

# The culture of epigraphy: from historic breakthrough to digital success

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**Abstract.** The aim of the present paper is to direct attention to new perspectives on the role and integration of epigraphy into the digital age. Nowadays, epigraphic and historical studies undergo a period of remarkable vitality, thanks to the finding of new inscriptions that enhance our understanding on past societies. History gives a great example of an interdisciplinary field, drawing not only on epigraphy, but also on numismatics and other related sciences. Despite the various efforts to digitize epigraphic heritage, the existing databases are primarily intended for specialized audiences, academics or researchers. Without overlooking the educational role of epigraphy, this paper examines and proposes new ways in which inscriptions can become more accessible to wider audiences. To this end, digital media can provide the means for more efficient engaging with the public.

**Keywords:** history, culture, epigraphy, inscriptions, digital, education

## 1 Introduction: setting the scene

*Concerning the Greek and Roman world one could talk about the culture of epigraphy” [1] L. Robert*

Nowadays, the science of History and applied historical research is undergoing an extremely vigorous, energetic and renewing period [2]. This progress mainly concerns the following three axes:

- a) The broadening of historical themes with "new stories" which emphasize the cultural elements (as compared to the traditional political and military history),
- b) Enrichment of the documents being used as sources to supplement the literary sources with archaeological data (monuments, inscriptions, coins, etc.) and
- c) The introduction of new methods of publicizing historical knowledge which are based on Information and Communication Technology (ICT or “new media”).

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Specifically the guidelines which have arisen from the movement of “New History” [3] developed nearby the political, social and economic history the, cultural history, the history of collective consciousness and behavior [4,5], the history of emotions, daily life stories of women, children and youth, etc. [6,7,8]. As far as the Ancient Greek History is concerned, the need for new approaches and discussion about methodology is evident [9,10,11,12,13]. Moreover, the idea of proximity or analogy between the ancient times and modern world is currently being put forward more frequently, while experts underline the need of developing an “applied antiquity”, which can provide new insight to our experience [14,15,16].

Studies on ancient Greek and Roman world have been updated with information which is provided by all kinds of inscribed objects. Inscriptions, papyri, and coins are now treated as valuable evidence, which constitute a practically inexhaustible, constantly enriching source of information [17].

Publishing new documents –most importantly inscriptions– is a service that constantly updates historical knowledge with new material and frequently leads to great scientific breakthroughs. According to L. Robert, “*Epigraphy provides ancient history with a constantly renewed freshness. It fights against the unfruitful and endless discussions about the literary documents which are being reviewed for the past four centuries ... It is the ‘fresh water – νερόν ὑδωρ’ of our studies. It always keeps open the possibility of discovery ... Its constant contribution revives the study of Antiquity in the most diverse ways ... a true kaleidoscope*” [18].

In recent years, information and communication technologies promoted history and culture and provided them with a privileged position on the internet [19], on television [20], on the silver screen, as well as in digital games etc. [21] The “informal/incidental” learning of history, which was the result of the excessive exposure of historical content in the media [22], creates concerns about information overload [23], but at the same time opens up new opportunities of exploration through dialogue between historical science on the one hand and the so called “public history” on the other [24], which is admittedly based mainly on history taught in organized education and history promoted by digital media.

## **2 History and primary sources· the inscriptions**

*“The study of ancient history was a result of the preservation, reproduction and study of classical texts. The great prestige they these texts had received, but also the emphasis given on the study of political history, meant that the margin of interaction between the two disciplines (i.e. history and archaeology) was extremely restricted”* [25]

K. Vlassopoulos

Literary evidence had been the only source for ancient civilizations before the commencing of systematic excavations. Literary sources can be divided as follows: historiography, political theory, philosophy, rhetoric and poetry [26]. However, the works of ancient authorities have not been delivered to us without intermediation. Throughout

the centuries the inherited literary tradition has been subjected to falsification and therefore must be critically approached by scholars, whose main task is to emend ancient texts and verify their authenticity and validity [27].

Next to the historical science, archaeology, a field that is closely connected to historical research, has also shown significant progress over the years. Since the last three decades, archaeology –within the post-positivist and post-processualist (interpretative) movement [28]– has been developed into a new field of study, characterized by interdisciplinary attitude and intense socio-political overtones [29]. Therefore, the efforts for historical interpretation of antiquity combine the literary sources with archaeological evidence. Every antiquary source is capable to provide us valuable information about the past and can facilitate its reconstruction. Both language and physical objects provide information about past societies. Collecting all available evidence and methodologically arranging it for statistical analysis is a process that can lead scholars to new interpretations of the past [30].

A true renewal of classical studies therefore requires the use of archaeological data. For this cause inscriptions are of paramount importance. Inscriptions are written documents engraved on a hard surface (stone, metal, ceramics) that come to us mainly through excavation [31,32]. They include a large variety of texts which were engraved with the intention to transmit their content to as large audiences as possible. In recent years, the number of inscriptions have been constantly increasing, most of them dating from the Classical period and mainly the Hellenistic and Roman period [33,34].

Inscriptions offer ample and growing amount of primary sources. This is due to the so-called “epigraphic habit” [35], which affected every aspect of ancient life. Written on walls of main buildings found in the Agora or elsewhere, incised on gravestones, altars and so on, inscriptions provide information about the most important features of civic life in antiquity and capture in the most unique way the pulse of the socio-political space. After all, in Classical and Hellenistic Era the ability to understand public documents was to some extent a prerequisite for successful participation in public life and therefore every citizen must have been expected to have a certain degree of familiarity with epigraphic documents [36]. What inscriptions can teach us is often regarded as a specific “detail”; these details, however, are both exemplary and revealing. What inscriptions tell us that happened once, in reality occurred hundreds of times. Taking this into consideration, inscriptions can no longer be considered as a mean to enrich our knowledge of the past with particular “details”, but instead as a guide for the reconstruction of the broader historical context of a given period [37].

Epigraphic evidence is of great importance for five more reasons:

- Inscriptions reach us without intermediary, as opposed to the historical works of antiquity, transmitted by manuscripts copied from one another for centuries [38].
- The inscriptions provide a direct contact with everyday life. Most of the time what stands before us is not merely a document packed with conventional remarks intended to be used for bureaucratic purposes, but instead a genuine and almost always contemporary expression of antiquity itself [39].
- In direct relation to the above, some types of inscriptions –such as the epigram and the issues which addresses– have a more personal tone and present the deepest thoughts of individuals, their beliefs and the “average” person’s mentality [40].

- In cases where evidence is scarce, inscriptions often constitute the sole source of information. For example, as noted by P. Gauthier, the study of the institutions of the Greek cities owes much, almost everything, to inscriptions: decrees, laws and regulations, conditions and contracts, lists and accounts [41], all are written on stone.
- Finally, what makes the study of inscriptions very “charming” is that new epigraphic evidence is constantly being discovered [42], amounting to over half a million documents [43], a factor that influences scholars to re-evaluate established ideas.

Besides epigraphy, numismatics, the study of coins, is another discipline which significantly contributes to our knowledge about the past. A coin is a piece of money made of metal which conforms to a standard, has a certain weight and bears a design which is related to the issuing authority. Although pieces of metal in various shapes (ingots, rods-spits, discs) were regarded in many cultures around the world as a mean for carrying out transactions long before the invention of money, it was in 7th century Asia Minor that coins were struck in the form that is known today. The vast majority of ancient coins were disk-shaped and were manufactured by striking a blank disk between two engraved dies, the upper (reverse) set in a punch, and the lower (obverse) set in an anvil. Their legends often bear inscriptions, the symbol of the issuing city or authority, a representation of a deity, portraits of king or emperors etc. [44]

Although the first coins are known to have been developed in Asia Minor, it is a matter of debate whether the first coins were struck by the Kingdom of Lydia, the Greek cities of the region or wealthy individuals [45,46]. Even though not much is known about the authorities that were the first to mint coins, it was the Greek cities that spread the use of coinage throughout the Ancient World. The phenomenon of colonization contributed much to that effect. The reason that made coins so popular is that they facilitated trade, providing everyone with a standardized medium of exchange. Soon after the first documented use of standardized money in Ephesus, the cities of mainland Greece followed suite. In the middle of the 6th century Aegina was the first city that struck coins. Soon after Aegina, other cities such as Athens and Corinth adopted the use of coinage around the second half of the 6th century. Although the first coins were made out of electrum, silver became the metal upon which Greece coinage system was based [47].

Coins are among the most important items that can be found on an excavation site, since they can facilitate the dating of other findings. Even though coins found separately on a site can provide archaeologists with valuable information, it is the treasures that are of paramount importance for the study of monetary circulation [48].

### **3 Collecting inscriptions· from epigraphic corpora to databases**

The use of inscriptions as historical source material dates back to the fifth century B.C. Historians, like Herodotus and Thucydides, recognized their value, but it was not until the 19<sup>th</sup> century that scholars from all around the world began to systematically collect all available evidence in epigraphic corpora. According to P. Herrmann, *“the purpose of the corpus consists in the reliable collection and presentation of the total*

*accessible epigraphic legacy of a geographical area and so to enable the use of this material by the whole spectrum of research into the ancient world. To a great degree it is thankless hard labour but it is held to a particularly high standard of reliability, as it is the task of the corpus to bring together all the scattered material and to set it in order bibliographically” [49].*

The comprehensive collections of ancient inscriptions are the *Inscriptiones Graecae* (IG) and the *Corpus Inscriptionum Latinarum* (CIL). The *Inscriptiones Graecae* are the oldest long-term project of the Berlin Academy of Sciences and as such are directly connected to the beginnings of the Academy itself. The project's founding document is the proposal of the 24th March 1815 by the Philological-Historical Class of the Academy. The *Corpus Inscriptionum Graecarum* (CIG) which began in this way appeared in four large folio volumes from 1828 to 1859 and included around 10.000 inscriptions. The editor, A. Boeckh, thus became the founder of modern epigraphy and its method. For the first and only time all regions of the ancient world were covered. Even today the CIG is in some parts not superseded by more recent collections. In 1847 a committee was created in Berlin with the aim of publishing an organized collection of Latin inscriptions, which had previously been described and published by hundreds of scholars over the preceding centuries. That led to the creation of *Corpus Inscriptionum Latinarum* (CIL). The leading figure of this project was T. Mommsen, who also wrote several volumes of this series covering Italy [50].

The last two decades of the Boeckh era were admittedly overshadowed by constant conflicts with the funding committee of the Academy. Boeckh himself was not particularly efficient at organisation. His interests led him ever more in the direction of the interpretation and evaluation of the inscriptions and away from editing. He passed the completion of volumes III and IV on to his pupils J. Franz and A. Kirchhoff. In the design of the project he also fell short of the potential of his own proposal. Travel to the region of ancient Greece was planned but never seriously pursued. This attitude had already been rendered obsolete by the liberation of Greece (1833) and became entirely untenable after Mommsen declared the autopsy of all accessible inscriptions to be the most basic principle of epigraphy.

Boeckh's successor as director of the Greek inscription corpus, A. Kirchhoff had himself brought the CIG to completion. In the meantime, however, the number of known stones had multiplied. Thanks to L. Ross and other scholars, a large number of very high quality transcriptions had been brought to Berlin from Greece. The increase in quantity became a problem for the design of the corpus. That led U. von Wilamowitz-Moellendorff to reorganize and re-energise the project into what is today known as *Inscriptiones Graecae*. Like CIG, IG were planned on the geographical system; its first volumes dealt with Attica, and those which followed covered the remainder of Greece, Italy, and the western provinces of the Roman Empire [51]. But not all the volumes projected have been completed. Gaps remain, some of them so adequately filled by other publications that there is now no need in these areas to complete the original plans. Despite the difficulties of modern conditions, and the interruptions caused by World War II, work on the great undertaking continues up until the present.

The volumes of *Inscriptiones Graecae*, however, extend only to Europe. For Asia Minor, the Levant, Egypt and North Africa the situation is much more complex and the material much less easily to be located. No such unified publication exists, although a beginning has been made, under Austrian leadership, of a series entitled *Tituli Asiae*

Minoris, so far confined to the inscriptions of Lycia and Bithynia, but ultimately of wider scope. Otherwise it remains necessary to cite material from the old Boeckh Corpus, from MAMA or other topographical studies. Apart from TAM and MAMA, a new series known as *Inschriften griechischer Städte aus Kleinasien* was initiated in 1972 by R. Merkelbach of the Koln University. Since then, over 60 volumes with inscriptions of various cities of Asia Minor have been published. Other important series and corpora include IGBulg, IGLS, IPE, IC, OGIS, IvO, FD, CID etc. [52]

Apart from full-scale corpora, there are hundreds of periodicals and occasional publications concerned with epigraphic studies, with an annual output of considerable proportions. Periodicals such as *Supplementum Epigraphicum Graecum* (SEG), *Bulletin épigraphique* and *L'année épigraphique* provide annual digest of what has been published in a given year for new or re-edited inscriptions. SEG appears annually and reprints the entire texts of newly published material unless the new publication is itself a Corpus or a work of the same character. By listing its material with a volume and reference number in the same way as does the Corpus itself, SEG can serve, as its name suggests, as a running supplement to the volumes of the Corpus. While none of these works can presume to include all epigraphic material from whatever source, since much depends on the availability of the publications and the general co-operation of the scholarly world, it may on the whole be claimed that the researcher who has consulted all of them may rest assured that he has done what he can to discover the information that he needs. *Guide de l'épigraphiste* provide a useful guide not only to epigraphists, but also to other researchers who wish to become familiar with the keys to the study of the epigraphies of the ancient world [53]. The Guide contains a carefully selected bibliographical apparatus, with brief comments on individual works, a methodological introduction and a rich series of indices.

Corpora and Supplementa are not the only tools which researches have at their disposal. The Packard Humanities Institute, in conjunction with Cornell University and The Ohio State University are making available online an extensive corpus of Greek inscriptions. The database created by the Packard Humanities Institute (PHI) is continuously updated with the goal of providing a complete collection of all edited Greek inscriptions [54]. It does not provide a critical text or commentary. Older, inaccurate publications of inscriptions have not been corrected against the subsequent, more accurate edition of the text, and search options are limited to simple queries. As it was possible to reach an agreement with the publisher de Gruyter through which the Greek text of the newest IG volumes can be included in the database, this permits electronic access to the corpora, but it by no means replaces them.

In Greece, where most inscriptions are found, there is no organized system of recording, classification and presentation of epigraphic data and their publications. The epigraphic science is completely absent in the primary and secondary education, while in higher education there is no systematic teaching in the Departments Philology and History and Archaeology. The Epigraphic Museum in Athens [55] and the small Epigraphic Museum in Rhodes are the only museums in Greece which exclusively exhibit inscriptions and inscribed objects [56]. The center for Greek Language is the first Greek institute who has attempted to digitize a small collection of inscriptions. The aim is to showcase aspects of the public and private life of the ancient Greeks, initiating users into "*the wonderful world of inscriptions*" [57].

## 4 Epigraphy in a digital age: actuality, possibilities and prerequisites

At an international level, there are many ongoing projects whose main task is to collect epigraphic and numismatic evidence and to systematically entry it into reachable databases. Besides PHI, which was mentioned earlier, particularly useful for scientific research are the Epigraphic Database Heidelberg, the Epigraphik Datenbank Clauss-Slaby, Wild Winds and many more. Although most databases assure free access to everyone, their content is primarily intended for a specialized audience. This is mainly because they incorporate texts written in ancient Greek or Latin, whose mastering requires excessive amount of time and effort, rendering data-browsing impossible without sufficient language proficiency.

Nowadays, however, database developers try to overcome the difficulties presented above and to think of new ways to manage digital material, especially in cases where important academic or educational value resides. To this end the concepts of participation, interactivity and interchangeability are of pivotal importance. Efforts are being made to make digital content more accessible and more appealing to a wider age range. With the aim of developing and sharing e-learning courses, digital content is designed to fulfil both educational and recreational purposes (edutainment) [58].

Thus far, there have been many attempts to incorporate some of the features presented above in the study and promotion of epigraphy and numismatics. At the University of Florida a multidisciplinary team has created the Digital Epigraphy Toolbox, an online library of digitized inscriptions which utilizes three-dimensional technology [59,60]. In Italy, the EAGLE (The Europeana Network of Ancient Greek and Latin Epigraphy) [61] funded by the European Union and in collaboration with Europeana [62] organized an online platform for ancient Greek and Latin inscriptions combining primary research, digitization and presentation of inscriptions in a way that is intended for both specialized and non-specialized audiences. In Greece, the Numismatic Collection of Alpha Bank, which is considered one of the most important collections worldwide, attempts to assume a more educational role as it is evident by its publishing activities, its educational programs for students and schools and the development of digital games for educational purposes [63].

Popularizing epigraphy or numismatics is not an easy task, but the progress made during the last years is encouraging. Digitizing epigraphic evidence for educational purposes seems to be a promising field and we are hereby listing some of the basic prerequisites for such a venture:

- Interdisciplinary research combining disciplines like history, archaeology, pedagogics and technology, as well as multinational cooperation.
- Constant process evaluation, investigation of attitudes of the audience towards the content presented to them, evaluation during the project's implementation with the aim of improving the project's design, as well as final evaluation to better evaluate the appeal of the product to the members of a target group.
- Adoption of educational principles and selection of teaching and learning resources that take into consideration the particular needs of each age group.

- Implementation of modern teaching methodology in shaping the content of the material.
- Use of digital tools such as digital photos and maps, educational videos, digital games, internet browsing etc.
- Making content available through the official website, but also developing software applications for mobile devices (smartphones, tablets).

An integrated digital display system of inscriptions and/or coins capable to fulfil educational purposes is expected to address the following objectives:

- Presentation of the history of the inscription or of the coin (where was it found, by who etc.).
- Study of the broader historical context within which it was created.
- Translation of ancient sources into a sufficient number of languages, presented with basic commentary and highlighting of the engraved text.
- Enabling users to further investigate topics of interest.
- Development of better understanding of the arts and science related to each object.
- Awareness of issues concerning preservation of cultural heritage.
- Awareness of issues about interaction between cultures.
- Connecting objects with the location where they were found or the city/museum where are being displayed with the aim to present them as “tourist attractions.”

Technological progress can provide us with the means to render epigraphic testimony more appealing to larger audiences. Digital imagery, animation, digital video and audio, e-books and video games have a significant impact on the daily life of the majority of people. Digital media have evolved to powerful tools [64,65] transforming the very nature of their users (digital generation / digital natives). Subsequently, current learning theories support the use of the internet and particularly of digital games [66,67,68,69,70,71]. It is evident that the content of an epigraphic or numismatic database can become more accessible and appealing by successfully integrating into the digital age.

Archaeologists become increasingly more aware of the potential within digital technology for more efficient engaging with the public. Digital media is not regarded merely as a means for more realistic visualization of ancient monuments through 3D-reconstruction. Nowadays the importance of electronic tools at the "archaeology teaching process" [72] is also realized. Putting educational content, such as historical events, monuments and museum exhibits into engaging formats for learners emerges as an educational necessity [73]. Moreover, studies have shown the positive effect of digital video in the learning process and the satisfaction it brings to the trainee/learner [74,75,76]. Studies also point out that the use of video can direct students and teachers to invest more willingly in their personal development [77].

The use of video in teaching presupposes specific conditions:

- Information should be presented in simple and accessible language, avoiding diversion and encouraging active learning.
- Video for historical narration must closely and creatively combine image, sound and words [78].



As far as digital gaming is concerned, researchers converge to the conclusion that video games have the potential to reinforce intrinsically motivated behaviour to both adults and children [79,80]. The utilization of games in learning is also related to the change of current learner's profile. Specifically, Prensky [81] has written about the clear distinction between the students of the "games generation" or "digital natives", who have grown up with computer games, television and other media and which they use instinctively, and the other students, whose interaction with the technology has been through conscious effort and their learning approaches more traditional learning strategies [82].

## 5 Epilogue

The development of a program about digitizing and publicizing epigraphic and numismatic evidence for scientific and educational use will set high standards for the management of cultural heritage. It requires international and interdisciplinary cooperation, while at the same time makes clear the need for interaction and engagement with the public. Moreover, such an attempt has to incorporate new technology in order to create digital learning environments that offer both synchronous and asynchronous activities, creating new opportunities for e-learning (groups and communities) [83,84]. In any case it is a new and promising domain.

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