stage in the history of textual transmission is conceivable.

\textsuperscript{83} Multitext is the innovative infrastructure model developed by the Center for Hellenic Studies for the digital edition of Homeric poems (including Homeric papyri). It is based on the consideration that Homeric textual evidence, fluid in nature, does not comply with the traditional philological/stemmatological view of variants stemming from a single archetype, since an original Homeric text never existed. The multitextual model is also suitable for the digital encoding of fragmentary sources: cf. Reggiani (2017a) chapter 9 and (2019a).
Bibliography

Abbreviations

CCSL (1953–) Corpus Christianorum Series Latina, Turnhout.
CSEL (1866–) Corpus Scriptorum Ecclesiasticorum Latinorunm, Vienna.
EDB Epigraphic Database Bari.
EDCS Epigraphischen Datenbank Claus–Slaby.
EDR Epigraphic Database Roma.
EM Athens Epigraphical Museum, Athens.
ICUR De Rossi, G.B. (1857–) Inscriptiones Christianae urbis Romae septimo saeculo antiquiores, Rome.
Louvre, Ma Musée du Louvre, Antiquités grecques et romaines.
MAN Naples Museo Archeologico Nazionale di Napoli.
MAN Parma Museo Archeologico Nazionale di Parma.
MGH Pertz, G.H. et al. (1826–) Monumenta Germaniae Historica inde ab a. c. 500 usque ad a. 1500, Hanover–Berlin etc.
MNR Terme Museo Nazionale Romano, Terme di Diocleziano.

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OCT: *Oxford Classical texts*


TLL: (1894–) *Thesaurus Linguae Latinae*, Munich.

TR: *Textus Receptus*

Vat. Mus.: Musei Vaticani, Vatican city.


Online Databases

BerlPap: *Berliner Papyrusdatenbank* <https://berlpap.smb.museum/> >

DIGIVATLIB: *Digital Vatican Library* <https://digi.vatlib.it/> >


EDB: *Epigraphic Database Bari* <http://www.edb.uniba.it/> >

EDCS: *Epigraphische Datenbank Clauß–Slaby* <http://www.manfredclauß.de/> >


EDR: *Epigraphische Datenbank Roma* <http://www.edr–edr.it/> >


TLL: *Thesaurus Linguae Latinae online* <http://www–1degruyter–1com–1thesauruslinguaelatinae.emeden3.sub.uni–hamburg.de/view/db/tll> >
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On the Track of the Books
Beiträge zur Altertumskunde

Herausgegeben von Susanne Daub, Michael Erler, Dorothee Gall, Ludwig Koenen und Clemens Zintzen

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On the Track of the Books

Scribes, Libraries and Textual Transmission

Edited by
Roberta Berardi, Nicoletta Bruno and Luisa Fizzarotti

DE GRUYTER
Preface: *Cupis Volitare Per Auras – Books, Libraries and Textual Transmission*

The present volume is conceived as the result of a discussion began during the two–day conference (Bari, 27–28, October, 2016) organised by the cultural association Prolepsis as its First International Postgraduate Conference. It is indeed from this meeting (*Cupis Volitare Per Auras – Books, Libraries and Textual Transmission from the Ancient to the Medieval World*) that this book takes its name. It is a title derived from Martial, who in *Ep.* 1.3 (*‘Cupis volitare per auras’*) addresses his book and blames it for wanting to fly away and become public instead of staying home. Thus, this sophisticated poetic quotation, offered us the hint for a wide reflection on ancient textual transmission and editorial practices in antiquity. In the vast and culturally lively scenario that characterised the reflection sprung on such a broad topic during the varied and multifaceted moments of discussions, emerged during this two–day conference, three main themes¹ stood out as deserving of deeper investigation and further study: the concept of ‘book’ in antiquity and its development; the crucial connection between text, paratext and scholarly work; and the various aspects that characterise materiality as means of survival of texts. Therefore, these are the points on which the three sections of this volume are constructed and shaped. Section one *Writers at Work: Books, Figured Books, and Ancient Authorial Strategies*, through its five contributions, will constitute an exploration on the role of books both as a material element and as a mental concept, but also on ancient editorial processes; section two, composed of five papers and entitled *Following the Routes of Textual Transmission: Corpora, Text and Paratext*, aims at investigating deeply into the mechanisms of formation of corpora and circulation of texts, alongside their paratextual apparatus; finally, our third section, entitled ‘One More Link in the Chain’: *Scribes, Stones, Codices, Libraries* and formed of six contributions, will show how the history of texts is also the history of the materials and the people that made them. We would like to imagine the three sections of this volume as the representation of a path that keeps broadening and enlarging, starting from a simple object – the book and its text – , that becomes bigger and richer through its paratext and its mechanisms of circulation, in order to eventually reach a final advanced stage in which it is part of wider contexts, of intellectual communities, *scriptoria*, and libraries.

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Introduction

1 Writers at Work: Books, Figured Books and Ancient Authorial Strategies

De los diversos instrumentos del hombre, el más asombroso es, sin duda, el libro. Los demás son extensiones de su cuerpo. El microscopio, el telescopio, son extensiones de su vista; el teléfono es extensión de la voz; luego tenemos el arado y la espada, extensiones de su brazo. Pero el libro es otra cosa: el libro es una extensión de la memoria y de la imaginación.

(Jorge Luis Borges, El libro in Borges oral, 1979)

In the first section, the collected papers retrace the first steps of the process of ancient writing, editing and publishing.¹ The reader will discover how the book is both a material object and a metaphorical personification, as is stands for something else, material or immaterial – a person, an object, and a literary motif. The book roll, its production, use and circulation, could be an instrument of cultural authority and the act of publishing could be also dangerous, especially if an author was accused of plagiarism.² Is it, however, correct to talk about plagiarism in ancient Greece and Rome? What are the strategies of quotations and allusions used by ancient authors? What is the reader’s response? Are the readers able to understand the cross references within and beyond a generic–code system or a rhetorical strategy?³ The analogical relationship between materiality and symbolism of books and libraries overcomes the literary game and becomes the mirror of the ancient society, in all its cultural, political and economic aspects and differences.⁴

² On the theme of plagiarism in Latin literature see McGill (2012).
The first two essays concern Horace and the ways in which Horace’s own poetic books are personified and treated symbolically in his works. The first contribution is written by a distinguished Horatian scholar, **Stephen Harrison** (University of Oxford), and is devoted to the analysis of three examples of the metapoetical personifications of Horace’s book, *Carm. 1.38, Epist. 1.13 and 1.20*. The figures of personification and metaphors used by Horace seem to reflect both appropriate literary and cultural traditions and the physical form of ancient book–rolls. In *Carm. 1.38*, the poetic book is compared with a garland: the Horatian metaphor is clearly inherited by Greek epigrammatic tradition, and, according to Harrison, it looks back to Callimachus (*Ep. 28 Pfeiffer*) and Meleager (*Anth. Pal. 4.1*). As Harrison rightly points out, this is not the only Callimachean manifesto at the end of the Horatian poetry book, suffice to mention *Carm. 2.20*. The literary tone deeply changes in two examples picked from *Epistles*’ Book 1, according to the realistic ‘generic’ code of satire. The key point of humour in *Epist. 1.13* is the ironic contrast between the lightness of the burden (the three papyri book–rolls of the *Odes*) and the melodramatic instructions given by the poet for their transport to Augustus. Harrison argues that the analogy is between soldiers and beasts of burden, and the poetic books are figured as military baggage. In the last example, the analysis of *Epist. 1.20*, the book is the personification of a boy, or better, a runaway slave, explored in hilarious ways which combine both Callimachean aesthetics and the nasty details of Roman prostitution.\(^5\)

A detailed analysis of Horace *Epist. 1.20* is the core of the essay by **Georgios Taxidis** (Universität Hamburg). Methods and perspectives used by Taxidis aim at a deep and new investigation on the use of Horatian lexicon of writing materials and the literary practice of *sphragis*. The main purpose of this paper is to shed light on the ways in which the technical terms of writing material items are used, according to a perception that is distant from any relation to the book’s image as a slave boy. Moreover, Taxidis compares the mentioned use of this specific lexicon with similar examples in other authors and other works of Horace. The second part of the paper deals with the comparison between two types of *sphragis*: one claiming poetic immortality (*Carm. 3.30.1 exegi monumentum aere perennius*) and the other one, the final lines of *Epist. 1.20*, characterised by a ‘self–deprecat ing humor’.

In the third chapter, **Katherine Krauss** (University of Oxford) explores how the material text works as a literary motif in self–consciously learned writings of the 2\textsuperscript{nd} century AD. Krauss focuses on the function and significance of the book roll in Aulus Gellius’s *Noctes Atticae* and Lucian’s *adversus Indoctum*, and she

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demonstrates how both the works share the same cultural *milieu*. She offers a treatment to the symbolic values of the book roll *per se*, which concern both Latin and Greek thought in the 2nd century AD. Both *Noctes Atticae* and *adversus Indocustum* reveal a preoccupation with the settings in which books can and cannot be employed as reliable symbols of authority. She traces the development of two related motifs, the use of the book as an implicit source of denigration of intellectuals, associated with the pecuniary aspects of education, and the limitations of the book’s ability to confer such an authoritative status to Gellius and Lucian as erudite narrators.

The paper by **Ambra Russotti** (Alma Mater Studiorum – Università di Bologna) summarises the complex question of the second edition of Book 10 of Martial’s *Epigrams*, providing a useful overview, and highlighting three interesting key points (*epigrammata longa*; the theme of plagiarism; Martial’s return to Spain). The case of Book 10 of *Epigrams* is not isolated: this fate was not only peculiar of Martial’s book. The first problem deals with the *epigrammata longa*: according to Russotti, Martial inserted them for a political reason, with the aim to substitute and delete the praise of Domitian; in fact, Martial, during Domitian’s reign had flattered and celebrated the emperor, therefore after Domitian’s death, he fell in disgrace. In the second part of the contribution, Russotti analyses the issue of plagiarism in Martial, starting her reflection from the Roman cultural and social meaning of this phenomenon: even if in the age of Martial divulged work could potentially be stolen, and even if plagiarism were a constant problem for the poet, Martial speaks about the topic only in some particular moments of his career (especially in Book 1 and 10). In the last part of her paper, Russotti briefly deals with the topic of Martial’s return to Spain, that is one of the dominant topics of Book 10. Although it is impossible to precisely reconstruct Book 10’s first edition, the results reached with this study clarify the nature of the modifications that Martial did, by considering the features of this book in comparison with those of others.

The last two essays of the first section aim at studying the practice of literary quotation and allusion to other ancient texts, according to different genres, languages and time. This common practice can also help the ancient and modern reader to reconstruct the libraries and the most widely read and quoted books. **Antonio Iacoviello** (University of Edinburgh), in his essay, considers the use of poetical *piéces*, especially from epic and tragic poetry (Homer and Euripides), in Attic oratory since the end of the 5th century BC. He focuses on three orators, Aeschines, Lycurgus and Demosthenes (in particular, on these speeches, Aeschin. 1–3, Lycurg. *Leoc.*, Dem. 18–19) and he shows how Homeric poems and Euripides’ tragedy were a powerful instrument to strengthen the orator’s political reasoning.
Iacoviello’s aim is not limited to the comprehension of the context of the quotes and the interpretation the orator gives to his quotations for his own speech. These orations, in fact, are important testimonia both for the reconstruction of the pre–aristarchean Iliad, known in Athens in the 4th century BC, and for some fragments of lost Euripidean tragedies, such as long rheseis.

Jerome’s bibliophilia is renowned and the author of the last chapter of the first section, Giulia Marolla (Università della Repubblica di San Marino), is well aware of the impossibility, for a modern reader, to recreate Jerome’s library. His massive quotations of Latin classics, Cicero and Virgil in the first place, especially in the enormous corpus of his Epistles, are ascribable to a ‘mental library’, one which probably Jerome refers to more often than it is necessary, to justify his quotations from detractors. It seems clear, according to Marolla, that Jerome’s purpose is to make use of the literary tradition of the past to enrich and embellish Christian writings with an excellent style. Marolla focuses on Jerome’s use of Cicero’s model in Ep. 123, that is an effective example of his recurring to a mental library and furthermore, his borrowing of classical echoes is a conscious choice. Though the content of his works reflects Christian models, the Scriptures, Paul and Tertullian, his style and language is riddled with classical references and reminiscences of his juvenile years as a student of Aelius Donatus. The study demonstrates that Jerome’s libraries are two: one physical in Bethlehem, impossible to recreate, but enriched by manuscripts of pagan authors copied for him, and one mental library, a sort of mental archive of his classical reminiscences.
2 Following the Routes of Textual Transmission: Corpora, Text, and Paratext

Il paraît que les érudits arabes, en parlant du texte, emploient cette expression admirable: le corps certain. Quel corps? Nous en avons plusieurs; le corps des anatomistes et des physiologistes, celui que voit ou que parle la science : c’est le texte des grammairiens, des critiques, des commentateurs, des philologues (c’est le phéno–texte)

(R. Barthes, Le Plaisir du Texte, 1970)

The second section of this volume will focus on corpora of Greek texts, their formation, and their paratextual apparatus. Throughout the five contributions included, the reader will explore various issues dealing with some of the mechanisms that are at the basis of the assembling of ancient Greek texts belonging to different literary (and not only literary) genres, but great attention will also be given to the role that marginal annotations and ancient scholarly work have had in relation to these texts. The section is therefore mainly structured in two parts: in the first one, we will see how certain environments can strongly influence the process of formation of corpora and their circulation, but also how even some individual textual choices can be the result of specific cultural conditions. Then, in the second part, the focus will move from the text to the paratext and the exegetical material (transmitted by various means), and on the different approaches that scholars can employ to work on it. Finally, the discussion on paratext will shift towards some newly emerging editorial issues, arising from the necessity to establish a clear text for some rather complex cases where text and paratext are intrinsically connected.

The first two essays deal with corpora of texts, the way they were put together, how their text was established, but also with the historical and cultural reasons that influenced their circulation. The first contribution is the one provided by Daniela Cagnazzo (Università degli Studi di Bari), it is entitled Some remarks on P. Lit. Lond. 63, a riddle epigram of an anthology?, and it contains the

6 About the formation of corpora of Greek authors, see relevant examples in Canfora (1995) 95–250.
7 As regards scholia and scholarly activity, among the vast literature on the topic, it is worth mentioning some recent works: Dickey (2006); Montanari–Pagani (2011) and Montanari–Mathaios–Rengakos (2014).
8 On textual variants see Pasquali (1952) in particular chapters 6, ‘Varianti antiche e antiche edizioni’, and 7 ‘Edizioni originali e variante di autore’.
9 On editorial issues see Grant (1989). For digital editions, see also Driscoll–Pierazzo (2016).
author’s re-examination of a relatively understudied papyrus, P. Lit. Lond. 63, an example of riddle epigram from the 2nd century AD, which is to be attributed to the environment of the school. It is studied by Cagnazzo in the context of the lack of witnesses of epigrammatic anthologies in Egypt in a period that covers the 2nd and the 3rd centuries, and is seen as emblematic (along with a number of other additional instances) of the discrepancy in that period between the attested presence of epigrams in schools (and broadly speaking in private contexts), and the absence of witnesses of proper anthology books – a typically more suitable place to arrange sets of epigrams (and for this the author also provides some general information). Thus, this contribution aims at giving a specimen case of a possible investigation on what a difficult and delicate task it can be at times to draw definite conclusions on the circulation and spreading of a certain literary genre in a period characterised by a striking lack of documentation. Cagnazzo’s work, therefore, hints at the phenomenon of the formation of corpora of texts as a product of social and cultural changes (which often, as in this case, are almost impossible to determine due to the scarcity of the information at our disposal).

Then, the analysis on the formation of corpora proceeds on the same track and becomes more specific with the second contribution by Leonor Hernandez Oñate (Universidad Autónoma Metropolitana). Her chapter, entitled Textual Tradition and Reception in Theocritus. The Case of αἰπολικὸν (Theoc. 1.56) constitutes a detailed investigation on the mechanisms of formation of the Theocritean corpus, and more specifically on textual choices that became part of the vulgata at a very early stage of the process. Social and cultural phenomena, indeed, as Hernandez Oñate argues, are not only at the basis of the fortune and survival of a genre (as we have seen for the case of epigrams in Cagnazzo’s paper) or of a single author, but they can also be intrinsically connected to textual choices. In this paper, in particular, Hernandez Oñate shows us how the early reception of the Theocritean text might have ended up strongly influencing the constitutio of his text; therefore, the author convincingly shows us this way as reception and textual transmission are much more related than they might seem at a first glance. This issue is carefully explained through the aid of a relevant example, the one of αἰπολικὸν (Theoc. 1.56), mentioned in the title, a lectio that is interestingly unanimously present in the manuscript tradition, but for which the scholia show traces of more complex textual possibilities and interpretations. This is explained in the light of the strong cultural influence of the ‘pastoralisation’ on the collective imagination about bucolic poetry, that ended up wiping out certain textual variants, regardless of the intentions of the authors, in favour of more normalised ones. This perfectly shows how the tradition of a work within a literary genre can have a huge influence on the manuscript tradition.
Hernandez Oñate’s contribution, with its attention to the role of scholiastic and exegetical material as proof of lost branches of the tradition, works as a perfect link between the reflection on corpora and the one on paratext, which, declined in various ways, constitutes the core of the last three contributions.

The third and fourth contributions included in this section are closely related, as they both deal with Erathostenes’ exegetical work: in the first case, the one illustrated by **Federica Benuzzi** (Università Ca’ Foscari Venezia) in her paper, a small fragment of Eratosthenes’ *studia Aristophanica* is transmitted by the scholia to Ar. *Nu*. 967 (and perhaps by a papyrus fragment), while in the other, the one illustrated by **Sara Panteri**’s work, a quotation of Erathosthenes’ Πλατωνικός is preserved through indirect tradition, thanks to a quotation transmitted by Theon of Smyrna’s *Expositio rerum mathematicarum ad legendum Platonem utilium*.

These two papers well exemplify how different approaches can be employed when studying exegetical material. A first angle, the one adopted by Benuzzi, consists in studying the *scholium* with the aim of clarifying some obscurities in the information it preserves, rather than drawing conclusions on the kind of exegesis Eratosthenes did on the Aristophanic text. In particular, Benuzzi identifies three separate annotations in the *scholium* (for which we are given a critical text and translation), that can be reduced to two main redactions, α and β (while the third is just an abbreviated version of one of the others). She compares the two redactions, giving particular attention to one of the several points on which they differ consistently, namely the mention of Eratosthenes’ position on the interpretative issue dealing with the attribution of the hymn Παλλάδα περσέπολιν (the fact that he ascribed it to Lamprocles, on the ground of the evidence provided by Phrynichus) in α, in contrast with the initial ascription of the ode Παλλάδα περσέπολιν to Phrynichus by Eratosthenes according to β. The author’s work on the text allows her to provide emendations that make the sequence of the *scholium* more logical, and to prove that the two redactions can refer to a common ancient annotation. But Benuzzi’s work also goes beyond this specific individual issue and analyses in depth the whole content of the two redactions of the text, and studies it also in the light of a papyrus fragment, P. Oxy. 13.1611, that undeniably contains a text related to that of the *scholium*.

A second possible approach to exegetical material is, then, the one adopted by **Sara Panteri** (Humboldt Universität zu Berlin), who does not simply use the extremely interesting testimony of Theon of Smyrna about Eratosthenes’ Πλατωνικός (one of the only two fragments of this lost work where the title is explicit – and of which the author offers us a critical edition and a translation) to shed new light on Eratosthenes’ exegetical work, but also – and most importantly
– she interrogates the text in order to see how this fragment can be used to better interpret the text of Plato, in the light of the considerations of his most important exeges (Eratosthenes was indeed named the second Plato). In particular, Panteri presents us with the problem of the nature of Eratosthenes’ commentary to Plato’s philosophy, showing us how the exeges dealt with a problem that was both linguistic and factual, namely the difference in meaning between the terms διάστημα and λόγος (which was a distinctive point of disagreement between the main Greek schools of Harmonics). Moreover, the author also clearly explains how the typology of commentary was both mathematical and philosophical. Lastly, thanks to a deep analysis of the content of this fragment and the cross reference to other sources, Panteri is able to confirm the passage to which the ancient commentator was referring to in this bit of commentary (i.e. *Timaeus* 34b–36d, the one to which Theon’s section of music is about).

Finally, this section is concluded by a paper that develops the reflection on the work on paratext, placing it in the context of contemporary editorial issues, specifically that of the crucial role that the digital humanities are gradually acquiring in the editorial process of some typologies of texts. In his chapter, Nicola Reggiani (Università di Parma) presents us the fairly complex and challenging case of fragments of Greek receipts and *receptaria* on papyrus. These texts constitute a quite singular and intricate case of textual transmission – which the author of the contribution himself does not hesitate to define ‘liquid’ – as they can be seen fragments of an oral discourse, always needing to be updated or modified. Consequently, the paratextual and marginal annotations cannot here be seen as a separate set of exegetical material as it happens for other literary genres, but do represent an essential part of the papyrus, which is in constant dialogue with the main text. Hence, a crucial editorial problem: a traditional approach, as Reggiani rightly argues, would end up undervaluing the importance of annotations and ‘paratext’ (if we can still define it paratext for this rather singular case) and cancelling the dialogical nature of the different layers of the text in the papyrus. This problem can be solved through the aid of a digital edition, that could certainly give the right space to the fluidity of these kinds of texts, conferring the right importance to each stage of the transmission.