

## KEYNOTES



# EAGLE: Past, Present and Future

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## Past and Present

Like any other European project, EAGLE had to be reviewed, at the end of each year, by the Project Officer of the European Commission and two external reviewers.<sup>1</sup> Both in 2014 and in 2015, after 12 and 24 months respectively, our project was evaluated as “excellent”, even if we were invited to consider some critical points. From the very formal point of view of the European Commission, this means essentially that a given budget was used and reported in the correct ways and time, that documents and items were delivered by the deadline, and that tasks and milestones declared in the Description of Work were achieved. Actually we are approaching the final goal of the project, that is to make accessible to the public — not only to scholars — a huge amount of texts and images, with related metadata, pertaining to ancient Greek and Latin inscriptions. The technical aspects and the positive results are illustrated by Claudio Prandoni, EAGLE Technical Coordinator, in a dedicated presentation and panel (see the EAGLE panel, and the contributions by Mannocci, Prandoni, Rocco and Vassallo-Damnjanovic). As Scientific Coordinator, I would like instead to make some more theoretical observations and share some thoughts on the significance of this “excellent” evaluation and the reasons that lay behind what we can call a successful case.

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<sup>1</sup> This text reproduces without substantial changes the speech held on January 27th, at the opening of the EAGLE Final Conference. The first part (*Past and Present*) is by Silvia Orlandi, the second part (*Future*) is by Silvio Panciera.

In fact, EAGLE is not only a project that is careful in spending money and sending deliverables and reports, ready to pass any review: EAGLE was born to be much more than this.

The possibility of free online access to all the Greek and Latin inscriptions of the ancient world has been a real need of the academic community for a long time. Our aim is to reach this goal not with the creation of a new, single database, but with the aggregation of the digital archives of different institutions around a common project and a common idea of what an inscription is, and how to read it; this idea was born after years of preliminary discussions and agreements that preceded and fostered the European project. Knowing clearly the need that we wanted to meet, and the way in which we wanted to do it, has surely helped us to focus our energies on the project's main goals: the harmonization of very different materials and the creation of a new portal that could make them accessible through a search form specifically designed for inscriptions. We can say that both goals have been achieved, even if corrections and improvements are still possible and necessary. However, strange as this statement may seem, I don't think that this is the real indicator of the success of the project. In my opinion, what actually shows that EAGLE is meeting a real need, is that our *modus operandi* is becoming an international standard: a larger and larger number of projects are using the controlled vocabularies that are one of the most interesting and immediately re-usable products of the harmonization job that EAGLE has done, are adopting an EAGLE compatible metadata model, and are sharing their content through the same system.

This scenario was already clear during the First EAGLE International Conference, which was held in Paris in autumn 2014, and it is now confirmed by the papers and posters selected to be presented in this volume, and by the huge networking activity of the project, which has widely enlarged the EAGLE consortium. Among the new partners — too many to be listed here — I would like to mention at least two examples that are — for different reasons — particularly important: the Inscriptions of Greek Cyrenaica (<https://igcyr.unibo.it/>) and the EPNet project ([www.roman-ep.net](http://www.roman-ep.net)), which is currently digitising the *tituli picti* on the Roman amphoras from the Monte Testaccio in Rome. In the first case, one can clearly see the importance of a project dealing with inscriptions from a region corresponding to present-day Lybia: thanks to this digital archive, they will not only

be better known, but also virtually preserved and protected against war damages and illegal commerce. In the second case, EPNet is an important step towards a digital archive for inscribed *instrumentum*, a type of inscription that is fundamental to our knowledge of the ancient economy, but that is still lacking a policy of aggregation and harmonization of the existing digital resources.

This role as project of reference, of course, gives EAGLE a great responsibility, not only for the present, but also for the future, since now we must not only continue to meet the need for which the project was born, but also to show the direction in which we want to continue.

In this sense, and not by chance, I think, Europeana has also shown an evolution in its policy: as has been recently stated by Joris Pekel during the final conference of the Athena Plus project (<http://www.athenaplus.eu/index.php?en/202/athenaplus-final-conference>), in the future Europeana will pay much more attention to the quality over the quantity of its digital items. This decision may have been made possible by the influence of projects like EAGLE, that are particularly careful about the curation of content and its usability in research activity.

The same observation can be made with respect to another aspect of the project. One of the main goals of the EAGLE project is to make inscriptions accessible not only to scholars, but also to a broader public, made up of students, teachers, tourists, and curious and interested people. To reach this audience it's necessary to overcome the barriers represented by ancient languages and sometime ancient alphabets, epigraphic formulas and abbreviations, but also by the characteristics of traditional academic language and means of communication, using the huge potential of images, social media, and storytelling techniques. The results of this effort are particularly interesting: the realization of a mobile application using an image-based recognition system, the creation of the EAGLE MediaWiki platform to collect and organize thousands of translations in modern languages of epigraphic texts of varying complexity, a new storytelling application to illustrate the narrative content of many inscriptions, not to mention a virtual exhibition and a promotional video (see the EAGLE featured panel).

All this was included in the proposal submitted to the European Commission, but — once again — the fulfillment of promises is not the only indicator of the success of our project. In this case too, I think that much more significant is what went beyond the promises: the unexpected, but no less interesting, developments.

The possibility to have in a single online archive most of the existing translations of Greek and Latin inscriptions has raised a whole series of theoretical reflections about the often underestimated problems and difficulties that a translator has to face. On this subject, scientific contributions and practical solutions have been proposed (see, for example, the Guidelines for Translators in EAGLE MediaWiki: [http://www.eagle-network.eu/wiki/index.php/Guidelines\\_for\\_Translators](http://www.eagle-network.eu/wiki/index.php/Guidelines_for_Translators)), but new questions still must be answered. And this shows that even a task born as a dissemination activity can successfully interact, if seriously undertaken, with research activity.

In the same way, the enormous work of enriching the content of the project with images has led to an effort to clarify the different laws that in different countries of the European Union govern the use of photographs of cultural heritage for both educational and commercial purposes. In this framework, the EAGLE Consortium has shared the position of Europeana on the review of the EU copyright rules (<http://pro.europeana.eu/blogpost/a-first-glance-into-the-future-of-eu-copyright-reform>) and the re-use of digital images on the web, especially within projects related to the digitalization of cultural heritage. We also hope that in the future this assessment will be accepted by all the institutions that don't yet recognize the civic value of scientific projects like ours.

In this field, too, the effort originally intended to enlarge the accessibility of the epigraphic material through the EAGLE portal is having — and will have in the future — interesting repercussions for scholars.

The importance of non textual elements for the correct and complete understanding of epigraphic messages has been recognized for some time. This implies the need not only to read, but also to look at the inscription. Not by chance, the theme chosen for the last International Conference of Greek and Latin Epigraphy, held in Berlin in 2012, was *Öffentlichkeit — Monument — Text*, and the same approach can be found in some of the papers presented in this volume, dealing with the relationship between form and content in epigraphic studies (see papers by Felle, Benefiel, Graham).

You can imagine how many possibilities in the field of palaeography and writing technique can be opened by the ability to search for “similar images” through the EAGLE portal. Once again, a project can be recognized as successful if it not only meets a present need,

but also shows new directions for future research, that will benefit from a constant and closer relationship between texts and images.

Finally, let me say something that is not strictly epigraphic, but is no less important. Among all the things that I have learned during these three years of work as coordinator, there is the persuasion that all these results would have never been possible without the help of all the people who, in different ways and with different roles, are involved in the project. People first of all curious and keen to ask questions, ready to listen and observe, who don't use problems as a pretext not to do things, but rather try to solve them. People, above all, able to connect ideas, places, projects, and other people in the awareness that every success is not a point of arrival, but part of a continuing journey.

We can learn something from this experience, not only for our present satisfaction but also as a suggestion for the future: even in the field of digital epigraphy we have to move, I think, towards a wider connection and interoperability of projects, allowing us not only to progressively fill the still existing gaps, but also to better use our human and financial resources.

In the XIXth century, the *Corpus Inscriptionum Latinarum* would have never been completed without the huge net of collaborators, correspondants and scholars from the whole of Europe with whom Theodor Mommsen intensively exchanged letters and documents. In the same way, I think, the new frontier of epigraphy is the broadening of studies and research made more and more open, collaborative and constantly updated thanks to a clever use of technology and digital resources.

## Future

There is no doubt that mine is the most difficult of the tasks assigned for this introduction. When we speak about past and present, we already know what has happened or what is happening. And this can also be a very pleasant task if, as in our case, there are many achievements and good results that can be praised.

On the contrary, it's very different to speak about the future, that is something that has not happened yet, and that we don't even know with certainty will ever happen.

When I organized the XIth International Conference of Greek and Latin Epigraphy, which was held in Rome about 20 years ago, I asked

Giancarlo Susini to open the conference, with the lecture “Ten conferences plus one: the way of epigraphy”; on the opposite side, I asked Géza Alföldy to close the conference with a paper on “The future of epigraphy”, and he, with the same embaressment that I have now, observed: “As historians, we already have problems understanding the past. What could we say about the future?”

As a matter of fact, the future doesn’t lean on solid, measurable facts: it’s the reign of the unknown, in which one projects rational and irrational desires, mixed with fears or even anguish. But it’s also a temporal space in which many of our previsions are going to be swept away by facts that nobody had foreseen or even imagined.

It would have seemed more logical for the future of the project to be presented by a young person, who will have the time to experience it, and not by an old man, who will never see it. By the way, I’m rather upset when I see the media invaded every day by some old men — I hope not to be one of them — who, after having had a long time to express their opinion, and having failed, think that they still have the right to give rules for the future, while — maybe — it’s the moment to open the floor to others.

But let’s speak of lighter things!

I don’t think that you want me to become a “futurologist” and to make predictions of what is going to happen in the world, or, more modestly, in EAGLE, in a more or less distant future. But we can’t do without the future.

Every action presupposes a future, and this feeling leads our steps and gives them a meaning. But we can also say that the future is nothing but the present of yesterday. To speak about the future of EAGLE, therefore, there is no need to imagine complex scenarios for the coming years. We can just ask ourselves: What am I going to do tomorrow? In English, there is a convenient distinction between the simple future, that is used for actions that happen spontaneously, and the intentional future, that is used for actions that are consequences of a plan, an intention. That’s what we should talk about now, but we can’t do that without considering:

- a) What was our original goal and how much of it has been achieved
- b) What has worked well and is to be kept, and what, according to this experience, should be improved
- c) What has been set aside or not originally included, but should be planned for the future

Since the beginning, I've thought that my role in the project was not to define every detail, but to establish some key points, and check that they would not be forgotten or changed. That's why today I would like not to illustrate every aspect of the project, but just to say a couple of words about the points already mentioned.

"Old fashioned" EAGLE was born as a federation of databases with the goal of "recording all Greek and Latin inscriptions older than the VIIth century AD, according to the best existing edition, possibly checked and improved, along with some fundamental data and images" (see the documents collected in [http://www.eagle-eagle.it/Italiano/documenti\\_it.htm](http://www.eagle-eagle.it/Italiano/documenti_it.htm)). We can say that this goal has been adopted by the "new version" EAGLE, too. But, due to a difficult coordination between Greek and Latin epigraphers (an old problem...) most attention has actually been paid to Latin inscriptions. We have known since the beginning that the complete recording of all known inscriptions was practically impossible. Nevertheless, we can probably state that in a short time the number of inscriptions searchable through the EAGLE portal will reach about 550.000, thanks to the enlargement of the consortium and to the enormous work of harmonization and disambiguation of content, and above all thanks to the inclusion of the epigraphic texts put at our disposal by Manfred Clauss and his database (I would like to thank Pietro Maria Liuzzo for this and other information).

It's not all that we need (I'll come back on this point later) and, above all, the metadata set of the texts and their degree of elaboration is not homogeneous in all the records. But nobody can deny that the original plan has been mostly fulfilled, and looking at what has been done we can be rather confident in the work that awaits us in the future.

Our tasks for tomorrow are the subject of my second point, concerning what to keep, and what to change according to our past experience. In my opinion, and — as it seems — according to the European Commission too, the general structure of the project, what we can call its philosophy, has been successfully tested — as the facts testify — and should, therefore, be maintained.

The philosophy is based on two fundamental principles:

1. The first is common to every project that aims to be a scientific research project, and it's the awareness that we do not have definitive solutions, but just hypotheses, which must always be checked

because every attempt involves the possibility of errors that can and must be corrected. The large number of changes and improvements made during the project are not a proof of weakness, but a sign of its strength.

2. The second point is the clear need for as wide a collaboration as possible, to ensure not only a large quantity of data, but above all a high quality of content, checked by experts in different geographic regions and thematic fields. This aspect has been particularly curated in these last years, so that the number of institutions and single content providers has been greatly increased. In this way, and thanks to great technical work including the fundamental creation of controlled vocabularies, the EAGLE portal now gives access to many different databases, originally independent and with different characteristics and purposes. In my opinion, this is the path to follow in the future as well, in order to face and solve bigger and bigger problems.

EAGLE looks different from other similar projects because, since the beginning, it has paid much attention not only to the quality of information, but also to the combination of textual and non-textual data, according to the current definition of an inscription as an inscribed monument. Moreover, in recent years, we have seen a huge increase in the visual documentation available online, and now EAGLE includes about 250.000 digital photos of inscriptions. This is another aspect that should be maintained, and — possibly — even strengthened. In fact, thanks to projects like ours, the problems related to the legal treatment of images of cultural heritage seem to be at the moment under discussion, both nationally and internationally (see paper by Modolo). Silvia Orlandi is also right to underline how important the inclusion of images of inscriptions and the technical possibility to search them will be for paleographic studies. I have recently discussed with Silvia Evangelisti how to improve the “*scriptura*” field of EDR with more detailed information about writing techniques, materials and tools. But the analysis of the graphic forms of inscriptions has not yet been adequately confronted, as it still lacks the contribution of professional paleographers. Maybe this conference will give us the chance to begin this kind of discussion.

Speaking about old goals to be taken up again, or new goals to be achieved, I have to come back to the problem of Greek inscriptions and the inscribed *instrumentum*. They are both essential components of our research field, with a number of independent digital repositories, but since the beginning we have had problems with their inclusion in the project. At the moment, EAGLE includes more than 7000 Greek inscriptions, while a specific commission of the International Association of Greek and Latin Epigraphy is currently working on the digital *instrumentum*. Now it seems that, after a long period of inactivity, we are having in recent years an awakening on both sides, and particularly on the side of Greek epigraphy, thanks above all, to the *Inscriptiones Graecae*. Now it's time to aggregate this fundamental material too, with the help of new technologies. I would just suggest that we first reach a preliminary agreement among the participants using past experience rather than starting from scratch both in terms of base requirements, and of open and flexible structure.

All this is about the future: not a vague and undefined future, but a very positive future, modeled according to our past and present plans, constantly checked and renewed. But at least part of the future doesn't depend on us.

For example: Will there still be somebody who will trust and fund projects like ours?

And will there still be, in Italy and elsewhere, enough scholars, old and young, adequately educated and motivated, who will take care of it?

The tendencies that we can see in Italian and European policy in the field of culture and the university, or at least some of them, could lead us to pessimism, but I don't think that we should give up. First of all because there are also signs of hope. The European Union, for example, with other important national institutions whose moral and financial support should never be forgotten — has trusted and supported the proposal that we submitted three years ago, and, during annual reviews, has appreciated the way in which the project has been carried out under the guidance of Silvia Orlandi and her many collaborators. Why should we exclude the possibility that something similar will happen again in the coming years? I continue to believe that EAGLE is not an ordinary project and that its cultural importance, both for the scientific community and for civic life, will be adequately recognized.

Moreover, my confidence is increased by the enthusiasm with which so many young people have taken part in the project, giving and receiving so much, not only on the professional and cultural side, but also in terms of education and ethics, learning to work not only for themselves, but also for others.

We live in a time of very quick changes — and this is even more true for a university, where the population of students is almost completely renewed every five years. Therefore, to foresee the worst is not necessarily more realistic than having some hopes.

Anyway, I think that not only a scholar, but any person who believes in something, should not give up only because of a mere calculation of probability: luckily we are not working only for the market, so that we can leave to others the task of dealing with risks and probabilities.

# Where eagles dare

*Charlotte Roueché\**

I couldn't resist this title, taken from Shakespeare's *Richard III* to use for a Hollywood film, full of daring wartime adventures. As academics we may underestimate the importance of courage in our undertakings. But the early epigraphers required a good deal of *daring*; while recording inscriptions was straightforward enough in Italy or north-western Europe, the eastern and southern regions of the Greco-Roman world remained difficult and dangerous to visit until the late nineteenth century or even later – as is again becoming true. The early travellers also suffered from practical constraints; in the 18<sup>th</sup> and 19<sup>th</sup> centuries they were limited by the quantity of paper that they had brought with them just as in the 20<sup>th</sup> century; Robert 'Palmyra' Wood recorded inscriptions on pages of his copy of Homer. He was travelling for several months, and was saving his paper for sketches, plans and drawings of buildings.<sup>1</sup> Similarly John Deering recorded texts in a notebook with very small pages.<sup>2</sup> Twentieth century travellers were to experience similar constraints on the amount of photographic film available to them.

At the same time, epigraphers have always been ingenious in their use of technical solutions. The most dramatic of these is perhaps the development of squeezes, which have turned out to provide records of enduring and continuing value. The driving force here was the need to record inscriptions in languages – hieroglyphics, cuneiform – which could not be interpreted, and even incised designs; copyists who know Greek or Latin could record texts in those languages with relative ease,

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<sup>1</sup> On Robert Wood (1716/17–1771) see White 2004.

<sup>2</sup> On John Peter Deering (1787–1850) see Burnet 2004.

but they too came to find squeezes useful in representing what they saw. Over time the technology was improved; while the plaster casts of Egyptian paintings could seriously damage the monument, paper squeezes improved in quality.<sup>3</sup>

During the 19th century, travel became steadily safer, and also easier – most dramatically as railways began to open up new regions. Over the same period, the creation of the first great corpora of inscriptions encouraged an increasing standardisation of records. Early travellers recorded as much as they could, often in haste: this normally took the form of a simple transcription, or drawing, of the text, with sometimes a brief mention of its support. Gradually, measurements start to appear – often only of letters, then of the monument or fragment itself. In 1890 the Austrian government set up the *Kleinasiatische Kommission*,<sup>4</sup> which provided travellers with special notebooks: these were pre-printed with headings for Location and Position, Material, Height, Width, Depth, Letter heights, Shape and Condition, Number and location of squeeze, When copied and by whom.<sup>5</sup> On return to Vienna, the notebooks could be filed, and the squeezes stored, in bookshelves and drawers specially designed for the purpose.

At the same time, the publication of the corpora, and the great projects from Boeckh's *CIG* to Mommsen's *CIL* was revealing the volume of material. The Ottoman world was becoming increasingly accessible; in the western part of the Roman Empire development and industrialisation – particularly the redevelopment of Rome as a capital city – increased the torrent of material. Publishing an abundance of texts, accompanied by increasingly detailed information, required a systematised response. Organisation could be thematic: Christian inscriptions, for example, were identified as a separate category, requiring different expertise, although this division has remained problematic. It could be geographic: the Berlin Academy took responsibility for publishing the material from Italy and the west, while the Austrian Academy was to deal with Asia Minor and the East; but national interests also played a part, with Italian and French scholars publishing materials from the epigraphically prolific north African regions which their governments controlled.

<sup>3</sup> [http://www.asia.si.edu/research/squeezeproject/sq\\_making.asp](http://www.asia.si.edu/research/squeezeproject/sq_making.asp)

<sup>4</sup> <http://www.oeaw.ac.at/en/science-and-society/commissions/kleinasiatische-kommission/geschichte/>

<sup>5</sup> Fund- und Standort, Material, Höhe, Breite, Dicke, Buchstabenhöhe, Form und Erhaltung, Nummer und Ortsangabe des Abklatsches, Wann und von wem copirt.

The situation also demanded finding aids – the *PIR* can be seen as a tool for accessing the material in *CIL*. And the pressure for standardisation continued, although it was not until the 1930s that use of the Leiden conventions for publishing inscribed texts was agreed (and modifications continued).<sup>6</sup>

Much of this reflected a response to the increased volume of material becoming available as the world changed. But the end of the nineteenth century saw the beginning of a further technological revolution with the arrival of photography. The use of cameras for archaeological records was at first limited to established excavation sites, or cities such as Athens, with a reasonable amount of infrastructure and protection for cumbersome equipment; but by the 1920s cameras were sufficiently portable to be taken out into the countryside. More and more inscriptions were photographed; but the traditions which had already developed meant that they were not immediately seen as essential elements in publication. The *Monumenta Asiae Minoris Antiqua* represent an honourable exception, established with the specific aim of taking and publishing photographs; but they had the support of American funding.<sup>7</sup>

Gradually, however, photographs began to effect transformations in scholarly practice. They permitted a far better understanding of regional, cultural and chronological distinctions, which could be communicated to readers who would have no opportunity to see the stones themselves. And they provided an increasing understanding of context – whose importance was emphasised by both Louis Robert and, more recently, Werner Eck. The photograph can present the support, and, when applicable, the setting of that support; Robert emphasised the importance of visualising the landscape surrounding a particular community.

Robert also demanded ever higher standards in the accompanying commentaries on inscriptions. But all of this raised a huge logistical problem: a text accompanied by a detailed description, a detailed commentary and one or more photographs requires a good deal of space – and more and more texts were appearing. From the 1980s onwards

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<sup>6</sup> Van Groningen 1932; for further modifications, see Dow 1969; Krummrey and Panciera 1980; Panciera 1991.

<sup>7</sup> Roueché 2013.

it was also becoming standard to provide a translation into a modern language. Publication in book form was becoming increasingly expensive and burdensome.

It was therefore changes which had been brought about by a series of technological developments which led far-sighted scholars – in particular Silvio Panciera and Geza Alföldy – to look to yet another technology. As early as the 1980s they both saw the value of computers as tools for holding, organising and searching large volumes of text; others quickly followed. Panciera also understood early on that working in this medium required collaboration, and the use of agreed standards, convening meetings to discuss such matters from 1989 onwards. With the arrival of the web, and the resultant possibilities for communication, these requirements became ever more important; in the early 2000s the agreed conventions of epigraphy were translated into a set of machine readable instructions by Tom Elliott, when he developed EpiDoc.<sup>8</sup>

At the same time, the steady improvements in technology were making it possible, by the 2000s, to exchange images as well as texts; and the arrival of the digital camera was transforming the possibilities for photographing texts. The epigrapher in the field no longer depends on a finite supply of film: the traditional shot of several fragments photographed together for reasons of economy is disappearing. Instead, the epigrapher should be expected to present images of every side of a monument and its setting. All these developments both enabled and necessitated the first large scale publications of inscriptions on line: *Vindolanda Tablets Online*,<sup>9</sup> (2003), the *U.S. Epigraphy project*,<sup>10</sup> (2003–), *Aphrodisias in Late Antiquity* (2004),<sup>11</sup> the *Inscriptions of Aphrodisias* (2007),<sup>12</sup> and others in preparation.

While we were working on the materials from Aphrodisias, new possibilities were opening up: connections were becoming faster and more ubiquitous. More and more relevant material was being published online: what Tim Berners-Lee calls *the next Web of open, linked data*.

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<sup>8</sup> <http://epidoc.sourceforge.net/>

<sup>9</sup> <http://vindolanda.csad.ox.ac.uk/>

<sup>10</sup> <http://usepigraphy.brown.edu>

<sup>11</sup> <http://insaph.kcl.ac.uk/ala2004/>

<sup>12</sup> <http://insaph.kcl.ac.uk/iaph2007/>

In 2008 we received a grant to start exploring the use of geodata with inscriptions, in the *Inscriptions of Roman Tripolitania* (2009);<sup>13</sup> this approach has been further developed in *Monumenta Asiae Minoris Antiqua* XI,<sup>14</sup> and other kinds of interconnection are being actively explored. Linking is closely connected to sharing: it is becoming increasingly clear that one way of ensuring the survival of our materials is by making them openly available for others to reuse and share as widely as possible.

One of the aims of both Alföldy and Panciera had been to develop collaborative corpora, places where large quantities of texts could be shared to enable extensive searching. After their projects moved onto the web it also became possible to include more and more material – photographs and other images, and geodata. It was Silvia Orlandi who realised that the next step was a portal, to offer access across these and many other online epigraphic collections. Work over several years, by many different scholars, had established EpiDoc as a robust system, particularly for the exchange of information, and it was therefore available to build EAGLE. The spirit of this enterprise was exactly the spirit behind Europeana – a project to present high quality records of heritage materials to a worldwide audience.

This is an account, therefore, of an academic discipline which has evolved by engagement with a series of technological developments over two centuries, and is continuing to do so; it is also a story of developing steadily higher standards for the publication of heritage materials. The current challenge is to confront the fact that such materials will now be universally available, and must therefore be presented in a way that helps and supports new audiences. For this the EAGLE project has been developing valuable new resources – such as the mobile app –and, very importantly, encouraging translations. The crucial thing to realise is that it will not be possible to revert to earlier models: this project sets new, higher standards for epigraphic publication. This is a project which will take the subject into the future ‘on eagles’ wings’, as the Bible puts it – in another phrase used by Hollywood.<sup>15</sup> They should be taking us all with them.

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<sup>13</sup> <http://inslib.kcl.ac.uk/irt2009/>

<sup>14</sup> <http://mama.csad.ox.ac.uk/>

<sup>15</sup> Exodus 19.4

## References

- BURNET, G. W. 2004. "Deering [Gandy], John Peter (1787–1850)." In *Oxford Dictionary of National Biography*, edited by H. C. G. Matthew and Brian Harrison. Oxford: Oxford University Press. Online ed. doi:10.1093/ref:odnb/7420.
- DOW, STERLING. 1969. *Conventions in editing: a suggested reformulation of the Leiden System*. Durham: Duke University.
- VAN GRONINGEN, BERNARD A. 1932. "Projet d'unification des systèmes de signes critiques." *Chronique d'Égypte* 7: 262-269.
- KRUMMREY, HANS AND SILVIO PANCIERA. 1980. "Criteri di edizione e segni diacritici." *Tituli* 2: 205-15.
- PANCIERA, SILVIO. 1991. "Struttura dei supplementi e segni diacritici dieci anni dopo". *Supplementa Italica* 8: 9-21.
- ROUECHÉ, CHARLOTTE. 2013. "The history of an idea: tracing the origins of the MAMA project." In *Roman Phrygia. Culture and Society*, edited by Peter Thonemann, 249-264. Cambridge: Cambridge University Press.
- WHITE, D. M. 2004. "Wood, Robert (1716/17–1771)." In *Oxford Dictionary of National Biography*, edited by H. C. G. Matthew and Brian Harrison. Oxford: OUP. Online ed. doi:10.1093/ref:odnb/29891.

# Putting ancient inscriptions in the limelight

*Mary Beard\**

**Note of the Editors:** we reproduce here the abstracts of Professor Beard's keynote presentation. The full text of the lecture (including the multimedia files shown to the audience) will be published in the "Storytelling Platform" on the EAGLE website at the address: <http://www.eagle-network.eu/story/putting-ancient-inscriptions-in-the-limelight/>

This lecture reflects on public engagement with ancient inscriptions: what is it about inscriptions that interests a wider audience, and – just as important – what puts them off? Mary Beard draws on a series of BBC documentaries, "Meet the Romans" which used Roman epitaphs and other inscribed texts as a way into the life of ordinary Romans, but reflects more widely on how academics and museum professionals can (and already do) make inscriptions come alive for the public.

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# Tradition and progress. The Roman World in the Digital Age - seen through Inscriptions

Werner Eck\*

Epigraphy has caught up with the digital age. If this point needs to be proven, this very conference speaks for itself. Its celebration in Rome does not happen by chance. Indeed, the first real attempt to create a collective compilation and presentation of all the Latin (and Greek) inscriptions in a single database or as a connection of the existing databases was made here in Rome in 1997 through Silvio Panciera during the 11<sup>th</sup> International Congress of Greek and Latin Epigraphy.<sup>1</sup> His fundamental initiative set in motion a process, which step by step will lead to a complete database. Very important steps in this direction have been made in the meantime and the development is progressing with particular emphasis at the Sapienza thanks to the collaboration between traditional epigraphists such as Silvia Orlandi and IT-people, who are affiliated to the Centro Linceo Beniamino Segre. These two and all the other partners in many European countries have to be thanked for these present steps and we wish them both courage and success in the following phase.

Whoever is dealing with inscriptions, at least since the 16<sup>th</sup> century, has to deal with a continuously growing mass phenomenon. One of the reasons, which instigated Mommsen to establish the *CIL*, was the amount of epigraphic texts, which were known at that time but had not been collected in one single place but were, instead, spread in countless manuscripts and publications. Even when one looks into a representative selection such as the *Inscriptiones Latinae Selectae* by Hermann Dessau – completed in 1916 – there are more than 9500 texts.

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<sup>1</sup> See Panciera 2006, 1913ff. – I would like to thank Aitor Blanco Perez for the translation of the paper.

Since the time of Mommsen and Dessau, however, the number of epigraphic documents has increased to a size previously unknown. On the website of EAGLE one can read of more than 1.5 million items, currently scattered across 25 EU countries as well as the east and south Mediterranean, which should be collected in the EAGLE database. In order to illustrate this growth in a more accessible way, let me refer to the following example. Since the conclusion of the first edition of *CIL II*, namely with the supplement in 1892, the number of inscriptions from the Iberian Peninsula has tripled. For some types of inscriptions, the increase is even bigger. When Herbert Nesselhauf collected all the military diplomata in 1935, he could put together a total of 187 documents in *CIL XVI*. Today, we know more than 1100 such texts, i.e. an increase of 7 times. Not in all regions of the early Roman Empire and for all types of inscriptions is the increase as dramatic as in the aforementioned examples. Even so, a doubling can be identified in many Roman places. Just to mention some examples: in Sarmizegetusa, the first Roman colony following the conquest of Dacia, around 330 inscriptions were collected in the different volumes of *CIL III*. Since then, more than the same number of new texts has appeared, perhaps around 400.<sup>2</sup> The growth is almost always dramatic when intensive excavations lead to a massive increase in the amount of inscriptions available, as somehow happens in the cases of Sagalassos or Perge in Pamphylia.<sup>3</sup> Perge provided only 4 Latin inscriptions for the *CIL III* and today there are at least 42.<sup>4</sup> Even more dramatic is the growth in Caesarea Maritima. In *CIL* there were only 3 Latin inscriptions known from the capital of the province of Judea, while now we have in the *Corpus Inscriptionum Iudaeae/Palaestinae* more than 270 Latin documents.<sup>5</sup>

Each of us is familiar with this massive increase in epigraphic monuments and we are reminded of this every year by the always more extensive volumes of *AE* and *SEG*. Even if it is impossible to provide an exact number of all the Latin inscriptions, one can still take as a starting point the fact that there are approximately 500.000 texts available for our work, including the so-called *instrumentum domesticum*. There are more than 495.000 inscriptions in the Database Claus-Slaby.

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<sup>2</sup> According to information by Ioan Piso.

<sup>3</sup> In Sagalassos almost all the new inscriptions are in Greek.

<sup>4</sup> See the Claus-Slaby database.

<sup>5</sup> Eck 2013, 17 ff.

Around 72.000 we can find in the Heidelberg Database and around the same number in the Epigraphic Database of Rome, from which the Project EAGLE emerged, not to mention other participants as, among others, *Hispania Epigraphica* or the Bari Epigraphic Database.<sup>6</sup> With regard to the Greek inscriptions, it is much more difficult to give an approximate number because their digital record is not as advanced as in the case of the Latin inscriptions. As for inscriptions in other languages – such as Punic, Hebrew-Aramaic, Demotic or Nabatean – let me exclude them from this discussion, even though they are just as part of the epigraphic tradition of the Greek and Roman antiquity as Latin and Greek inscriptions – we should not forget this very important fact.<sup>7</sup> Our work as historians or philologists is based on all those texts. But, the bigger the number of documents providing information is, the more difficult it becomes to find all texts. Even more difficult is to collect selectively those texts related to the topic on which one wants to work. And yet, the complete collection is crucial for the scientific result.

Let's go back only two or maybe three decades, a time which many of you in this room have vividly gone through. In that time it was clear, what we had to do, when we wanted to explore a topic on the basis of epigraphic evidence. We were to search – sometimes in countless volumes of inscriptions and partly supported through more or less detailed indexes. Depending on the type of subject on which we were working, these indexes were not always perfect tools to find the material. Very often they could not even be such perfect tools, since many phenomena are not accessible through precise termini in the epigraphic material, but rather through the entire content of the text. I am sure that you all have your own experiences. When I worked on the administration of Italy in the high Roman Empire, the indices were helpful but not sufficient. I had to go through each and every of the epigraphic corpora, which means that at least the inscriptions had to be read. In total, the look through all the necessary volumes took me almost two years.

Is that different today because there are numerous databases available? At least with regard to the Latin inscriptions almost all of them are collected, although with very different individual information.

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<sup>6</sup> See the individual databases.

<sup>7</sup> At the 14. International Congress of Greek and Latin Epigraphy there was a special section for this phenomenon: Eck *et al.* 2014, 159 ff.

With few clicks, we can find an answer for many questions in few seconds – sometimes one has to wait a bit longer, since the server does not work properly or some other problems exist. Indeed, as an already deceased colleague once told me long before the digital period in 1973: *Pazienza* is the greatest virtue of the epigraphist. Today we are ready to forget this virtue thanks to our computers. At any rate, most of the relevant material available in databases appears quickly on the screen. It is not necessary to give examples. And yet, something which we all know: it is by no means guaranteed that we have found absolutely all the relevant material which exists; the reason for these gaps are inter alia, that not a small part of our epigraphic testimonies survives only as fragments and can be restored in different ways. For example, if we would try to find all the *quaestores* of the province of Achaëa in the imperial age, we would not find the following fragmentary inscription from Corinth, the capital of the province, because the text has read as follows:<sup>8</sup>

*Q(uinto) Vili[o--]/Titia[no]/Quadra[to--]/IIIvir(o)vi[ar(um)cur(andarum), trib(uno)] / la<sup>r</sup>icl(avo) leg(ionis) [--, leg(ato) prov(inciae)] / Ach(aiae), ob ius[titiam et fidem,] / quam circa [universam] / Achaia[m exhibuit,] / qu<sup>a</sup>m pro praetore [administravit.] / M(arcus) Antonius M(arci) [filius)] / Nigrinus [--].*

Our search in a database would have recorded a proconsular legate of Achaëa whose function in the inscription is nevertheless restored. The restoration of the position of provincial legate is not impossible, but it is also not very likely. The restoration of the office of quaestor: [*-- quaest(ori) prov(inciae)*] / *Ach(aiae)* instead of [*-- leg(ato) prov(inciae)*] / *Ach(aiae)* fits in the lacuna much better.<sup>9</sup> For a young senator who had completed an office of the *vigintiviri* and then a tribunate in a legion, the *quaestura* should actually follow in a normal career and not the position of a proconsular legate under a proconsul. Of course, we know that exceptionally young senators already before the *quaestura* were acting as legates of a proconsul in his province. In total, there are only four of such cases. By contrast, much more senators state in their inscriptions that they have held the office of provincial *quaestor* as *pro praetore*.

<sup>8</sup> CIL III 537.

<sup>9</sup> In the database Clauss-Slaby there are around 68 examples in Latin inscriptions, in the database of the Packard Institute one can find 10 more in Greek texts.

The *pro pr(aetore)* preserved in the inscription could therefore refer to the *quaestura*. As the *quaestura* normally follows the *viginvirate* and the legionary tribunate, this rule should automatically be observed in a fragmentary career.<sup>10</sup> This kind of result is not achieved through an inquiry into a database but through a constructive consideration on the basis of personal experience. Such knowledge will remain also the basis of our discipline in the future. Databases complement our knowledge but they cannot replace it. This can't be their business.

Inscriptions are in the first place texts which contain certain evidence as such. But inscriptions do not only consist of text, although this may commonly seem to be the case in the literature. In German, one speaks of „*Inschriften errichten*“ and in Italy one can say: *una iscrizione eretta*.<sup>11</sup> In the *Prosopographia Imperii Romani*, the expression *titulum ponere* was long in use and applied to inscriptions of all kinds. With these expressions, it was not clear, what specific function was connected with an epigraphic text and the support on which the inscription appears. Nonetheless, the support already contains its own message and that was, on many occasions, the primary message for the Greek and Roman public.<sup>12</sup> In order to understand what an inscription can today convey as evidence, it is fundamental to include the *monument* with which the inscription was connected. This can be an altar, an architrave of a temple, a mausoleum or, for instance, the base for a statue, which is explained by the inscription. In enquiring about the content of inscriptions, we must decisively take into consideration the function that inscription and monument shared in the Graeco-Roman world.

However, when one looks for the function of an inscription in a database, the difficulties begin – if I were to speak about my own experiences. On many occasions, this function is not found, if one enquires about what is directly conveyed in the inscription, because this exact function is commonly not mentioned in the epigraphic text. This is not surprising. To mention the function was not particularly necessary because the ancient observer completely saw, on what an inscription was written. Given that today this context is mostly not preserved,

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<sup>10</sup> See now the new reconstruction of the inscription by Eck 2017.

<sup>11</sup> It seems not necessary to give examples for this type of formulation; they are abundant.

<sup>12</sup> Cf. now Eck, *Wie ehrt man*.

we must infer it from the support whose form and particular details are connected with it. This necessity has meanwhile become almost common knowledge – in contrast with Mommsen’s time.<sup>13</sup> On the EAGLE website, this is specifically taken into account with the option *advanced search*, in which it is possible to browse the database according to object type. With this option, one can find the categories, for example, of *statue*, *statue base*, *statue base shaft or plinth*. Hence it is already possible to obtain a result with a high degree of differentiation, if one browses selectively. However, not all the different categories of statues are grasped with these search terms. Just to mention an example: *bigae* or *quadrigae*, which were erected to honour a person, can only be found if these terms would also appear in the inscription. But in the epigraphic text the object is directly mentioned only in a limited number of cases. The ancient observer saw the object which did not need any additional reference. For us, on the other hand, the specific types of statues are generally recognisable only if we include the support of the inscription in the analysis. The original statues are almost always lost or, at least, not connected with the inscription. Enquiring about the types of statues is not a child’s play. For the most part, they rather say fundamental things for both the honoured and the honouring individuals.

One example from Volsinii (modern Bolsena) can illustrate this.<sup>14</sup> It is an honorific monument set up to commemorate a senator of the Hadrianic-Antonine age. The surviving fragmentary *titulus honorarius* records his names: Pompeius Vopiscus C. Arruntius Catellius Celer Allius Sabinus, followed by his *cursus* and, finally, the city of Carthage as dedicator. The text, however, does not specify in which figurative way the senator was presented to the audience of ancient Volsinii. This is also not attempted in the epigraphic database of Rome; there it is only said (as in the Epigraphischen Datenbank Heidelberg) that the text is to be read on a base.<sup>15</sup> While this is correct, the plain term “base” does not allow to recognise the most important element, namely with what type of honour had the city of Carthage honoured the senator coming from Volsinii. The particular quality of the honour is, nevertheless, revealed by the size and shape of the inscribed plaque.

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<sup>13</sup> Eck 1995, 107 ff.

<sup>14</sup> AE 1980, 426.

<sup>15</sup> EDR077846 = HD005099 (M.G. Schmidt).

The plaque is 76.5 cm high and 1.90 m wide.<sup>16</sup> The monument was so wide that a normal statue could not have stood on it; this would have appeared completely out of place. Given the width of the inscribed slab, it is to be inferred that a *biga* or perhaps even a *quadriga* was set up for the senator. He should therefore have completed an action beyond his official duty on behalf of Carthage for which the city decided to recognise his activity in this lavish way and to send ambassadors to Volsinii to erect the monument.

A similar case can be inferred for Larcus Priscus, a legate of the *legio III Augusta*.<sup>17</sup> The city of Thamugadi honoured him in a similar way to that of Carthago for the senator in Volsinii. On the forum of the colony founded by Trajan, not a normal honorary statue not even an equestrian statue – as previously suspected<sup>18</sup> – was set up but rather a *biga* on which the statue of Larcus Priscus was presented to the citizens of Timgad.<sup>19</sup> But in EAGLE one finds the note:

Type of object: unbestimmt = undefined (= EDH).<sup>20</sup>

But one can see the type of the object on the photo, published by Zimmer in 1989.<sup>21</sup> More examples of this kind could be given. In my opinion, an important consequence is therefore clear. If databases were to fulfil their function completely, then it would be not only useful but rather very necessary to record an indication of the concrete form of the honorific monument in such cases. Otherwise, a crucial part of the potential information would be lost.

Of course such a degree of precision is not always possible, but very likely when – as shown by the two previous examples – the form of the support provides evidence beyond the text of the inscription that can be searched in the database. This happens for example in many inscriptions which in antiquity were to be seen under *statuae equestres*. Sometimes this form of honour is recorded in the text of the inscription itself. In the database Clauss, there are around 45 records if one looks for *statuae equestres* or *statuam equestrem*, in the database EAGLE around 27.

<sup>16</sup> Gros 1980, 977 ff.

<sup>17</sup> CIL VIII 17891 = Dessau 1055.

<sup>18</sup> Bergemann 1990, 147 Nr. E 90: „equestrian statue“.

<sup>19</sup> The inscription is 188 cm wide, much more than necessary for an equestrian statue.

<sup>20</sup> EDH031159 (B. Gräf).

<sup>21</sup> Wesch-Klein 1989, 71 Nr. T 4.

That EAGLE shows fewer cases is naturally due to the fact that this database is still under construction. Either with 45 or 22 inscriptions, this only records in any case a minority of the texts which were once to be read under such *statuae equestres*. In the monograph on equestrian statues written by Johannes Bergemann in 1990, 128 inscriptions are collected, which were once connected with an equestrian statue according to the investigations of the author.<sup>22</sup> Besides the statues directly referred to as such in the text, there are also those containing other hints which allow us to recognise that the honoured person was once presented on a horse.

Some examples should illustrate which equestrian statues cannot be recognised as such without these extra hints. In the colonia Aelia Capitolina, modern Jerusalem, an equestrian statue was erected for Antoninus Pius through the council of decurions, apparently straight after his accession in the year 138/9. In the text of the honorific inscription, the type of statue is not mentioned but it can be inferred from the size of the inscription.<sup>23</sup> Therefore, it must be registered as an equestrian statue in a database. The same applies to the honours bestowed in Lepcis Magna upon the governor of the late-antique province Tripolitana, Flavius Nepotianus. In the inscription itself, it is only spoken of a *statua marmorea* that should memorialise the services of the magistrate.<sup>24</sup> However, the base enables to recognise that a *statua equestris* once stood there because this base is 170 cm deep.<sup>25</sup>

Equestrian statues are, nevertheless, not uniform. They can also provide, in turn, additional information by their specific appearance. They were dedicated in very different forms; above all in very varied sizes. For example: Alfius Secundus, a *flamen perpetuus* in Africa proconsularis, set up two or three equestrian statues of the emperor Septimius Severus.<sup>26</sup> Even though these statues represent the emperor, they must have been small ones because the base is only 54 cm high and 35 cm wide.<sup>27</sup>

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<sup>22</sup> See n. 18.

<sup>23</sup> *Corpus Inscriptionum Iudaeae/Palaestinae* I 2, 718.

<sup>24</sup> IRT 565.

<sup>25</sup> Bergemann (n. 18) no. 83. Cf. the inscription for the flamen provinciae Pompeius Cerealis Salvianus in Lepcis Magna: the basis is 70 cm high, but 160 cm deep (IRT 602).

<sup>26</sup> CIL VIII 14370 (Avedda).

<sup>27</sup> Bergemann (n. 18) no. 81.

These small equestrian statues fitted probably into the context in which they stood. On the other hand, gigantic equestrian statues were erected of all the emperors – and not only of them. An exact relation between the size of a monument and social rank did not exist. Various factors could be relevant in such cases. Nonetheless, the size can already tell us something about the status of the honorand and the intention of the dedicator.

Most *statuae equestres* either rose from bricked bases or the base was made of solid stone. The base for the statue of C. Minicius Italus in Aquileia was built with bricks and then covered with marble slabs.<sup>28</sup> The one of the young senator L. Fabius Severus in Tergeste was made of a single solid stone.<sup>29</sup> The latter applies to the majority of these monuments. Even so, at least in the first century AD there was also a type of an equestrian statue that remained unattended in research until recently. For there existed equestrian statues, which seemed much lighter and did not stand on an apparently solid basis.<sup>30</sup> Sometimes the base was simply made of a foundation slab, two supporting pillars and a cover plate on top, on which the equestrian statue stood. (Fig. 1 and 2) To the best of my knowledge, there is only one fully surviving example of this type, which is today kept in the museum of Brescia. (Fig. 3) This example presents a posthumous honour for a 6-year old boy decreed by the *ordo decurionum* of Brixia. The setting up of the equestrian statue was executed by the father of the deceased.<sup>31</sup> In this case, we recognise such a particular type of equestrian statue only because the entire monument survives, in the inscription the father mentioned only a *statua equestris*. Yet research did not consider the piece which can be seen in the museum at Brescia as a special type of honorary monument, but rather as a unique object. There are, however, not a few inscriptions that were connected with this statue type in the Roman age. The central feature of this type are always two supporting pillars and a cover plate on top, on which the equestrian statue stood. Two kinds of pillars can be distinguished, and they differ clearly. There are pillars such as those used as inscribed support in the form of the example from

<sup>28</sup> CIL V 875 = Dessau 1374 = Inscr. Aquileiae I 495; Alföldy 1984, 98 f. no. 87. For a photo see EDCS-01600153.

<sup>29</sup> CIL V 532 = Dessau 6680 = Inscr. Italiae X 31. Photo : EDCS-04200621.

<sup>30</sup> For the following discussion see Eck and von Hesberg 2004, 143 ff.

<sup>31</sup> CIL V 4441 = Inscr. Italiae X 5, 232.

Brescia and there are the so-called *trapezophora* on which an inscription is not rarely found.<sup>32</sup> Just to mention some: We know for the young senator P. Numicius Pica Caesianus<sup>33</sup> two *trapezophora* from Rome, quite a number from Torino for Q. Glitius Atilius Agricola,<sup>34</sup> a single one for T. Flavius Cimber, a municipal magistrate from Urvinum Mautaurense<sup>35</sup> and many others.<sup>36</sup>

These epigraphic monuments can partly be found in the EAGLE database too. Here one has to search for the term *trapezophorus* as object type.<sup>37</sup> Table feet of this kind, which contain inscriptions, are known in relatively big numbers because of their special shape; they have always been categorised individually.<sup>38</sup> However, they were not hitherto considered as parts of statue bases but rather of tables, real *mensae*. Today it is no longer questionable that these *trapezophora* with inscriptions were in reality parts of statue dedications, with an equestrian statue which stood on this specially arranged base.<sup>39</sup> As long as these inscriptions are marked up with the keyword *trapezophorus* (sic!) in the EAGLE database, they can be found without problems. In the Heidelberg database, however, with the keyword *trapezophorus/um* one will find nothing, although there are three such objects in the database; but there they are registered under the keyword *mensa*. If one is entering *mensa* in the EDH, numerous and extremely varied objects appear, which have by no means the same function.<sup>40</sup> If the keyword *mensa* is entered in the EDH and connected with the search parameter “honorific inscription”, it is possible to find three *trapezophora* – in the category *mensa*.<sup>41</sup>

<sup>32</sup> For more information see Eck and von Hesberg 2004.

<sup>33</sup> CIL VI 3835 = D 911 = VI 31742 = 31743.

<sup>34</sup> CIL V 6974 – 6987; Eck and von Hesberg 2004, 186 f.

<sup>35</sup> CIL XI 6062: *T(ito) Flavio L(uci) f(ilio) Ste(l)latina Cimbri pont(ifici), aed(ili) bis, IIIIvir(o) i(ure) d(icundo), quinq(uennali), praef(ecto) fabr(um), d(ecreto) d(ecurionum)*.

<sup>36</sup> See Eck and von Hesberg 2004, 180 ff.: a list of the inscribed *trapezophora* which were known to us in 2003/4.

<sup>37</sup> Trapezophoron is the normal terminus technicus.

<sup>38</sup> For the literature see Eck and von Hesberg 2004.

<sup>39</sup> Eck and von Hesberg 2004 with the general discussion of this type of honorary monuments.

<sup>40</sup> For an example of a *mensa* in the concrete sense: IRT 590: *Ti(berius) Cl(audius) Amicus M(arcus) Heliodorius Apollonides aed(iles) mensas p(ecunia) s(ua) d(ono) d(ederunt)*; the inscription is engraved on the frame of the table; cf. also CIL III 15184, 18 = AIJ 310. On the other side also a *mensa ponderaria* can be found by surging for a *mensa*: AE 1905, 37 = HD030144; CIL III 15025 = HD005744.

<sup>41</sup> HD002671 = EDR111713; HD006112 (Ruck) = EDR076783; HD025725 (Féraudi) =

But who would imagine that the combination of *mensa* and honorific inscription is necessary to find this type of monument? Also in EAGLE not all the objects that belong to this form of monument can be found with a single search term. That means as a consequence, that in the databases combined by EAGLE the terms for specific objects should be uniform; for the moment this is not the case.

To give one example here: We know one *trapezophoron* with an inscription from Cosa in which Drusus Caesar, son of Tiberius, is mentioned; it appears in EDR076783 with no specific characteristics for the object, because the information comes from the EDH. In EDH006112, the object of this inscription appears as a *mensa* and an “Ehreninschrift”, but not as a trapezophoron. On the other side: In EAGLE, *mensa* can almost only be used as long as the word occurs in the inscribed text, not as term for an archaeological object.<sup>42</sup> Again the harmonization of search terms becomes extremely important in order to enable a quick and safe search.<sup>43</sup>

As mentioned before, a total of 23 *trapezophora*, which can be described as honorific monuments for single persons, can be found in EAGLE. These are by far not all the inscriptions, which were once connected with equestrian statues, which did not stand on a solid base but rather on a plate supported by two pillars. The posthumous honours in Brescia for the 6-year old P. Matienus Proculus is, as already mentioned, such an example.<sup>44</sup> But in the databases, inscriptions for such monuments are not described with their specific features as the entry for the monument from Brescia makes clear; of course normally they can be found with the term honorific inscription, i.e. as *titulus honorarius*; but that does not really help, there are too many *tituli honorarii* in the database. The text for Publius Matienus Proculus one would not even find with the word *titulus honorarius*, because it is categorised as *sepulcralis*.<sup>45</sup> To single out the different types, one has to describe in the data bases the special singularities, which identify the particular functionality of such monuments. Here one example.

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EDR073154 (also described as *mensa*).

<sup>42</sup> For an exception see the preceding note.

<sup>43</sup> In EDR077116 an inscription with the text: *L(ucius) Ansius Quintill[i]anus me[nsam] – J* is called trapezophorus, although in reality it is a *mensa*, as the text itself tells us and as the photo in EDCS-10700899 clearly shows. The inscription is engraved on the frame of the tabula for a *mensa*.

<sup>44</sup> CIL V 4441 = Inscr. Italiae X 5, 232.

<sup>45</sup> EDR090232. The precise terminus would be: *titulus honorarius postumus*.

In Sirmione (ancient Sirmio), at the Lago di Garda, an inscription was found in 1960. It once belonged to an honorific monument for the young senator C. Herennius Caecilianus. The following text was published by Alberto Albertini in 1973 (fig. 4):<sup>46</sup>

*C(aio) Herennio  
C(ai) f(ilio) Pob(lilia)  
Caeciliano,  
adlect(o) in senat(um)  
ab imp(eratore) Hadriano  
Aug(usto), q(uaestori) prov(inciae) Narb(onensis),  
trib(uno) pleb(is), IIIviro i(ure) d(icundo)  
Veronae,  
patrono  
d(ecreto) d(ecurionum).*

The text is not particularly interesting with regard to its content. It only records the beginning of a senatorial career in the Hadrianic period. The young senator came apparently from Verona where he was also *IIIvir iure dicundo* and patron of the city. For this very reason the city wanted to honour him, naturally with a statue. This was also assumed by Albertini, who suggested a bronze statue. The text also appears in the EDR and EDH.<sup>47</sup>

The inscribed support consists of a slab, 100 cm high, 59 cm wide and 29 cm deep. The text is surrounded with a frame on the front side. The same frame surrounds also both laterals and, above all, the backside, which is crucial (fig. 5 and 6). For this shows that the backside was elaborated with the intention to be exposed, a detail also observed by Albertini as he accordingly commented that the base (with the statue directly standing on it, in his view) was not *adossata a una parete, ma eretta in uno spazio*.<sup>48</sup> It is correct that the inscription could not have been *adossata a una parete*. However, both the first editor and all the others who dealt with the inscription thereafter have simply not wondered how, then, could the statue stand on a slab which is only 29 cm deep (fig. 7). Furthermore, the three holes for the corresponding dowel on the top side of the slab show that no statue

<sup>46</sup> Albertini 1973, 439ff. = Alföldy, *Römische Statuen* (n. 28) 253; R. Bertolazzi - V. Guidorizzi, *Supplementa Italiae* 28, nr. 7.

<sup>47</sup> EDR093835 and HD033596.

<sup>48</sup> Albertini (n. 46).

was fixed there, but rather, something completely different, another horizontal slab. If one compares the evidence concerning this inscribed support with the equestrian statue of Matienus Proculus in the Museum of Brescia, shown before, which also had the backside of the front pillar elaborated with the intention to be seen from both sides like also the second uninscribed pillar – the following result becomes immediately clear: Herennius Caecilianus was not simply honoured with a statue by the people of Verona, but with an equestrian monument standing on an cover plate, which was resting on two pillars, whose front side with the inscription was 29 cm deep (the second pillar is lost). This “lighter” version of an equestrian statue was perhaps chosen by Verona because the monument should probably be set up in the estate of the senator. The fact that this type of monuments was not unusual in this region is shown not only by the posthumous monument of Matienus Proculus in the Museum of Brescia, but also by two other pillars in the same museum, which are very similar to the monument of Herennius Caecilianus; these too are elaborated on the backside with the intention to be exposed. One of the pillars bore once an inscription that was later erased,<sup>49</sup> which makes it impossible to know who was honoured in such a way (fig. 8-10).

What are the consequences of these observations? Databases are by now indispensable in the epigraphic work. They speed up not only the work but allow, above all, to recognise evolutions through the possibility of examining texts systematically: e.g. formulae or forms of abbreviations. Previously, this was only possible through the arduous and time-consuming examination of endless volumes. Therefore very often this systematic search was not be done or the result was supported only by a slim documentary basis. This is now much easier especially when it is possible – like now in EAGLE – to access many databases at the same time. In order to achieve an even more effective and extensive access, it appears to me, that a stricter coordination between the different databases is necessary, a harmonization that should also concern the question, which search terms are necessary and possible. If the same phenomena, i.e. inscriptions, which had the same function, are shown with different terms, a uniform search becomes necessarily difficult, if not completely impossible. I referred to the already examined terms *trapezophoron* and *mensa*.

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<sup>49</sup> A more detailed argumentation in Eck, *Wie ehrt man*.

Under the same term, phenomena and documents with very different functions should not appear together. A *mensa* should not refer both to a *mensa ponderaria* and, at the same time, to the pillars of an equestrian statue of the type described above, as somehow occurred in Cosa with the *trapezophoron* for Drusus Caesar.

The honours for Herennius Caecilianus introduce another further possibility to make the utilization of databases for the users even more diverse. In EDR093835, a photograph of the monument of Herennius Caecilianus was published, naturally of the front face with the inscription. Yet a photograph of the backside would be equally necessary to recognise the specific function of the stone and to make it immediately clear that the slab was elaborated with the intention to be exposed. In this way the essential evidence for its function would be provided. Of course such photographs are not always available. However, during the preparation of entries one should always check whether more pictures are available and not only those of the side with the text. The text remains essential, but it must be completed with exact observations about the support of the inscription. Often the meaning of the monument can only be reached in this way. This was the central theme of the 14<sup>th</sup> Congress of Epigraphy. Databases have the capacity to provide all those details which are necessary for the complete interpretation of an epigraphic monument.<sup>50</sup> The high costs that the inclusion of many pictures in previous publications entailed are not a crucial problem any longer.

At the end of my presentation let me once more demonstrate the necessity to describe clearly the monumental features of an inscription and the photographic documentation now with an example that comes from the material of the *Corpus Inscriptionum Iudaeae/Palaestinae*.<sup>51</sup> A short time ago one could find the inscription only in the database Clauss-Slaby and only the text.<sup>52</sup> Avi Yonah, who greatly contributed to the collection and publication of epigraphic monuments during the time of the British mandate in Palestine, published in 1946

<sup>50</sup> For the acts of the Congress see note 7 above.

<sup>51</sup> This monument will be included in volume V of the *Corpus Inscriptionum Iudaeae/Palaestinae*.

<sup>52</sup> EDCS-15200169; now there are also photos connected to the text. Under the address: [http://www.antiquities.org.il/t/item\\_en.aspx?CurrentPageKey=33&rock=0](http://www.antiquities.org.il/t/item_en.aspx?CurrentPageKey=33&rock=0). The monument can be seen on the homepage of the Rockefeller museum in Jerusalem; there is only mentioned that an inscription is written on the monument; but the text is not given.

an inscription found near the legionary camp of the *legio VI Ferrata*, near Caparcotna = Legio.<sup>53</sup> It is a round monument, 1.05 m high, which he – like many epigraphists later – presented as an altar.<sup>54</sup> The monument shows three perfectly elaborated relieves on three sides: a Victoria standing on a globe with a tropaion as well as a victory crown in the hands, and two eagles that carry a thunderbolt in the crawls and a crown in the beak. The inscription on the front face reads (fig. 11-14):<sup>55</sup>

*Pro salute et incolumitate / domini nostri [[Imp(eratoris) Caes(aris) M(arci) Aur(eli) Antonini Aug(usti)]] / praesentissimum deum Mag(num) Sarapidem / leg(io) VI Ferrat(a) F(idelis) C(onstans) [[Antoniniana]] / Iulius Isidorianus p(rimus) p(ilus).*

In the scholarly discussion, the monument was almost universally presented as an altar and logically considered as a dedication to the god Sarapis. Nevertheless, this understanding did not take into consideration the clear testimony of the inscription, in which it is written: *praesentissimum deum Mag(num) Sarapidem*.<sup>56</sup> This evidently means that Sarapis is not mentioned here as the one to which something was dedicated but rather that his figurative representation is the dedicated object. There is no doubt that a representation of Sarapis was set up as a votive gift, probably in a shrine, perhaps for Egyptian gods near the camp of the legio. The fact that a representation of Sarapis was dedicated means, consequently, that we are not dealing with an altar but with a base on which the representation found its place. Above all, it should not have been omitted from the beginning that there is a remarkable peculiarity on the upper side of the base, namely a completely rounded hollow with a diameter of 29 cm and a depth of 9 cm (fig. 15). It is an almost half sphere that was perfectly chiselled and smoothed from the marble. Sometimes earlier scholars noticed this hollow, as already Avi Yonah, but concluded that over

<sup>53</sup> Avi-Yonan 1946, 89 = AE 1948, 145.

<sup>54</sup> For example. Vidman 1969, 182f. no. 361; Mora 1990, 243 Nr. 577; Belayche 2001, 59 ff.; Bricault 2005, 508f. no. 403/0201; Belayche 2007, 451f.; Eck 2007, 186f.; Figures 2013, 78. 96.

<sup>55</sup> The text of the inscription is corrected by Eck 2016.

<sup>56</sup> One exception: Stoll 2001, 280, who saw the consequences of the accusative for the interpretation of the monument.

the “altar” a focus would have stood in the hollow, on which the offerings could be given. However, a shallow cavity can be seen in such cases at the most, but not the half spherical hollow found here. As this half sphere can only be carved with a considerable amount of work, it must have a specific meaning, which should be connected, as the entire monument, with the depiction of the god Sarapis.

The representation of the god is not preserved, only the basis with the inscription like in most other dedications. Nevertheless, if one checks the forms in which Sarapis is figuratively represented, one immediately comes upon busts of the god which sits on a globe. With this observation, we also have immediately an explanation for the spherical form of the hollow carved on the upper part of the base. Here the lower part of a globe would sink, on which the bust of the god would likewise rest. This entire monument, the basis and the bust of the god was set up in a shrine and probably took an important place there (fig. 16).<sup>57</sup>

As already mentioned, this extra-unusual object appeared until a short time ago only as a text in the database Clauss-Slaby. The way in which it should be presented, so that users of databases can decipher its complete meaning, follows with necessity after the previous discussions: not only must all the sides be depicted but even more important is the upper surface for which also the dimensions should be given in this case. At least several photos of the monument are now visible in the database Clauss-Slaby. Indeed, only all this information together can reveal as much of the context as possible.

These observations in one way or another are valid for all of our epigraphic texts. The text alone is not enough, but needs – as far as possible – all the other concrete details and photos not only of the text, but of the monument itself. In such a way the access to ancient reality becomes easier, as, for example, in the villa of Herennius Caecilianus in the area of Sirmione or at the shrine near Caparcotna/Legio in northern Galilee. It is clear that we cannot completely reconstruct ancient reality, but we should come as close as possible to the former reality. The digital presentation is a crucial premise for this purpose.

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<sup>57</sup> Drawing of the reconstruction by Gisela Michel.

## Bibliography

- AVI-YONAH, M. 1946. "Newly discovered Latin and Greek inscriptions". *Quarterly of the Department of Antiquities in Palestine* 12: 84-102.
- ALBERTINI, ALBERTO. 1973. "Un patrono di Verona del secondo secolo d.C.: G. Erennio Ceciliano". In *Il territorio Veronese in età romana, 439-459*. Verona: Accademia di Agricoltura, Scienze e Lettere.
- ALFÖLDY, Géza. 1984. *Römische Statuen in Venetia et Histria*. Heidelberg: Winter.
- BELAYCHE, NICOLE. 2001. *Judaea-Palaestina, The Pagan Cults in Roman Palestine (Second to Fourth Century)*. Tübingen: Mohr Siebeck.
- . 2007. "Les dévotions à Isis et Sérapis dans la Judée-Palestine romaine", in *Nile into Tiber. Egypt in the Roman World*, edited by L. Bricault, M.J. Versluys and P.G.P. Mayboom, 448-469. Leiden: Brill.
- BERGEMANN, JOHANNES. 1990. *Römische Reiterstatuen. Ehrendenkmäler im öffentlichen Bereich*. Mainz: Zabern.
- BRICAULT, LAURENT. 2005. *Recueil des inscriptions concernant les cultes isiaques (RICIS)*. Paris: Bocard.
- ECK, WERNER. 1995. "Mommsen e il metodo epigrafico." In *Concordia e la X Regio. Giornate di Studio in onore di Dario Bertolini, Atti del Convegno Portogruaro 22-23 ottobre 1994*, edited by Pierangela Croce Da Villa and Attilio Mastrocinque, 107-112. Padova: Zielo.
- . 2007. *Rom und Judaea. Fünf Vorträge zur römischen Herrschaft in Palaestina*. Tübingen: Mohr Siebeck.
- . 2013. "Comprendere contesti: Il nuovo multilingue *Corpus Inscriptionum Iudaeae / Palaestinae*." *Rationes Rerum* 1: 17-38.
- . 2016. "Sarapis und die legio VI Ferrata. Die Weihung einer Sarapisbüste für das Wohl des Kaisers". *Zeitschrift für Papyrologie und Epigraphik* 198: 211-217.
- . 2017. "Quaestor, nicht legatus provinciae Achaiae. Zu einer Inschrift des Q. Vilius Quadratus aus Korinth" *Zeitschrift für Papyrologie und Epigraphik* 201, 253 -257.
- . "Wie ehrt man Mitglieder der staatlich-städtischen Elite? Inschriftenbasen unerkannter Reiterdenkmäler". In *Kolloquium Kassel März 2015*, edited by K. Ruffing and H. Schneider.
- ECK, WERNER AND PETER FUNKE, edd. 2014. *Öffentlichkeit – Monument – text. XIV Congressus Internationalis Epigraphiae Graecae et Latinae Akten*. Berlin: De Gruyter.
- ECK, WERNER AND HENNER VON HESBERG. 2004. "Tische als Statuenträger". *Mitteilungen des Deutschen Archäologischen Instituts, Römische Abteilung* 111: 143-192.
- FIGUERAS, PAU. 2013. *The Pagan Image of Greco-Roman Palestine and Surrounding Lands*. Oxford: Archaeopress.

- GROS, PIERRE. 1980. "Une dédicace carthaginoise sur le Forum de Bolsena". *Mélanges de l'école française de Rome* 92: 977–992.
- MORA, FABIO. 1990. *Prosopographia Isiaca. I. Corpus Prosopographicum Religionis Isiaca*. Leiden: Brill.
- PANCIERA, SILVIO. 2006. "Informatica". In Panciera S. *Epigrafi, epigrafia, epigrafisti*. Vol. 2. Roma: Quasar.
- STOLL, OLIVER. 2001. *Zwischen Integration und Abgrenzung. Die Religion des römischen Heeres im Nahen Osten. Studien zum Verhältnis von Armee und Zivilbevölkerung im römischen Syrien und den Nachbargebieten*. St. Katharinen Scripta Mercaturae.
- VIDMAN, LADISLAV. 1969. *Sylloge inscriptionum religionis Isiaca et Sarapiacae*. Berlin: De Gruyter.
- WESCH-KLEIN, GABRIELE. 1989. "Katalog der Inschriften", in: G. Zimmer, *Locus datus decreto decurionum. Zur Statuenaufstellung zweier Forumsanlagen im römischen Africa*. München.

# Infrastructures for Digital Research: New opportunities and challenges

*Lorna Hughes\**

## **Introduction: understanding the use of digital content**

The past twenty years has seen a very visible expansion of the digitization of Europe's Cultural Heritage. However, to put the scale of this investment in perspective, the ENUMERATE<sup>1</sup> project has produced data about the volume of digital cultural heritage available across Europe. The results of their analysis published in 2014<sup>2</sup> shows that over 10% of the collections of European museums, archives and libraries has been digitized, over 300 million items. At the present scale of progress, it will take over 30 years to digitize the rest: a task that will be more complex taking into consideration that a large amount of material remaining to be digitized is 20<sup>th</sup> and 21<sup>st</sup> century material, either moving image, audio, or born-digital. A growing number of organisations have developed digital strategies to address this: 36% of the institutions surveyed by ENNUMERATE in 2014 have a written digitisation strategy.

Of the content that has been digitized, though, only 34% is available online, and of that only 3% is available for open re-use, though Creative Commons and unrestricted licensing. However, more than half of the organisations surveyed do not implement measures to quantify how their digital content is used. This lack of analysis of use isn't just an issue in cultural heritage digitization: in 2008, the UK's Arts and Humanities Research Council carried out an analysis of sustainability

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<sup>1</sup> <http://www.enumerate.eu/>

<sup>2</sup> ENUMERATE 2014, 6.

planning for projects funded through its Resource Enhancement Scheme, 173 projects, an investment of approximately £40 million<sup>1</sup>. Of these projects, only just over half were collecting usage statistics<sup>2</sup>. A lack of enquiry into the use and impact of digital content is not a new issue: indeed, there has been a disproportionate investment in creation, management and curation of digital resources versus *use* of digital content for scholarship (in the UK from 1999-2009, the AHRC invested approximately £1.5 million into research that addressed the *use* of digital content, tools, and methods for research, but during this period they invested significantly more in digital content creation and curation). The lack of investigation in this area raises some serious questions about the value of the significant international investment in digital cultural heritage.

## What are we doing with all this digital stuff?

It is perplexing that more institutions don't try to develop a better understanding of what their users do with digital content, because methodologies exist for gathering and analyzing this information. Using analytic tools including Google Analytics<sup>3</sup> as a baseline, it is possible to augment numeric data with other qualitative and quantitative measures for assessing users, including structured surveys, interviews, and content analysis tools (looking at citations of digital content, and its embedding in blogs and other resources). These approaches have been refined in a tried and tested approach developed by the Oxford Internet Institute (OII), called Tools for the Impact of Digitised Scholarly Resources (TIDSR)<sup>4</sup>. This has been used successfully to measure the impact of a range of resources in the arts and humanities<sup>5</sup>. Similarly, methods developed by the CIBER initiative<sup>6</sup>, originally based at University College London, enable an understanding of the 'digital footprint' of users of heritage content.<sup>7</sup>

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<sup>1</sup> Robey 2008.

<sup>2</sup> Robey 2011, 153

<sup>3</sup> <https://www.google.co.uk/analytics/>

<sup>4</sup> <http://microsites.oii.ox.ac.uk/tidsr/>

<sup>5</sup> For an overview of the use of this method on a collection of Northern Irish Parliamentary Papers, see Hughes et al. 2015.

<sup>6</sup> <http://ciber-research.eu/>

<sup>7</sup> <https://www.ucl.ac.uk/news/news-articles/1001/10010802>, and see also Nicholas 2014.

These approaches are an interesting way to build a narrative around data: using statistics about use to build a picture of engagement with digital cultural heritage. Overall a striking finding is the change in information seeking behaviours: users will multitask, and do many things lightly rather than one thing deeply: they have become what David Nicholas of CIBER referred to as ‘web foxes’<sup>8</sup> as people bounce around the digital domain using fast and abbreviated searches. Visitors to sites will frequently only access one page, then move on. This is even more noticeable when users access heritage data using mobile phones devices on the go: searching is shorter, and less engaged.

In order to investigate these questions in more detail, from 2011-14 I undertook some analysis of the use of the collections of the National Library of Wales, specifically *Welsh Journals Online* (<http://welshjournals.llgc.org.uk/>) and *Rhyfel Byd 1914-1918 a'r profiad Cymreig / Welsh experience of the First World War 1914-1918* ([www.cymru1914.org](http://www.cymru1914.org))<sup>9</sup>. This analysis showed several interesting things. Google analytic data for both sites showed that users mostly come from search engines, not the library website or interface, which is interesting in terms of the investment in presenting content. Similarly, many users were referred through family history websites, or media stories about the resource, rather than academic or subject-specific resources that linked to it: the highest number of referrals to *Rhyfel Byd 1914-1918 a'r profiad Cymreig / Welsh experience of the First World War 1914-1918* came from a story on the BBC Wales News Website about the launch of the resource<sup>10</sup>. The most popular search results are location based: people are looking for historic information about places they know. Interviews with selected groups of users of both resources expanded on these findings, establishing that the search box enabled most searches: that the ‘googlization’ of information seeking had not affected the quality of information they were able to find. In fact, the only limitation that users reported was that there was not enough digital content in each resource. This is a consistent finding when surveying users of digital cultural heritage: as fast as digital content is launched, the demand increases for more

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<sup>8</sup> Nichols 2015, 23.

<sup>9</sup> Welsh Journals Online: <http://welshjournals.llgc.org.uk/>. The study into the use of Welsh Journals Online was written about in Hughes 2012; the research into the use of [Cymru1914.org](http://www.cymru1914.org) was presented at the Sheffield Digital Humanities Conference, 2014: <http://www.hrionline.ac.uk/dhc/paper/19>.

<sup>10</sup> <http://www.bbc.co.uk/news/uk-wales-25126781>.

material: 'we have too many digital collections' said no survey respondent, ever. The benefits of unlimited access to information are so great that they compensate for problems that arise from irrelevant data, poor metadata, or digital dead ends.

### **"We are all digital humanists now"**

Humanities research also exemplifies this enthusiastic embrace of the digital: In many respects, we are all digital humanists now: we all use digital data for research by default (at the very least, electronic catalogues that point to analogue resources). Scholars rely on a steady consumption of digital source materials for scholarship and pedagogy, mostly created through large-scale digitisation initiatives in universities, libraries, museums and archives and as well as by commercial entities<sup>11</sup>. And humanists do not just use data: many scholars now create and manage these resources; we communicate via blogs and twitter, and use digital dissemination methods for sharing and challenging research results. For many, this represents a sea change in research practice within the recognizable lifetime of a career.

But digital humanities is more than just the use of digital content for searching and browsing. If I was to attempt a definition of '*digital humanities*' as an emerging field of research, I would suggest that it is combination of using digital content; with digital methods for the analysis and interpretation of this content; tools for specific scholarly tasks; and communicating research to the widest possible audience using traditional and non-traditional publishing methods. At its most effective, digitally enabled research in the humanities can facilitate and enhance existing research, making research processes easier via the use of computational tools and methods. More interestingly, it can enable research that would be impossible to undertake without digital resources and methods, allowing the formulation of new research questions that are driven by insights only achievable through the use of new tools and methods.

At the core of this sort of approach is collaboration: with researchers from scientific and other humanities disciplines, computational and technical fields, as well as cultural heritage organizations.

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<sup>11</sup> Ell and Hughes 2013, 24.

Another important collaboration is with the audiences for our work, as user-led design, and participation via mechanisms like crowdsourcing, informs the development of many initiatives. It also relies on underlying technical infrastructures.

I like this characterization of digital humanities as about *content, tools and methods*, because it creates a working environment with raw materials, tools for working with the raw material, and expertise in digital methods. This may seem a reduction of humanities practice, one that confirms Gary Hall's view of the digital humanities as a use of tools and technologies that does not rely on a theoretical framework<sup>12</sup>: the sort of model that one can see as the basis for a DH research infrastructure, putting the maker's perspective at the centre. However, another school of thought in the digital humanities, exemplified by Alan Liu, sees the emphasis on building and making as a space for exploring and critique of culture<sup>13</sup>. I would argue that the maker and theorist perspectives are not incompatible: in fact, it is through developing and building digital projects in the humanities *through practice* that we can conduct cultural and critical analysis, by questioning many of the assumptions on which digital resources are built and communicated, and developing a better framework for understanding the ways that working with digital content, tools and methods is transforming our consumption and production of knowledge. By subsequently analyzing use of the digital collections and content that have been built, we can also develop a better understanding of their role in the humanities research lifecycle, and start to address questions about how digital content in particular is not just helping us to do research more effectively, but a disruptive, transformative intervention in the research lifecycle.

To address some of these questions, from 2011-15 the European Science Foundation funded the Research Network in Digital Methods in the Arts and Humanities (NeDiMAH.eu), to look at the practice of digital humanities across Europe, and to understand what researchers need in order to do digitally enabled research in the future. From a detailed programme of methodologically focused activities, several conclusions can be drawn about what can

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<sup>12</sup> Hall 2012.

<sup>13</sup> Liu 2012.

make digital resources and collections more valuable for scholarship<sup>14</sup>. These conclusions sit alongside the user analysis described above to suggest three core observations about what the research community needs from digital content, and the infrastructures that deliver this content: access to, and ‘knowability’ of digital content; opening up content for use and re-use; and creating better environments for drawing together multimedia content from a variety of sources for analysis and publication. These are described in more detail in the sections that follow.

### Access to, and ‘knowability’ of digital content

Much of what is classified as ‘digital humanities’ is consumption: scholarly use of digital resources and born-digital material, working in what Roy Rosenzweig called a culture of abundance.<sup>15</sup>

While this presents new possibilities it also raises significant challenges, and there is a need for a deeper understanding of the digital resources scholars rely on. As Tim Hitchcock has described in his article *‘confronting the digital: or how academic history writing lost the plot’*<sup>16</sup>, researchers often work with data that is what we would charitably call ‘limited’ in its potential for re-use, thanks to problems with OCR, markup, and description and provenance information. Similarly, limitations in metadata often mean that while keyword searching gives the satisfying ‘quick hit’ of a result, the user frequently misses important contextual information that enables more mindful engagement with sources, especially archival content: the scale of the original sources, their condition and their environment are often hidden when using digital surrogates that often appear as disembodied objects, separated from their context. Ryan Cordell, who has theorized a “network-author” function in antebellum newspapers from research based on digital newspaper archives, has said that “most digital archives hide more

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<sup>14</sup> Full reports of all NeDiMAH activities are available at the Network’s website, nedimah.eu. These activities were structured around Working Groups, each addressing a specific area of Digital Humanities methods: Space and Time; Information Visualization; Linked Data and Ontological Methods; Developing Digital Data; Large-Scale Text Collections; and Scholarly Digital Editions.

<sup>15</sup> Rosenzweig 2010, 22.

<sup>16</sup> Hitchcock 2013.

than they reveal, as keyword searches require prior knowledge of the texts to be discovered and can lead to evidentiary excess.”<sup>17</sup>

Another issue is the selection of content for digitization. Due to limitations of funding, availability of analogue sources, and copyright and licensing issues, many digital archives are not ‘complete’. The National Library of Wales received funding from the Welsh Government and European Regional Development Fund (ERDF) to digitize 1 million pages of Welsh Newspapers Online (<http://newspapers.library.wales/>) from its holdings. These date from 1800-1919, in Welsh and English. As a selection of the newspaper coverage of the time, this is an important resource for research and teaching: however, it is by no means a full representation of all newspapers of the period.

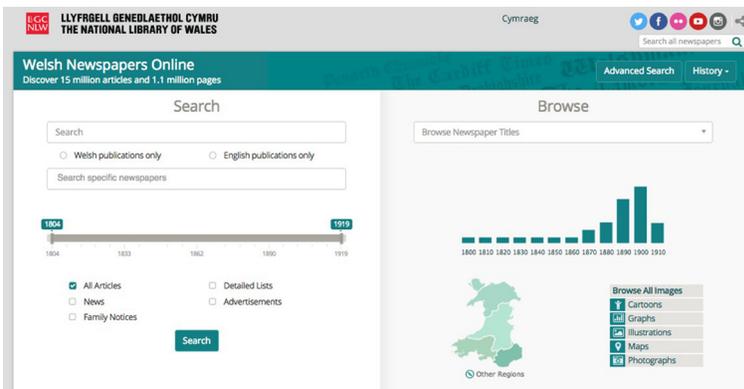


Fig. 1. Home page: Welsh Newspapers Online.

Figure 1 shows a chart on the home page of the resource showing the materials selected for digitization: many are missing from the 1909-19 period as a smaller, separate funding source was used for this. From the earlier period, many of the newspaper runs held by the library are incomplete. However, for the user, it’s too easy to assume that the resource is a complete representation of *all* Welsh Newspapers, ever: the chart only shows the proportion of the newspapers in the resource, not as a proportion of those published. As we know, users (especially students) frequently turn to digital content by

<sup>17</sup> Cordell 2015.

default when looking for historical sources, and as a free resource, this newspaper archive is very likely to be used, leading to the likelihood of research being conducted from an incomplete dataset.

## Opening up content for use and re-use

A second requirement for researchers is the need for better, and more open, solutions for analysis and linking of digital content, which is all too frequently locked in digital silos, unable to be easily re-used and linked with other data from other providers and collections. Evaluation of users of digital content, and assessment of a range of European Digital Humanities projects, shows that scholars frequently have very simple questions or ideas that they want to test with data at the desktop, and they do not want the technology to be a barrier. When data is locked in 'silos', it can be difficult for the end user to integrate the tools they need analysis and linking with content held remotely. There needs to be greater disassociation of text and data from platform and delivery mechanisms, liberating digital resources for purposes unanticipated by the creators of digital resources<sup>18</sup>.

For example, users often want to be able to use simple, pattern-finding tools, like nGram, with a range of data sets to quickly test hypotheses – the example in Figure 2 shows a visualization, using nGram, of the term 'Belgian Refugees' in newspapers in Welsh Newspapers Online from 1914-1919. The graph shows a spike of heightened interest in the almost fashionable cause of Belgian refugees in late 1914, which tailed off as the war continued. A similar pattern can be seen in newspapers from around the British Isles<sup>19</sup>. For questions like this, requiring simple pattern finding, this sort of tool can be a compelling and timesaving aid for researchers. However, as the tool is not part of the resource, using it with this collection required liaison with the National Library of Wales developer team to extract and work with the core data in this way.

One of the huge advantages of digital access is making the invisible visible in archives. We lose this when we can't easily re-use and re-purpose this content.

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<sup>18</sup> Robinson 2014, 251.

<sup>19</sup> Hughes 2016.

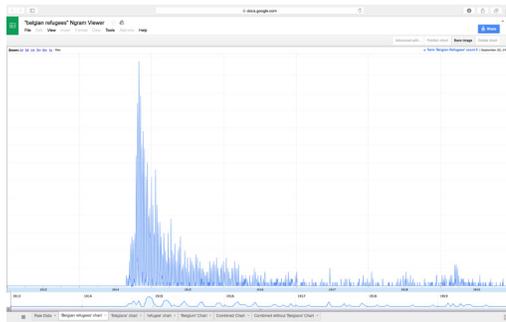


Fig. 2. nGram of the term 'Belgian refugees' in Welsh Newspapers Online.

## Creating better environments for drawing together multimedia content from a variety of sources for analysis and publication

The attraction of working in a digital environment is the ability to integrate sources in a variety of formats, and to use them for new and unforeseen purposes. An example of working with hybrid, multimedia content can be seen in an AHRC funded project, *The Snows of Yesteryear: Narrating Extreme Weather*.<sup>20</sup> The project was a creative collaboration to uncover archives in the collections of the National Library of Wales that contain information about the impact of extreme weather in Wales during the period from about 1700 (the pre-weather instrument period) to the 1960s. This included manuscripts (literary works, diaries, letters); printed materials, including Welsh ballads; and other material, including art works and manuscripts. These were digitized and made accessible to a team of climate scientists from the ACRE Project at the UK Met Office who used the data to fill gaps in the global picture of extreme weather in this period, and to use digital tools and methods to 'map' and visualize incidents of extreme weather: floods, storms, freezing conditions, and incidents including the 'year without a summer', in 1816 (after the Tambora volcano eruption caused severe climate abnormalities).

<sup>20</sup> Eira.llgc.org.uk. The partners in the project were the Centre for Advanced Welsh and Celtic Studies at the University of Wales, the ACRE Project at the UK Met Office, the department of performance at Aberystwyth University, and Welsh performance artist, Eddie Ladd.

The project also carried out community engagement, gathering interviews with local communities to share their experiences of extreme weather events within living memory: floods, storms, and snowfall. From these two strands of evidence, we were able to construct two types of interpretation and analysis: the scientific visualisations; and also a public performance piece, *Ghost Dance*, by Eddie Ladd: this drew on disparate narratives describing events of the winter of 1963 in an allegorical, not didactic way.

The project required sustaining a complex, hybrid archive of materials related to extreme weather impact in Wales, their analysis through performance and scientific visualization, and the communities that contribute this data. As such, it exemplifies the possibilities of digitally integrated research as set out in the Digital Humanities Manifesto: the ability to combine research, curation, and archive management to re-imagine the creation of digital content as a process of creative making, bringing together scholars and curators in ways that recast the role of each, driven by a shared goal of using historical sources for new purposes. These approaches effect collaboration of disciplines and data types as an act of curation as much as a piece of scholarship, one in which scholars will not just create not just a collection of sources, but also effect a convergence of practices: artistic, scientific, and humanistic, and the ability to work with connected communities around the content<sup>21</sup>. Documenting and publishing this sort of practice over the long term will also create a range of interesting issues – how do we replicate the relationships between archives, scientific visualization, and performance? How is provenance of archives retained when embedded in a scientific visualization, or a performance? How will the convergence of digital and born digital be preserved and replicated over the long term? This form of knowledge production is an exciting means of determining the interface to information, data, and knowledge. It also raises significant information management research challenges associated with managing and sustaining complex collections over time, pushing the boundaries of what is currently known about stewardship and curation of humanities and cultural heritage content and data.

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<sup>21</sup> <http://manifesto.humanities.ucla.edu/>.

## Working in a culture of abundance: Europeana.eu

There are, therefore, a number of opportunities and challenges for researchers working in digital culture of abundance. And when it comes to abundance, Europeana.eu is the largest, and best known aggregator of European cultural heritage resources. So it may be that Europeana can offer some solutions to these identified challenges: helping researchers to select and understand content; supporting the creative use and re-use of content, and working with multimedia content in different disciplines and formats.

Europeana.eu is an online platform that acts as an interface to over 50 million items: books, paintings, films, museum objects and archival records that have been digitised throughout Europe, with the objective of making the 10% of digitised cultural heritage more usable for research, teaching, and public engagement, focusing especially on making it available for creative re-use releasing its impact for society and the economy. More than 2,000 institutions across Europe make their collections available through European, including the Rijksmuseum in Amsterdam, the British Library and the Louvre to regional archives and local museums from every member of the European Union, including the National Library of Wales. In terms of full-text content, The Europeana Newspapers project is an interface to several million pages of text and images available in the public domain. Together, their assembled collections let users explore Europe's cultural and scientific heritage from prehistory to the modern day. Europeana has been aggregating metadata of digital heritage content, and making data (both content and metadata) openly available, for nearly 10 years. It recently produced a new portal for searching across this collection, offering new functionality and a greater degree of interactivity through services that are part of the 'platform', rather than a 'portal': Pro, Labs, and End User Services, making much of Europeana's dataset available for reuse via its API, portal and linked data sets.

For an example of how these tools can integrate content from disparate locations, WUD (What's Up Doc) is a customised search engine helping pull, link and organise data from two major cultural heritage repositories: Europeana.eu and the Digital Public Library of America (DPLA). It was developed as part of the research and outreach activities of the Medicine and Society chair at University of Fribourg. Initially intended for researchers: it stems from an effort to hand pick

images and documents for the *Medicine and food virtual exhibition*. Using online tools and APIS, the project team were able to streamline and make more efficient the curation process.

## The Europeana Aggregation flow

Figure 3 shows the Europeana aggregation flow. The Europeana ecosystem depends on a network of national, thematic and domain aggregators which bring together, manage and provide access to data about Europe's cultural heritage. The concept of aggregation partners has been the cornerstone of Europeana's business model from the very beginning: Europeana does not currently have the resources to ingest metadata directly from the large number of organisations that already supply, or wish to supply, metadata to Europeana. The aggregator model makes it possible to obtain metadata from thousands of cultural heritage and scientific institutions while directly ingesting metadata from fewer than 150 organisations.



Fig. 3.

## Europeana: Understanding researcher needs

The digitised content of Europe's galleries, museums, libraries and archives has huge potential for research, and Europeana has identified several ways it can do more to focus on researchers. From a technical and collections perspective, it is building focused aggregations of content, particularly full-text, and exploring how the content can

be re-used by the research community and highlighting collections in the Europeana dataset of specific interest to researchers based on some successful examples with Europeana Newspapers. Also ongoing is the exposure of Europeana's aggregations of text and metadata to allow research teams and infrastructures to build specific tools and services to fulfill particular research tasks, like looking for links between types of data, or doing the kind of nGram modeling described above. One of the biggest areas of potential is linking disparate collections and tools in different institutions and building workflows between them, although of course, issues of licensing, interoperability and access can often impede the re-use of that data in research.

Working with researcher communities of practice is also an important way of optimizing Europeana for scholarship, and understanding what specific communities need. EAGLE (the Europeana Network of Ancient Greek and Latin Epigraphy,) is an excellent example of this sort of liaison. EAGLE provides a single, user-friendly portal to the vast majority of the surviving inscriptions of the Greco-Roman World, as well as explanatory information and translations for the most important: a massive resource for researchers as well as the public. As part of Europeana, the EAGLE dataset includes over 1.5 million items, currently held across 25 EU countries as well as the east and south Mediterranean. EAGLE has supported the development of services such as a mobile application, allowing tourists to understand the inscriptions they find in situ by taking snapshots with smartphones, and a storytelling application that will allow teachers and experts to assemble epigraphy-based narratives.

A recent project to investigate optimizing Europeana Content for research, Europeana Cloud, conducted detailed analysis of the digital scholarship life cycle. Looking at a variety of user communities, the projects identified a number of key challenges to research use and potential of Europeana:<sup>22</sup>

- Different research disciplines use different types of data in different ways, and there is no one size fits all solution
- Data aggregation should be aimed at horizontal rather than vertical solutions: rather than enabling deep down investigation of a topic, the access to aggregate data offered by Europeana is useful for comparison, sampling, and annotation of a variety of data from different locations.

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<sup>22</sup> <http://pro.europeana.eu/europeana-cloud>.

The value is in bringing together material, rather than exploring a complete collection in detail

- In order to encourage access to, and better discovery and knowability of collections, there is a need for enhanced collection-level descriptions
- There is a greater need for user-friendly tools and services which will enable re-use of Europeana data
- Digital humanities research requires access to greater amounts of data at the API level than is currently the case

In many respects, these reinforce the findings outlined above. The best way to address these in the Europeana ecosystem is developing a better understanding of how content and metadata is actually used, and their relationship with digital methods and tools. There is also a need for greater engagement with research communities, but ultimately, the least surprising finding is that there is a need for increased content of use to potential stakeholders. Once again, the requirement for more data is paramount.

## **Europeana Research**

These findings have made development of Europeana Research a priority from 2016-8. Resources have been allocated to this initiative through the Europeana DSI funding strand to explore these issues, as it is seen as an important mechanism for connecting digital heritage with the research community. It has established a research Advisory Board to direct a series of funded activities to enhance the use of Europeana for Research, and to better document some of the innovation that can be achieved in re-using digital cultural heritage content, expressed in its mission statement:

“Europeana Research will help open up cultural heritage content for use in cutting-edge research. It will run a series of activities to enhance and increase the use of Europeana data for research, and develop the content, capacity and impact of Europeana, by fostering collaborations between Europeana and the cultural heritage and research sector. It will provide an important focus for the emerging communities of

practice who rely on Europeana for their research, and support the European investment in digital cultural heritage.”<sup>23</sup>

The workplan for Europeana Research has several areas of focus, which will be overseen by the Europeana Research Advisory Board. There will be a *grants programme*, offering funds to researchers working with digitised content from the cultural sector that is part of the Europeana ecosystem, exploring how content can be re-used by the research community. The Europeana Research platform will highlight various *featured collections* available for re-use. These collections will be expanded and have extra descriptive metadata for discovery and use. There will be a focus on researching enhanced ways to describe *case studies* of successful use of Europeana content with DH tools and methods, developed through user engagement and dialogue with groups working in specific disciplinary areas.

## **Conclusion: Impact of Europeana Research on European Research Infrastructures**

Europeana Research will work with research infrastructures such as CLARIN<sup>24</sup> and DARIAH<sup>25</sup> to help address strategic issues, and to encourage a flow of information on understanding engagement with digital content, tools, and methods. The grants programme especially will be a unique opportunity to engage with researchers directly and develop a better understanding of how they can work with digital content and metadata, developing a better awareness and understanding of available tools for analyzing data through the Europeana platform. This will provide an important layer of evidence that will help shape the development of research infrastructures in the humanities. Despite a significant, there is still concern that what Joris Van Zundert has called ‘big, all encompassing all serving digital infrastructures<sup>26</sup>’ have little value for digital humanities technology development. He argues that what is needed for the humanities is flexible, small-scale research focused development practices, and highly specific distributed web services.

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<sup>23</sup> <http://research.europeana.eu/>.

<sup>24</sup> [clain.eu](http://clain.eu).

<sup>25</sup> [daraih.eu](http://daraih.eu).

<sup>26</sup> Zundert 2012.

In order to deliver the services that researchers in the humanities say they want: trusted, open content that is 'pre-knowable' from the perspective of quality control; the ability to liberate content from its mode of production and dissemination for reinterpretation and analysis by open tools; and working with multimedia content in an integrated way, liberating data from silos of content type, we need to try and find scalable solutions to defined problems. The specific ways that the development of Europeana Research can inform developments in Research Infrastructures are by providing the sort of 'agile' development mentioned above, especially testing the integration of data with tools and methods for analysis, through understanding the use of digital content at all stages in the research life-cycle, and in fostering better connections with GLAM organisations who provide access to their content. If research infrastructures are to have value for scholarship, there needs to be a clear role for scholars to contribute to a greater scholarly investigation and critique of the digital content life cycle, to create a more theoretical reflection concerning the role of the digital in humanities research. Europeana Research is an important opportunity for a praxis-based critical engagement that is the key to understanding the ways that the digital is affecting knowledge production. Hopefully lessons can be drawn from this programme of activities that will inform the future development of research infrastructures so they can support these agendas: drawing us into new collaborations, leading us to encounter new methods for engaging with content, and assisting in developing new insights into our cultural heritage.

## Bibliography

- CORDELL, RYAN. 2015. "Reprinting, Circulation, and the Network Author in Antebellum Newspapers". In: *American Literary History* 27.3. <http://ryan-cordell.org/research/reprinting-circulation-and-the-network-author-in-antebellum-newspapers/>
- ELL, PAUL S., AND HUGHES, LORNA M. 2013. "E-Infrastructure in the humanities". *International Journal of Humanities and Arts Computing*, 7.1-2: 24-40.
- ENUMERATE. 2014. *Survey Report on Digitisation in European Cultural Heritage Institutions*. <http://www.enumerate.eu/fileadmin/ENUMERATE/documents/ENUMERATE-Digitisation-Survey-2014.pdf>

- HALL, GARY. 2012. "Has critical theory run out of time for data-driven scholarship?". In *Debates in the Digital Humanities*, edited by M. Gold, 128-132. Minneapolis: University of Minnesota Press.
- HITCHCOCK, TIM. 2013. "Confronting the digital: or how academic history writing lost the plot." *Cultural and Social History* 10.1: 9-23.
- HUGHES, LORNA M. 2012. "Live and kicking: the impact and sustainability of digital collections in the humanities". In *Proceedings of the Digital Humanities Congress 2012*, edited by C. Mills, M. Pidd. and E. Ward. Sheffield: HRI Online Publications, 2012. <http://www.hrionline.ac.uk/openbook/chapter/dhc-hughes> (accessed April 11th 2016).
- . "Finding the Belgian Refugees in [cymru1914.org](http://cymru1914.org)". 2016. IN *SOON GONE, Long Forgotten – uncovering British responses to Belgian refugees during the First World War*, special edition of *Immigrants and Minorities*, 34.2. The data for this graph is accessible at <http://dx.doi.org/10.5525/gla.researchdata.301>.
- HUGHES, LORNA M., PAUL S. ELL, GARETH A.G KNIGHT, AND MILENA DOBREVA. 2015. "Assessing and measuring impact of a digital collection in the humanities: an analysis of the SPHERE (Stormont Parliamentary Hansards: Embedded in Research and Education) project". *Digital Scholarship in the Humanities*, 30.2: 183-198. doi:10.1093/llc/fqt054.
- LIU, ALAN. 2012. "Where is cultural criticism in the Digital Humanities?." In *Debates in the Digital Humanities*, edited by M. Gold, 490-509. University of Minnesota Press, Minneapolis.
- NICHOLAS, DAVID, DAVID CLARK AND A. WATKINSON. 2014. "Log Usage Analysis: What it Discloses about Use, Information Seeking and Trustworthiness". *International Journal of Knowledge Content Development & Technology* 4.1: 23-37.
- NICHOLS, David and David Clark. 2015. "Finding Stuff." In *Is Digital Different*, edited by Michael Moss, Barbara Endicott-Popovsky and Marc Dupuis, 19-34. London: Facet, 2015.
- ROBEY, David. 2008. *Sustainability of AHRC-funded digital resources*. Available at: <http://www.ahrcict.rdg.ac.uk/activities/review/synthesis%20of%20sustainability%20issues.pdf>.
- . 2011. "Improving sustainability of publicly digital resources". In *Evaluating and the measuring the value, use and impact of digital collections*, edited by Lorna M. Hughes, 147-156. London: Facet.
- ROBINSON, Peter. 2014. "Digital Humanities: Is bigger better?." In *Advancing Digital Humanities: Research, Methods, Theories*, edited by Paul L. Arthur and Katherine Bode. Basingstoke: Palgrave.
- ROSENZWEIG, ROY. 2011. *Clio Wired: The Future of the Past in a Digital Age*. New York: Columbia University Press.
- VAN ZUNDERT, JORIS. 2012. "If you build it, will we come? Large scale digital infrastructures as a dead end for digital humanities", *Historical Social Research/Historische Sozialforschung* 37.3: 165-186.

