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## Byzantine Epigraphy for the 21<sup>st</sup> Century

Abstract: The publication of inscriptions has been evolving over the last couple of centuries. The nineteenth century saw progression from individual copies to the great corpora; the twentieth century saw the extensive use of photography, and fuller descriptions of context, both material and intellectual. These developments improved the quality of publications, but created problems of scale; editors trying to manage the enormous volume of material were forced to create categories to allow them to select material, and Byzantine inscriptions have frequently been relegated to appendices or omitted. In the twenty-first century the development of digital publication is offering an opportunity to reunite materials which have been separated by categorisation or location, and for experts to collaborate in new ways: a collaborative online corpus of Byzantine inscriptions, contributed by a range of experts, and covering many geographical areas, could be a scholarly model for other fields.

### BACKGROUND

Since antiquity, scholars have read and recorded inscribed texts. Byzantine scholars were intrigued and mystified by earlier texts; from the renaissance onwards western scholars recorded inscriptions, and then found ways to publish them. From the 18<sup>th</sup> century travel in the eastern Mediterranean became easier; although few western travellers went with the intention of recording texts, most had the education in Latin and Greek which encouraged and enabled them to do so. They would tend to focus on complete texts, which were recorded as texts, with little reference to their media;<sup>1</sup> this reflects the challenging circumstances in which they were often working, with limited time at their disposal, and even limited supplies of writing materials.

Only gradually did a more ‘scientific’ approach develop, as scholars began to travel with the specific purpose of recording inscriptions: the Austrian Academy had special notebooks printed for recording such material, pre-printed with the headings for metadata: place, material, dimensions etc. (For an example see <http://insaph.kcl.ac.uk/ala2004/inscription/eAla016.html>) Travelling scholars could make paper impressions of stones (squeezes); but early photography was only possible at major excavations, and was much more often used for sculpture than for texts.

The publication of inscriptions followed from the ways in which they had been recorded. They were published as texts rather than as archaeological artefacts, in volumes (most obviously the great corpora, such as *CIG*), or in appendices, specifically devoted to inscriptions.<sup>2</sup> Early publications did provide for the ‘look’ of an inscription to be represented, in the majuscule version, showing unusual forms and ligatures. But as the volume of such publications increased, the range of representation was reduced, with some standard elements recorded – lunate versus standard sigmas, or one or two forms of alpha – in all but the most expensive publications. On the other hand, the range of information about the media – measurements, etc. – did increase.

It was only in the 1930s that the papyrologists agreed on publishing conventions which could reflect the state and appearance of a text;<sup>3</sup> these were then adopted by epigraphers. The so-called Leiden system specifies how features of an inscription besides the text itself should be represented in print. The system uses specific symbols and/or text decorations to convey the state of the original document and the editor’s interpretation of that document. Discussions and refinements have continued ever since.<sup>4</sup> The system is extremely

<sup>1</sup> For examples, see the notebooks of John Gandy-Deering, from a visit to Aphrodisias in 1812: <http://insaph.kcl.ac.uk/notebooks/-deering/index.html>.

<sup>2</sup> The inscriptions are published as a section in each chapter of Ch. FELLOWS, *An Account of Discoveries in Lycia*. London 1841; they are published in an appendix, 109–117, to R. M. SMITH – E. A. PORCHER, *History of the recent discoveries at Cyrene, made during an expedition to the Cyrenaica in 1860–61*. London 1864.

<sup>3</sup> B. A. VAN GRONINGEN, *Projet d’unification des systèmes de signes critiques*. *Chronique d’Égypte* 7 (1932) 262–269.

<sup>4</sup> S. PANCIERA, *Struttura dei supplementi e segni diacritici dieci anni dopo*. *Supplementa Italica* 8 (1991) 9–21.

efficient; but it does tend to produce texts which are off-putting to inexperienced readers. Moreover, the Leiden system was not principally concerned with indicating the forms and variations which characterise some Byzantine texts.

The need to maintain an agreed set of standards has also tended to create the idea that there is only one way to record and present inscribed texts; in fact, however, the process has been constantly evolving. A far higher set of standards was established by the observations of Louis Robert. Editors must provide a full physical description of the media, and of the text; a careful bibliography; a fully edited text with apparatus, and a rich commentary; if possible they should provide a photograph both of the inscribed stone and of its context. One further requirement which has emerged over recent decades is the presentation of a translation into a modern language. However, one consequence of this increased ‘professionalism’ of epigraphic publication is that the volume of data presented is far greater than in the earliest publications; the volumes are becoming more expensive to produce at the same time as the market is shrinking.

Another consequence of these developments has been the opposite of what Robert intended. His observations on epigraphy drew on a wide range of reading of every kind, and he ranged over texts from many centuries. But a large body of inscribed texts, each fully presented, is likely to produce a volume where there is no room for other materials from the same archaeological context – so inscriptions, ceramics, architecture will all appear in different volumes – and where the commentary will necessarily be limited. Moreover, the organisation of the material requires the imposition of categories. Several traditional categories have developed; but it is here that Byzantine epigraphy is disadvantaged of the first time. Material from the Byzantine period is variously defined – sometimes including anything Christian, or hard to read; sometimes including fourth century materials, and sometimes not. Above all, it tends to be placed in a separate category, of material grouped by period, when earlier materials have been grouped by content.

#### THE DIGITAL AGE<sup>5</sup>

Epigraphers, along with other archaeologists, were quick to see the value of digital aids to the study of their material. The first projects were intended to assemble large bodies of material, for the purpose of analysing and searching them. One of the first projects was launched by a computer expert with a classical education, David Packard, who developed a font to allow the presentation of Greek texts; he was also involved in the early stages of the *Thesaurus Linguae Graecae* (*TLG*), which started collecting Greek literary texts, in digital form, in 1972.<sup>6</sup> The *TLG* first produced material on magnetic tape, and (from 1985) on CD ROM. The Packard Humanities Institute also sponsored a parallel project for Greek inscriptions: the Cornell Greek Epigraphy Project was started in 1985, collecting published Greek inscriptions and making them available on CD. The first “Demonstration” CD (#1) was released in 1987; the last (“Greek Documentary Texts,” #7) in 1996. In 1993 an associated project, digitising inscriptions from Ionia, Lydia, and Galatia was established at Hamburg.<sup>7</sup> Another database of Greek inscriptions from Asia Minor was developed by Jürgen Malitz at the University of Eichstatt, and issued on CD in 1996.<sup>8</sup> Malitz also produced a CD of Latin inscriptions in 1996. There were several initiatives in the field of Latin epigraphy, where fonts did not present a problem. The Epigraphische Datenbank Heidelberg (EDH) was started through the imaginative energy of Géza Alföldy in 1986.<sup>9</sup> At about the same time Manfred Clauss at the University of Frankfurt also started a database of Latin inscriptions, which eventually absorbed the one started by Malitz. By 1989 the Association Internationale d’Épigraphie Grecque et Latine (AIEGL) felt it useful to hold a colloquium on “Épigraphie et informatique” and set up a “Commission for Epigraphy and Information Technology”.<sup>10</sup> In 1995 American scholars started

<sup>5</sup> <http://www.digitalhumanities.org/dhq/vol/003/1/>

<sup>6</sup> See <http://www.tlg.uci.edu/about/>

<sup>7</sup> <http://www.epigraphik.uni-hamburg.de/project>

<sup>8</sup> <http://www.gnomon.ku-eichstaett.de/LAG/IGEyst.html>

<sup>9</sup> See <http://www.uni-heidelberg.de/institute/sonst/adw/edh/index.html.en>, History

<sup>10</sup> AIEGL, Colloque “Épigraphie et informatique”, Université de Lausanne, 1989.

the US Epigraphy project, aimed at producing digital records of all Greek and Latin inscriptions to be found in the USA.<sup>11</sup>

By the 1990s, therefore, there were several overlapping projects that were digitising epigraphic texts, particularly in Latin. From the late 1990s it was becoming clear that the future for such material was not on individual servers, or on CD-ROM, but online. The EDH went online on the web in 1997; it consists of three databases, the first containing texts, the second bibliography, and the third over 20,000 images.<sup>12</sup> The database prepared by Clausus went online at about the same time.<sup>13</sup> The Thesaurus Linguae Graecae went online in 2001.<sup>14</sup> The PHI website of Greek inscriptions was officially released in 2006.<sup>15</sup>

This situation drew attention to questions of overlapping coverage, and also to the compatibility of conventions. In May 1999 Silvio Panciera, then Professor of Latin Epigraphy at the Sapienza University of Rome in his capacity as President of the AIEGL IT Commission convened a meeting on “Epigraphy and Information Technology” in Rome: the meeting produced a manifesto recommending the establishment of an on-line, free and unrestricted “database ... of all surviving Greek and Latin epigraphical texts produced down to the end of Antiquity”. He and his team undertook the development of a database of the Latin inscriptions of Italy, Epigraphic Database Rome (EDR); the Christian inscriptions started to be entered in the Epigraphic Database Bari (EDB), and the intention was to work towards an amalgamation of all epigraphic databases. In 2003 a further meeting of the IT commission, held at Aquileia and Trieste, revisited the idea, and proposed, instead, a federation of epigraphic databases:<sup>16</sup> EDR was published online,<sup>17</sup> and with EDB, EDH, and Hispania Epigraphica (HE)<sup>18</sup> form the current constituents of the Electronic Archive of Greek and Latin Epigraphy, EAGLE.<sup>19</sup>

This process has seen a progression from the use of computers to handle and search large bodies of data, towards a use of digitisation to present and publish inscriptions. In 1999, the AIEGL Commission drew attention to the importance of using a platform-independent format suitable for backup, archiving and data interchange. The normal format for doing this is the international standard Extensible Markup Language (XML), which allows the author to mark up a text not only in terms of representation (e.g. distinguishing italics or bold) but also semantically (e.g. distinguishing names from words or numbers).<sup>20</sup> In the 1990s Tom Elliott had been working, with colleagues at the University of North Carolina in Chapel Hill, to devise a set of XML guidelines for epigraphy, EpiDoc. This schema was itself based on the work of another international consortium, which has been developing agreed standards for the digital publication of many kinds of text, the Text Encoding Initiative (TEI).<sup>21</sup> In response to the Commission’s report Elliott published his proposal in summer 1999. In January 2001 a first draft of guidelines was published, after discussion with a range of colleagues in Europe and the USA; the most recent guidelines and version were released in December 2014.<sup>22</sup> They were adopted for the publication of the Vindolanda Tablets (2003),<sup>23</sup> the US Epigraphy project (2003–),<sup>24</sup> Aphrodisias in Late Antiquity (2004),<sup>25</sup> the Inscriptions of Aphrodisias (2007),<sup>26</sup> the Inscriptions

<sup>11</sup> <http://usepigraphy.brown.edu/index.html>

<sup>12</sup> <http://www.uni-heidelberg.de/institute/sonst/adw/edh/>

<sup>13</sup> <http://www.manfredclaus.de/>

<sup>14</sup> <http://www.tlg.uci.edu/>

<sup>15</sup> <http://epigraphy.packhum.org/inscriptions/>

<sup>16</sup> [http://www.edr-edr.it/Documenti/Document2\\_it.html](http://www.edr-edr.it/Documenti/Document2_it.html)

<sup>17</sup> <http://www.edr-edr.it/>

<sup>18</sup> <http://eda-bea.es/>

<sup>19</sup> [http://www.edr-edr.it/Italiano/present\\_it.php](http://www.edr-edr.it/Italiano/present_it.php); see also S. EVANGELISTI, EDR: History, Purpose, and Structure, in: Fr. FERAUDI-GRUÉNAIS (ed.), *Latin on Stone: Epigraphic Research and Electronic Archives*. Lanham, MD 2007, 119–34.

<sup>20</sup> <http://www.w3.org/XML/>

<sup>21</sup> <http://www.tei-c.org/>

<sup>22</sup> <http://sourceforge.net/p/epidoc/code/HEAD/tree/tags/8.20/>

<sup>23</sup> *Vindolanda Tablets Online*, available at <http://vindolanda.csad.ox.ac.uk/>

<sup>24</sup> <http://usepigraphy.brown.edu>

<sup>25</sup> C. ROUECHÉ, *Aphrodisias in Late Antiquity: The Late Roman and Byzantine Inscriptions*, revised second edition, 2004, available at <http://insaph.kcl.ac.uk/ala2004>

<sup>26</sup> J. REYNOLDS – Ch. ROUECHÉ – G. BODARD, *Inscriptions of Aphrodisias (2007)*, available at <http://insaph.kcl.ac.uk/iaph2007>

of Roman Tripolitania (2009),<sup>27</sup> and other projects currently in preparation. EpiDoc was also used to create the Papyri.info project (2009–), which brings together data collected by a variety of scholarly projects on documentary papyri.<sup>28</sup> Through each of these undertakings, each with its own particular demands, the EpiDoc schema has been refined and improved. EpiDoc now aims not only to provide a common interchange format, but also to be a robust mechanism for the creation of complete digital epigraphic editions and corpora.<sup>29</sup>

#### BYZANTINE EPIGRAPHY IN A DIGITAL AGE

Digital epigraphy is still evolving – but some central points have gradually emerged.<sup>30</sup> Computers are very useful for sorting and searching material, and for this databases provide the most straightforward method. But the arrival of the World-Wide Web means that computers are now also used to make materials available. In popular subject areas, this second function is less important. There is no need to read Shakespeare, or Sophocles, online, since print editions are abundant, and cheap: but an online edition may be very useful for searching the text. Experience is very different for those of us who work in subject areas – such as Byzantine Studies – where the texts are far less easy to access. The Thesaurus Linguae Graecae was devised to enable searching: but, as it has included more and more Byzantine texts, many of us use it as a library as much as a search engine.

The rigours of book publication force the writer to organise material in a linear fashion, which is very useful in disciplining thought. But when it is a question of publishing primary materials, the linear structure often forces the imposition of unnatural categories – which is the process which puts “Byzantine” and/or “Christian” and/or “Miscellaneous” inscriptions at the end of so many corpora. Linear publication also imposes crude chronological divisions. Materials published online can be accessed by a variety of routes – by the location of the text, by its date, by the type of text, by the type of monument, by language – without privileging one approach. Byzantine inscriptions, therefore are likely to benefit particularly from digital publication.

Late Antique and Byzantine inscribed texts have another particular characteristic. Compared to the epigraphic corpus of classical Athens, or of the second century A.D., they form a relatively small part of the textual evidence from the period; they regularly need to be read in conjunction with texts which are preserved in the manuscript tradition. Inscribed acclamations, for example, are only really comprehensible in the context of the acclamations preserved in the proceedings of the Church Councils.<sup>31</sup> There are therefore strong arguments for publishing such texts in a format which is compatible with that used for publishing literary texts. EpiDoc uses the conventions of TEI, which are specifically devised for the publication of literary and documentary texts.

Research over the last few years is increasingly producing online corpora of texts and enabling the interchange of materials. The texts in the *Inscriptions of Roman Tripolitania*, encoded in EpiDoc, were exported directly into the Epigraphische Datenbank Heidelberg; they can therefore be used in two ways, within the context of the material from Tripolitania, or by those wishing to pursue the use of particular terminologies in Latin inscriptions more generally. Byzantine inscriptions need to be studied as a specific body of material, but also within the epigraphic contexts from which they come. The new developments in digital publication make that a real possibility. A digital corpus can bring together widely scattered materials, for analysis as a group, while still allowing them to be read in their local corpus. Digital publication can allow contributions

<sup>27</sup> *Inscriptions of Roman Tripolitania*, by J. M. REYNOLDS and J. B. WARD-PERKINS, enhanced electronic reissue by G. BODARD and Ch. ROUECHÉ (2009) available at <http://irt.kcl.ac.uk/irt2009>

<sup>28</sup> <http://papyri.info/>

<sup>29</sup> <http://epidoc.sourceforge.net/>; see also G. BODARD, EpiDoc: Epigraphic documents in XML for publication and interchange, in: FERAUDI-GRUÉNAIS, *Latin on Stone (op. cit.)* 101–118.

<sup>30</sup> H. CAYLESS – Ch. ROUECHÉ – T. ELLIOTT – G. BODARD, Epigraphy in 2017. *Digital Humanities Quarterly* Winter 2009, 3.1, available at <http://www.digitalhumanities.org/dhq/vol/003/1/>

<sup>31</sup> Ch. ROUECHÉ, Acclamations at the Council of Chalcedon, in: M. WHITBY (ed.), *Chalcedon in Context: Church Councils 400–700*. Liverpool 2009, 169–177.

from various scholars, writing in their own languages, and from their own perspectives. Perhaps even more usefully for a collaborative enterprise, online publication can be gradual – material can be published when it is ready, and further contributions added as they appear. The use of XML means that indices etc. grow as new texts are added.

Byzantine epigraphers are in a strong position, since so much of the preparatory work has now been done. There are lively academic communities, which, although they do not call themselves Byzantine, encompass Byzantine interests: all Byzantinists should subscribe to Digital Classicist<sup>32</sup> and Digital Medievalist.<sup>33</sup> There are experts on using EpiDoc in many countries, who can be reached through these portals. An even larger community is that of TEI, with representatives in most major universities;<sup>34</sup> and national research councils are increasingly encouraging publication in this way, for example through initiatives such as the German TextGrid.<sup>35</sup> New standards of collaboration in epigraphic publication are now being set by EAGLE, the European network of Ancient Greek and Latin Epigraphy, which is a best-practice network co-funded by the European Commission, under its Information and Communication Technologies Policy Support Programme.<sup>36</sup> As so often, it is not clear where Byzantine epigraphy will fit in; but this could present an opportunity for Byzantinists to build on the EAGLE expertise, and improve on it. A collaborative digital corpus of Byzantine inscriptions could be a model for other disciplines; it could be used as a separate body of material, but the constituent elements could also be transferred to other larger collections of inscribed texts. Byzantinists have a great deal to gain, and a great deal to contribute, by adopting this approach.

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<sup>32</sup> <http://www.digitalclassicist.org/>

<sup>33</sup> <http://www.digitalmedievalist.org/>

<sup>34</sup> <http://www.tei-c.org/index.xml>

<sup>35</sup> <http://www.textgrid.de/>

<sup>36</sup> <http://www.eagle-network.eu/>

