2 Digital Bibliographies and Bibliographical Standards

Without tradition, art is a flock of sheep without a shepherd.
Without innovation, it is a corpse.
Winston Churchill

Bibliographies, i.e. lists of publications, contain references to primary or secondary literature, which falls into the digital category of metadata described above (§ 1.2). Bibliographies are in fact metadata catalogues themselves. In the papyrological field we may distinguish between general bibliographies (basically, the Bibliographie Papyrologique), special bibliographies (bibliographical repertories devoted to particular themes), individual bibliographies (bibliographic references to single papyri), and checklists (catalogues of reference works and edition volumes, of which they usually provide the ‘official’ abbreviations). As we will see, standardization is the real sore point for bibliographical resources, due to different traditions and needs – the lowest common denominator can indeed be provided just by Digital Papyrology.

2.1 Bibliographie Papyrologique

The most complete and comprehensive bibliographical resource in Papyrology is the Bibliographie Papyrologique (BP), “une bibliographie générale de la papyrologie grecque depuis ses origines”, following the definition provided by its own founder, Marcel Hombert, in 1932. The scientific range and the practical effort of such a project are easily imaginable, and the same Hombert presented their outlines during a talk delivered at the second International Congress of Papyrology (Leiden 1931), then published on Chronique d’Égypte one year later¹. Its details, though being of huge interest from the point of view of both the history of the discipline and the bibliographical sciences, fall outside the purposes of the present pages. I just recall that the project was designed into two different stages: the production of a retrospective bibliographical inventory of what had been published until then and the redaction of a current bibliographical resource, on cardboard sheets, aimed at keeping a constantly updated overview of Papyrology-related publications. For financial reasons, only the latter task was launched, supported by the Fondation Égyptologique Reine Élisabeth at Bruxelles and edited by the same Hombert, until 1992.

¹ Hombert 1932; text also online on the BP website (http://www.aere-egke.be/projet.pdf).
later flanked and then substituted by Georges Nachtergael, from 1974 to 2009, and then Alain Martin, since 1984.

At a later time, a paper presented by Nachtergael and Roger S. Bagnall at the 15th International Congress of Papyrology (Bruxelles 1977; then published in the Proceedings) represented a milestone in the history of this bibliographical resource, in that it marked the meeting point with the electronic tools. The increasing number of papyrological publications was making it increasingly complicated to manage the bulk of information, while the need for a good retrospective bibliography was still felt: in this situation, turning to the new information technologies was not avoidable any more. Thus, the cardboards were digitized, in several different stages, at the Columbia University, by means of the bibliographical software ProCite: by 1992, 8,529 files were created, covering the publications of the years 1976–1989, collected in a series of floppy disks published by Scholars Press. In the meantime, the updates to the current bibliography continued to be circulated to subscribers, on the traditional cardboards and, as of 1995, in both A4 paper prints and a digital card-like FileMaker Pro database – first on floppy disks, then as electronic mail attachments.

In 2000, the Fondation Reine Élisabeth produced a CD-ROM called Subsidia Papyrologica 1.0, which contained 24,215 bibliographical records covering the years 1960–1999 (= “BP 60–99”), organized in a FileMaker Pro database and including both the files created at Columbia, converted in the new format, and more recent records. This first issue was followed by versions 2.0 (years 1932–2004 = “BP 32–04”, total 37,506 records), 3.0 (years 1932–2007 = “BP 32–07”, total 41,620 records), and 4.0, the most recent one at present, released in 2010 and edited by Alain Martin with the cooperation of Roger Bagnall, Alexandre Buchet, Annie Deknudt, Alain Delattre, Paul Heilporn, and Henri Melaerts. It contains roughly 44,000 records, covering the years 1932–2010. The CD-ROM includes also a database of “concordances”, listing the index numbers used to categorize the bibliographical citations, the abbreviations of papyrological and epigraphical texts, the abbreviations of periodicals and journals. The query function is very simple and compliant with FileMaker database search options. It is possible to search for words in all the fields in which the records are arranged: indexed subject; mentioned documents, if appli-

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3 The same need was felt by the Italian scholars who took care of the two bibliographies (“Bibliografia metodica” and “Testi recentemente pubblicati”) on the journal Aegyptus, which closely parallel the two prospected sections of BP. The project of digitizing such bibliographies was announced by Tibiletti 1988 but, as far as I know, never accomplished.
4 Cf. Dell’Orso 1999.
6 See below (§ 2.4) for the issues related to the abbreviating system used by the BP.
cable; author and title; publication details; summary of the content; possible reference to *Sammelbuch* or *Supplementum Epigraphicum Graecum*; possible critical reviews; unique numeral identifier of the record; surnames of the authors; publication year. These digital cards represent therefore an enhanced version of the information collected in the cardboards.

 Comparison between paper (top) and digital (bottom) BP record (from MARTIN 2010)

7 Cf. QUENOUILLE 2016, 6.
As of 2011, BP took advantage of the technological progress accomplished with the project *Integrating Digital Papyrology* (see above and below, §§ 1.2 and 8.3–4) and became part of the *Papyri.info* portal: the data from its digital records were converted in XML format and are now available and searchable through the page http://papyri.info/bibliosearch. Simple text searches are possible; in the following picture, the quick guidelines provided on the page itself are visible:

![Search Bibliography](image)

The fields indicated come from the original BP *FileMaker Pro* records. The results are listed in a series of links that point to each related record.

The following picture shows the same bibliographical entry as in the samples above. The record is divided into three main sections: “Original BP record”, containing indeed the information from the original BP record, according to the usual field arrangement but based on the new XML structure; “Provisional Papyri.info output” is a provisional HTML compact display of the record; “Mentioned Texts” lists possible references to papyri cited in the bibliographical entry, linked to the corresponding record(s) in the textual database (see below, § 8.4).

In the next pages, I reproduce the current record of the mentioned sample as it appears on the BP via *Papyri.info*, followed by its underlying TEI-compliant XML source.

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Cotton in Graeco-Roman Egypt.

The most striking feature of the new online version of the BP is the possibility to create new entries or edit the existing ones for any registered user of Papyri.info. This goes in the same collaborative direction as the whole Papyri.info platform (see below, § 8.5). To create a new entry, one needs to sign in the Papyrological Editor and then go to the “Advanced Create” page and click the button “Create New Biblio”. XML encoding is facilitated by a form-like interface, full of detailed fields that must be carefully filled in according to the bibliographical information to be encoded (picture in the next page).

Each bibliographical record is given a unique ‘publication’ identifier (‘Biblio 2017–0003’ in the example), which is not related to the record itself but to the editing instance, according to the Papyrological Editor custom (see below, § 8.5). It is of course possible, through the same form, to edit existing bibliographical records: once the desired record is opened on the Papyri.info platform, a click on the “edit” link, to be found in the “provisional output” section, will lead to the editing interface. The results, in both cases, must be saved and submitted to the editorial board.
It must be noted that for technical issues BP records available via Papyri.info are covered up to 2012. For a more recent and versatile online resource, one should refer to the Bibliographie Papyrologique en ligne, a new bibliographic databank developed by the Association Reine Élisabeth itself (http://www.aere-egke.be/BP_enligne.htm). The tool, officially announced at the International Congress of Barcelona in 2016, covers the “retrospective BP” from 1932 up to one year before the current date (53,000 records up to 2016). The records of the current year, i.e. the “current BP”, are temporarily reserved for the subscribers, who also receive five yearly updates of the offline digital BP. The search interface reproduces the FileMaker fields; the re-
The two tools only partially overlap, in terms of both coverage and functionality. For now, the BP *en ligne* is by far the most up to date, but the possibility for the users of adding new records to the BP via *Papyri.info* creates an imbalance also for the years before 2012. On the other hand, the output of the former looks more charming than the latter, and the possibility to easily print single ‘cards’ or the whole of the results is not to underestimate. However, the XML background of the latter grants great compatibility to other papyrological tools, and complies with the beneficial requirements of integration and standardization: consider the possibility to link the papyrus documents from the bibliographical record, and also to create direct links to single bibliographical records, through stable URLs like http://papyri.info/biblio/38003, which is not possible with the Bruxelles platform. An interconnection between the two tools would be highly recommended, also in view of the multiple functions of this bibliographical resource: archive of past publications, quick reference for bibliographical inquiries, statistical base for general reflections on papyro-
logical studies. The latter goal, usually neglected\(^\text{10}\), is now much favoured by the recent integration of BP data in *Trismegistos*, which allows further quantitative considerations (see below, §§ 3.3 and 7.2).

Bibliographical records in the new BP en ligne.

### 2.2 *Trismegistos* Bibliographies

Powerful bibliographical tools are indeed offered also by the *Trismegistos* platform (see below, §§ 3.3). *TM Bibliography* (*TM Bib*, http://www.trismegistos.org/genbib) is an online, searchable bibliography aimed at facilitating querying in the *TM Texts* database. The main purpose of this resource is “to find more information about a specific publication or to find out which texts were published together in a particular book”\(^\text{11}\); this means that the resource is far from being a complete and exhausting bibliography of Papyrology and related studies, as the editors themselves warn, though it covers a wide range of texts anyway, and is enriched by the recent inclusion of BP data in the *TM Editors* section\(^\text{12}\). Queries can be launched by author/editor name, title, year, journal/series of publication; the parameters can be combined with one another in the TM fashion.

Conversely, the *Demotistische Literaturübersicht* (*DemLü* or DL, http://www.trismegistos.org/dl) aims at completeness: it is an ongoing comprehensive bibliography of all types of publications related to the field of Demotic studies, and appears also in regular printed instalments in the journal *Enchoria* since 1971. It started from a

\(^{10}\) But see how BP data are exploited in Martin 2009 to trace appraisals and future perspectives of some papyrological studies.


\(^{12}\) See below, § 3.3; cf. http://www.trismegistos.org/edit.
bibliographical database collected by H.-J. Thissen (Köln University, see below, § 3.3) and is now fully searchable, by number of notice or by text strings in the fields (author/editor, title, year, journal/series, summary). Unlike TM Bib, DL offers also a detailed summary of the contents of each publication. Both bibliographies are linked to TM texts, and vice versa, in the worthy ideal integration of resources traditionally sought by the Leuven platform (see below, § 3.3).

Sample record of Demotistische Literaturübersicht.

### 2.3 The Checklist of Editions

When Georges Nachtergael, one of the fathers of BP, reviewed the fifth edition of the Checklist of Editions, he noted:

> On se gardera naturellement de confondre la Checklist avec une liste d’abréviations ! Il s’agit d’abord et avant tout [...] d’une bibliographie raisonnée de toutes les monographies, récentes et anciennes, relatives aux documents sur papyrus, parchemin, ostraca et tablettes.¹³

Few lines before, he had praised Hombert’s abbreviating methodology, founded on the principles of coherence and clarity also for non-specialists (see below, § 2.4): no surprise that he tended to attribute a wider bibliographical mission to the Checklist.

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¹³ Nachtergael 2002, 335.
But it was indeed the increasingly pressing need to dispose of universally standardized, comprehensible, and recognizable references that had led to the redaction of the first *Checklist of Editions of Greek Papyri and Ostraca*, edited by John F. Oates, Roger S. Bagnall, and William H. Willis, and published in the first issue of number 11 of the *Bulletin of the American Society of Papyrologists* (1974).

In fact, as one can read in its introduction, the first attempt “grew out of the efforts of Oates to assemble a working collection of papyrological material in the Papyrology and Palaeography Room in the Rare Book and Manuscript Department of the Duke University Library” in order to avoid that the papyrological volumes be catalogued on the basis of the different publishing series of each, “burying the standard papyrological system of reference under a serial classification or even deeper in a subseries (One must admit that many an edition of papyri presents a bibliographical nightmare)”\(^\text{14}\). However, there existed a wider goal:

Another, and equally important, purpose of this list is to establish a standard list of papyrological abbreviations. Such a standard list may be an ideal incapable of fulfillment, and it may seem a presumptuous undertaking on the part of a few persons to impose their standards on everyone else. Nonetheless, standardization is a highly desirable goal, and the decision to attempt it was established at a conference held at Marburg on the occasion of the XIIIth International Congress of Papyrology on August 6, 1971. Present at the meeting were Professors Eric G. Turner (London), President of the Association Internationale de Papyrologues, Jean Bingen (Brussels, Secretary-Treasurer of the international organization and editor of *Chronique d’Egypte*), Alan E. Samuel (Toronto), then Secretary of the American Society of Papyrologists and editor of the *Bulletin of the American Society of Papyrologists*, Willis, then President of the American Society of Papyrologists, and Oates. Oates had at that time already prepared a check-list of editions, and it was agreed that he should proceed to modify that list with a view to producing what would become a standard list of abbreviations and references. Shortly thereafter Bagnall joined the project. Willis, too, subsequently became an active participant\(^\text{15}\).

Inconsistent abbreviations were indeed a long-standing pain for Papyrology, as Calderini’s early methodological outlines show\(^\text{16}\). It is interesting to continue the reading of the introductory presentation, in order to understand the founding parameters of the *Checklist*, still at the basis of its more recent digital version; it may be noted that such a description is not that far from Hombert’s concerns for BP.

The principles that have governed our choices do not aim at a rigid consistency. Brevity and clarity have been the chief goals. Usages long sanctioned, particularly by Wilcken, have been maintained. Our preference has been to use abbreviations based on the location of the collection (*P.Mich.*), on the site where found (*P.Oxy.*) or on the name of the person whose papers constitute an archive (*P.Petaus*) wherever possible. We have arranged our list in four categories: editions of papyrological texts (e.g. *P.Teb.*), editions of ostraca (e.g. *O.Mich.*), corpora of texts of


\(^{15}\) OATES – BAGNALL – WILLIS 1974, 1–2; cf. BABEU 2011, 10.

\(^{16}\) CALDERINI 1936, 355; see above, § 1.1.
related nature (e.g. *C.Ord.Ptol.*), and series (e.g. *Pap.Lugd.Bat.*). We have made no systematic attempt to include all publications of literary papyri since they are conveniently located through R.A. Pack, *The Greek and Latin Literary Texts from Greco-Roman Egypt* (2nd ed., Ann Arbor 1965). In general, we have not listed documentary material which should find its way to publication in *SB*, although important and continuing publications (*P.Panop.* and *P.Stras.*) have been noted. We have provided some cross-references to variant abbreviations but have not attempted to scour the sources for all such. We have also noted reprinted editions as far as they are known to us.

Subsequently, the notable increase in papyrus editions made it necessary to produce a second edition of the list after just four years. It was printed as BASP Supplement 1 (Missoula, Montana 1978), edited by Oates, Bagnall and Willis as well, with corrections, updates and supplementary information, among which a list of editions arranged by year of publication, drawn up by Klaas A. Worp. Six years later, a third edition (BASP Suppl. 4, Missoula, Montana 1984), edited by Oates, Bagnall, Willis, and Worp, extended the purposes of the Checklist to include, for the first time, the digital resources. In the meantime, indeed, the project of the *Duke Databank of Documentary Papyri*, aimed at digitizing the whole corpus of the Greek documentary papyri, had launched (see below, § 8.3), and the Checklist immediately seemed a privileged way to have “accurate bibliographical records for the project”, and therefore it was updated and adapted “to enter it into computer-readable form”.

The projection towards digitization is even clearer in the Preface to the fourth edition of the Checklist (BASP Suppl. 7, Atlanta, Georgia, 1992), edited by the same Oates, Bagnall, Willis, and Worp. Now, the third function of the Checklist is to provide a canon of the volumes containing documentary texts which have been or will be entered in the Duke Data Bank of Documentary Papyri, in order that a complete corpus of all published Greek and Latin documentary papyri, ostraca and tablets in machine readable form may easily be accessed, searched and concordanced by computer. Each volume already entered in the Data Bank is starred with an asterisk. Of the 440 volumes published to date, 375 are available on PHI CD ROM no. 6 issued by the Packard Humanities Institute, including all texts entered into the Data Bank up to 5 April 1991. Data entry continues, and additional volumes are being entered continuously in inverse order of their date of publication, with priority given to those published most recently. Volumes entered since 5 April 1991 are also asterisked in the Checklist.

Joining the Checklist to the textual database facilitated also its updates, without relying on new paper issues:

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| 18 | Cf. LECLERCQ 1980. |
The basic data for the Checklist are maintained in a continually updated version at the Duke Data Bank. PHI CD ROM no. 6 contains Electronic Edition B as it stood in 5 April 1991. Electronic Edition A, revised as of 8 September 1988, was included on PHI CD ROM no. 2.

The last paper edition, the fifth one, was published in 2001 (BASP Suppl. 9), edited by Oates, Bagnall, and Worp together with Sarah J. Clackson, Alexandra A. O'Brien, Joshua D. Sosin, and Terry G. Wilfong. The most notable innovation is the inclusion of the editions of Coptic and Demotic papyri, to which the usual standard abbreviations (with P. and O. indicating, respectively, editions of papyri and ostraka) were applied. Meanwhile, the birth (in 1991) and development of the World Wide Web hypertext architecture (see above and below, §§ 1.1 and 9) had provided an even more dynamic and quick tool for updating and accessing data. Thus, the latest electronic Checklist edition on physical support (PHI CD-ROM no. 7), updated to June 30, 1996, was replaced by an online version hosted by the servers of the Duke University (Durham, NC) at the URL http://scriptorium.lib.duke.edu/papyrus/texts/clist.html, serving also as the bibliographical canon of the Duke Databank, equally moved to the Web.

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23 OATES – BAGNALL – CLACKSON – O’BRIEN – SOSIN – WILFONG – WORP 2001, ix. A Checklist of Arabic Documents, edited by P.M. Siijpesteijn, J.F. Oates, A. Kaplony, E.M. Youssuf-Grob, and D. Potthas, is kept separated at http://www.naher-osten.lmu.de/isapchecklist, but it followed more or less the same changes as the other Checklist, of which it emulates the structure: a “Beta Version” was published on BASP in 2005 with an introduction about Arabic Papyrology and general observations (SIJPESTEIJN – OATES – KAPLONY 2005), then it moved to the Internet with two versions (2011 and 2016) downloadable in PDF format from the website of the International Society of Arabic Papyrology (ISAP, see below, § 6.1), where a digital version of the original article is also available.
The possibilities offered by the web pages made it useless to update both the electronic CD-ROM edition and the paper edition of the Checklist: the new Checklist of Editions of Greek, Latin, Demotic, and Coptic Papyri, Ostraca and Tablets, edited by Sosin, Bagnall, Wilfong, Worp, along with James Cowey and Mark Depauw, was kept up to date according to the traditional arrangement (nine sections dealing with: papyri; ostraka and tablets; corpora; instruments; series; periodicals; information on publishers; chronological list of the editions; proceedings of the international congresses; an appendix on other non-standard abbreviations), while the new hypertextual structure facilitated its use: each section corresponded to a single web page, hyperlinked through a side-bar menu on the left, with the first, longer section – the one dealing with the papyrus editions – was further articulated alphabetically (see pictures above). The hypertextual edition of the Checklist (now at the address http://library.duke.edu/rubenstein/scriptorium/papyrus/texts/clist.html; the older URL still works but redirects the users to the new one) is updated to June 1, 2011: since then, it has been joined to the Papyri.info platform as a result of the pro-
ject *Integrating Digital Papyrology* (see above and below, §§ 1.2 and 8.4). It has therefore followed the fate of the textual database to which it had been connected for many years, and is now available at the URL http://papyri.info/docs/checklist, edited by Sosin, Bagnall, Cowey, Depauw, together with Rodney Ast, Alain Delattre, Robert Maxwell, and Paul Heilporn (picture below). As the new short introduction explains, the choice of the abbreviations is now open to discussion of the papyrological community, according to the collaborative trend that we already sketched in the *Introduction* and to which we will come back later on (§§ 8.5 and 9). The structural arrangement is the very same as before, though, as to now, a hypertextual arrangement that facilitate navigation as in the old Duke website is missing.

While updating seems to be a still painful issue – for example: to May 31, 2017, no reference to the *Proceedings of the 27th International Congress of Papyrology* (Warsaw 2013), published in summer 2016, has been added yet –, the most striking fruit of the integration of the Checklist to the *Papyri.info* platform is the addition to each item of a hyperlink (see detail in picture below), which brings the users to the digital texts of the papyri contained in each listed edition and, when applicable, to a digital online copy of the volume itself, as in the case of the *Proceedings of the 25th* International Congress of Ann Arbor illustrated below. Both the Checklist and the *Bibliographie Papyrologique en ligne* (i.e. the Belgian online search engine, not the one available via *Papyri.info*) are indeed fully aware of the increasingly widespread presence of electronic publications (see below, § 6.6), and kindly provide useful links when the recorded items are freely available online.
2.4 A Flock without a Shepherd (On Bibliographical Standards)

A strong claim to uniform bibliographical standards underlay the “plan” of BP as presented in 1977 by Georges Nachtergael, beside the announcement of the digital treatment of the bibliographical records (see above, § 2.1). That plan, elaborated by Hombert, Nachtergael and Bagnall, consisted basically in the definition of numbered subjects, in order to index and categorize the relevant publications recorded. It took the Bibliografia Metodica (“methodical, systematic bibliography”) introduced by Aristide Calderini in the journal Aegyptus since 1920 as a model, with significant improvements that were subsequently adopted by Orsolina Montevecchi for the Italian journal as from 197825. In Hombert’s and Nachtergael’s words, “cette précieuse adhésion permet d’espérer que désormais un système bibliographique unique sera universellement accepté dans le domaine de la papyrologie”26.

The thorniest issue was faced under category 140, “Éditions” (i.e. of papyri, ostraka, and tablets). The editors of the Bibliographie subdivided the group alphabetically, according to the abbreviations of the reference editions or corpora. “Dans le choix des abréviations, de grands efforts ont été faits pour répondre à des conditions parfois difficiles à réunir: adopter les abréviations le plus souvent usités, présenter

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26 HOMBERT – NACHTERGAEL 1977, 156. The complete plan was published ibid., 157–61. For Calderini see also above, § 1.1.
un système cohérent, concilier la brièveté et la clarté”\(^\text{27}\). Though the Checklist of Editions had been launched three years earlier, the bibliographers decided to follow it only partially, with the intention to establish “une liste standard, s’imposant à tous, des abréviations”, admittedly inspired by sir Eric Turner’s recommendations\(^\text{28}\).

The same standardizing wish was expressed also by the founders of the Checklist:

> The references established here have been adopted by the American Society of Papyrologists as official for their publications, the Bulletin of the American Society of Papyrologists and the monograph series, American Studies in Papyrology, and by the journal Greek, Roman and Byzantine Studies. In addition, the journal Phoenix follows the practices of the Bulletin of the American Society of Papyrologists in matters of papyrological citation. We hope that adoption of the list will spread further; we also hope that the list will alert papyrologists to the confusing and anomalous practices of the past and lead to greater consistency and clarity in the future\(^\text{29}\).

Unfortunately, those pleas have never been fulfilled. The most striking piece of evidence for this lies in the digital version of the Bibliographie Papyrologique hosted on Papyri.info, which retains the BP abbreviating system, while the links point to the Papyri.info URLs based on the Checklist (highlighted in the picture beneath; see below, §§ 8.3–4).

The increasing adoption of the Checklist as a standard reference for papyrological abbreviations pushed the editors of BP, unable to correct tens of thousands of past bibliographical cards, to issue a concordance between the two systems (http://www.aere-egke.be/sigles_pap.pdf), where the BP abbreviations are explicated with those of the Checklist. On the other hand, the editors of the Berichtigungsliste have very

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\(^{27}\) HOMBERT-NACHTERGAEL 1977, 162; cf. also NACHTERGAEL 2002, 334.


\(^{29}\) OATES – BAGNALL – WILLIS 1974, 2.
recently announced that the renowned collection of emendations to published papyri will make use of the *Checklist* abbreviations from planned volume XIV onwards, “with a view to the integration of BL material into the existing databases”\(^{30}\). The strong integrating and standardizing afflatus of digital papyrological resources, as already sketched in the *Introduction* (§ 1.2), would be the perfect ground for realizing the desirable ideal of a common, uniform system of abbreviations, which surely every papyrologist shares. Unfortunately, this is not (yet) the case, if we note that the other two biggest papyrological platforms, the *Heidelberger Gesamtverzeichnis* and *Trismegistos* (see below, §§ 3.1 and 3.3), adopt each own idiosyncratic system, to which add those used by the current *Berichtigungsliste* and Hagedorn’s *WörterListen* (see below, § 4.1), partially or totally different — *ça va sans dire* — from BP and *Checklist*\(^{31}\). At least, a complete concordance, like that once appended to the early Duke checklists\(^{32}\), and possibly searchable, would be most helpful.

“Without tradition, art is a flock of sheep without a shepherd. Without innovation, it is a corpse”, said Winston Churchill. A very recent and masterful contribution, delivered by Peter Arzt-Grabner at the International Congress of Barcelona (2016), resumes the traditional principles of papyrological abbreviations and points out the inconsistencies between the different systems in fashion, also providing a very useful and complete concordance table. “It is a good opportunity now”, Arzt-Grabner says, “after an extensive relaunch of the *Checklist* in 2014 and regular updates since then, to collect such inconsistencies, and to try to find practical solutions wherever necessary or reasonable”. He obviously refers to the migration of the *Checklist* to the *Papyri.info* platform, and his claim is a wonderful example of how digital innovation might offer a starting point for reviving a traditional flock without a shepherd\(^{33}\). Though “incon-

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31 See e.g. the case recently pinpointed by CASANOVA 2015, 62.

32 Still available at http://library.duke.edu/rubenstein/paratorium/papyrus/texts/clist_appendix.html, but lacking some items.

33 Arzt-Grabner’s paper will probably appear in the proceedings of the Barcelona Congress, but the author very kindly and wisely has left a digital PDF copy of it at everyone’s disposal (https://www.uni-salzburg.at/fileadmin/multimedia/Bibelwissenschaft%20und%20Kirchengeschichte/Griechisch/CongressPap2016_Arzt-Grabner.pdf; Appendix with concordance tables: https://www.uni-salzburg.at/fileadmin/multimedia/Bibelwissenschaft%20und%20Kirchengeschichte/Griechisch/Arzt-Grabner_Concordance_coloured.pdf). To the list of cases recorded by him, we shall probably add “P.Fay.Coles” (or “P.Fayum Coles”), which seems to be an unofficial abbreviation used by some papyrologists to refer to COLES 1970. I myself experienced a great waste of time trying to find out its exact bibliographical reference. Also GMP for *Greek Medical Papyri* could definitely be added.
sistency is too common to be criminal”34, I strongly wish that his suggestions will be seriously taken into consideration for the next developments of Digital Papyrology.

2.5 Special Bibliographies

It goes without saying that papyrological bibliographical information can be extracted also from more general electronic bibliographies dealing with classics or ancient studies, like *L’Année Philologique*35, but of course this is far beyond the purposes of the present book. Some attempts to provide introductory bibliographical surveys of the matter come in plain HTML web pages, like the papyrological section of the *Bibliotheca Classica Selecta* (BCS) implemented by the Université Catholique de Louvain (http://bcs.fltr.ucl.ac.be/Papy.html). After a general overview of the discipline, this website provides some descriptive pages listing reference works and handbooks, examples of text editions, work tools (anthologies, dictionaries, grammars, onomastic repertories, palaeography, periodicals...), books dealing with historical studies based on papyrological evidence, and a selection of electronic tools. Equally basic and introductory bibliographies to papyrological studies are provided e.g. by the *Duke Papyrus Archive*, with the addition of a section devoted to literature on papyri, or by the Papyrus Collection of the University of Michigan, in DOC format36. All of these are intended to provide a first acquaintance to the discipline, and by no means aim at completeness.

A useful “evolving” bibliography on *Ancient Libraries* is offered by W.A. Johnson (http://people.duke.edu/~wj25/uc_web_site/libraries/library_biblio.html), while web pages like *Ptolemaica. Une bibliographie sur l’Egypte lagide* (by Chr. Hugot, Bibliothèque des Sciences de l’Antiquité – Université Lille 3, http://bsa.biblio.univ-lille3.fr/ptolemaica) and *A Hellenistic Bibliography* (by M. Cuypers, Trinity College Dublin, https://sites.google.com/site/hellenisticbibliography) provide a good historical, cultural, and literary background to papyrological studies for the Hellenistic period, but are not papyrological resources *stricto sensu*.

Other special bibliographies are intended to support specific projects. This is the case with the *Ancient Alexandria* project conducted by P. Van Minnen at the University of Cincinnati, hosting an introductory papyrological bibliography along with

34 G.L. Prestige, “a renowned expert in dogmatics” quoted by VAN MINNEN 2007, 714.
35 Cf. BABEU 2011, 9–10; DELATTRE – HEILPORN 2014, 310–1. See also BABEU 2011, 9–12 for further general bibliographical resources.
special repertories about Alexandria, in particular its Roman phase\textsuperscript{37}. It is worth mentioning also \textit{The Books of Herculaneum}, “a guide to editions and translations of the principal works discovered at Herculaneum and related texts” maintained by The Friends of Herculaneum Society (http://www.herculaneum.ox.ac.uk/?q=books, see below, § 7.1).

When a thematic bibliography tends to be particularly complex, static online pages are not enough any longer: therefore, for example, the bibliography about the Herculaneum papyri embedded in the online catalogue \textit{Chartes} is wisely provided with a search engine, though a plain general bibliographical list is added anyway\textsuperscript{38}. Also the bibliography on mummy labels (alphabetic both by author and by country) on the \textit{Death on the Nile} project website (see below, § 3.5) is provided with an internal search tool. For other thematic bibliographies connected to specific projects, as well as for the bibliographical information included in the metadata catalogues, see the next chapter 3.

A strong digital bibliographical tradition is embodied by Belgian papyrologists. Apart from the complete bibliography of Claire Préaux, provided by the Université Libre de Bruxelles as a digital version of a print book by M.-Th. Lenger, on occasion of the 100\textsuperscript{th} anniversary of the famous papyrologist’s birth\textsuperscript{39}, it is in particular the Centre de Documentation de Papyrologie Littéraire (CEDOPAL) at the University of Liège that holds the biggest number of special bibliographies dealing with papyrological matters\textsuperscript{40}. These bibliographies present two interesting features. Firstly, most of them are connected to the development of the \textit{Mertens-Pack3} catalogue\textsuperscript{41}, probably the main achievement of the CEDOPAL, of which we will discuss further on (§ 3.2): they are basically the product of data extraction from the catalogue cards of the literary papyri recorded in the M-P\textsuperscript{3} base. Secondly, they do not belong to the trend of transition from paper to digital supports: unlike the \textit{Bibliographie Papyrologique} and the \textit{Checklist} (and Préaux’s bibliography), they were born as digital resources, later included in printed publications. A third interesting aspect is that they were first published as HTML web pages, while now they appear as PDF files embedded in the web pages themselves, which gives them a sort of borderline format between paper and digital supports.

\textsuperscript{37} http://classics.uc.edu/~vanminnen/Alexandria/Papyrology_Bibliography.html; http://classics.uc.edu/~vanminnen/Alexandria/Alexandria_Bibliography.html; http://classics.uc.edu/~vanminnen/Alexandria/Early_Roman_Alexandria_Bibliography.html.


\textsuperscript{39} http://www.ulb.ac.be/philo/cpeg/preauxbiblio.html. The booklet (Lenger 1980) was published soon after Préaux’s death. Similarly, a memorial bibliography of P.W. Pestman is published in PDF format at http://media.leidenuniv.nl/legacy/bibliography-pwp.pdf.

\textsuperscript{40} Cf. Delattre – Heilporn 2014, 311.

\textsuperscript{41} Cf. Marganne 2007d, 430.
Directly depending on the M-P³ catalogue are the extensive bibliographies on literary papyri by ancient authors and by sub-genres⁴²: both of them exhibit a drop-down menu, from which one can choose the author or the genre on which he wants to consult the bibliography, each one in a single PDF file. The bibliography for sub-genre “Medicine and surgery” has been published at the beginning of two preliminary accounts of the M-P³ catalogue records dealing with medical papyri provided by Marie-Hélène Marganne and Paul Mertens⁴³.

Other extensive bibliographies stem from the traditional fields of interest and research of CEDOPAL. The cultural and bibliological studies are represented by Alexandria Docta, a general bibliography on the intellectual and scientific life centred on ancient Alexandria (by Nathaël Istasse, 2003 ff., updated for 2008–2016 by Marganne), and Liber Antiquus, a general bibliography on books in the Graeco-Roman world (by Jean-Christophe Didderen, 2004 ff., updated for 2005–2016 by Marganne)⁴⁴. Both have been published in 2004 as appendices of the first two “Cahiers du CeDoPal”⁴⁵. Further bibliographies dealing with medical papyri and ancient medical culture are to be found in the section Médecine dans l’Égypte gréco-romaine⁴⁶ and are devoted to pharmacology (Pharmacopoea Aegyptia et Graeco-Aegyptia, by Marganne and Pierre Koemoth), literary medical papyri (Medici et medica, which expands a bit the aforementioned medical bibliography), iatromagical papyri (with a short introduction by Magali De Haro Sanchez), medical petitions and reports (by Antonio Ricciardetto), private letters with medical content (by Ricciardetto as well)⁴⁷. All of them, except the first two, flank a catalogue of the relevant texts, extracted from the main M-P³ base (see below, § 3.2). Another section is devoted to Robert Cavenaile’s Corpus Papyrorum Latinarum and the project of its update⁴⁸, and collects special bibliographies about Latin papyri (Papyri Latinae, mainly fo-

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cused on literary texts and their writings), Latin papyri of Herculaneum (by Gabriel Nocchi Macedo), Jew and Christian Latin papyri (by Nocchi Macedo), bilingualism Greek / Latin and trilingualism Greek / Latin / Coptic in Egypt (by Nathan Carlig and Bruno Rochette)\(^49\). Finally, _Judaica et Christiana\(^50\) offers bibliographies about Jew and Christian authors of the I and II centuries AD (with introduction, by Carlig), Didymus Caecus (with introduction, again by Carlig), Greek Christian letters of literary character (by Carlig as well), Greek and Latin Christian school texts on papyrus (with introduction, by the same Carlig)\(^51\). Most of them stem from recent additions made to the M-P\(^3\) catalogue (see below, § 3.2).

If we are allowed to extract some general conclusion from the CEDOPAL online bibliographies, then we can certainly stress that they are a clear example of how digital resources are not to be regarded as a mere replacement, or a conflicting double, of more traditional paper resources, but can produce a wise scholarly interplay where the electronic outcome is not the ultimate achievement, nor an optional tool, but a robust ground for further scholarship that may even come back to more traditional ways of expression (see also below, § 3.2).

A peculiar bibliographical tool developed on the _Aristarchus_ portal for classical studies of the University of Genua\(^52\) was an index to the papyri mentioned in the


\(^{50}\) http://web.philo.ulg.ac.be/cedopal/judaica-et-christiana.


\(^{52}\) On _Aristarchus_ see BABEU 2011, 160. The platform has been recently refurbished.
Année Philologique (the famous bibliographical resource for ancient studies), edited by Franco Montanari and Laura Moisello in the framework of the Centro Italiano dell’Année Philologique (CIAPh). This database contained the reference to all the papyri, ostraka and tablets mentioned in the APh as of volume LXXI (2000). When possible, the edition sigla were uniformed according to the Checklist standards. The archive was searchable either/both by papyrus edition or/and by APh reference, but it seems lacking from the renovated version of the portal (http://www.aristarchus.unige.net/CIAPh/it-IT/Home).

http://www.aristarchus.unige.net/CIAPh/it-IT/Home.