Julian Bogdani, Eugenio De Mitri,

*A Bibliography on the Application of GIS in Archaeology and Cultural Heritage*

Volume 2-2017  
ISSN: 1825-411X  
pp. 1-XIV  
DOI: 10.12977/groma12  
Publisher: BraDypUS [http://books.bradypus.net](http://books.bradypus.net)  
Publication date: 29/10/2017  
License: CC BY-NC-ND 4.0 International  
Section: Notes
Introduction

Geographical Information Systems (GIS) applications to archaeological projects of different scales, chronological contexts and cultural milieux has accrued by now a long history and bibliography. Hopefully the phases of experimentation and almost blind testing are over, even if GIS applications are still sometimes being labeled as “new technologies”. This does not mean that scientific research is on a blind alley and nothing new is to be expected from GIS applications to archaeology. It means only that at present some strong, reliable and indisputable basis exist and are available to build new research on. Just as archaeological stratigraphy, GIS and spatial information technology is now a widespread and steady technique handled everyday by hundreds of archaeologists that use these tools to manage, visualize, query and model datasets that are growing everyday more diversified and richer. It is thus important to keep an eye open on current research in order to promptly identify innovative best practices or approaches that can greatly help in interpreting our data.

Recently, with the exponential growing of our datasets due to a more careful documentation of archaeological remains—enormously helped by technologically advanced tools and laboratory analysis—new concepts borrowed by information technology applied to social sciences are being introduced in archaeology and more broadly in humanities. Concepts like “big data” or “social network analysis” are not so bashfully expanding the field of traditional spatial analysis. This particular aspect, I believe, needs further theoretical consideration and hopefully the scientific community will sooner or later decide to face it beyond the current fashion. The amount of data that a research project actually deals with or is able to produce does not compare with the underlying meaning of “big data”, despite our already mentioned growing capabilities of extracting information from archaeological remains. Furthermore, the fragmentary and randomness nature of the data archaeology works with should strongly prevent to rely too much on statistical approaches like social networks analysis, that require a capillary information about the object of analysis. These approaches can be used—at best—to confirm hypothesis or thesis formulated by traditional means, strongly relying on the interpretative competences of the scholar or team of scholars. After all archaeology is still and righteously considered to be a social—or soft—science even when it makes heavy use of techniques, methodologies or tool belonging to other fields.

Principal aim of the following pages is to provide a base bibliography on the application of the Geographical Information Systems to Archaeology, History and in a broader context to the Cultural Heritage. It is not meant to be a complete and ultimate collection of everything that has been published on this topic up to present, but a catalogue of useful information to better comprehend the relationship between a specific branch of Information Technology, GIS, and the Cultural Heritage.

The core of this work is the fruit of a practical exercise conducted by Eugenio De Mitri in the context
of the laboratory class of GIS in Archaeology held at Bologna University in 2016. Till then the bibliography has been enriched by new contributions of other colleagues and scholars.

Some spatial and temporal limits were necessary and inevitable to be set before the work was started. Only contributors written in Italian and English, published in the last 10 years, ie, from 2005 to present have been considered. As a consequence a number of older but still fundamental works has been kept out, for example the volume about “Interpreting Space: GIS and Archaeology” edited by Allen, Green e Zubrow or “Spatial Technology and Archaeology: a Guide to the Archaeological Applications of GIS”, written by Wheatley and Gillings, both published by Taylor & Francis respectively in 1990 and 2002; the same is true for “A Place in History: a Guide to Using GIS in Historical Research”, by Ian Gregory published in 20013 by Oxbow and “Sistemi Informativi e Reti Geografiche in Archeologia: GIS–Internet. VII Ciclo di Lezioni sulla Ricerca Applicata in Archeologia, Certosa di Pontignano (Siena), 11–17 Dicembre 1995”, edited by Antonio Gottarelli and published by Edizioni All’Insegna del Giglio in 1997 and finally “I Sistemi Informativi Geografici in Archeologia”, by Maurizio Forte published in 2002 by Mondo GIS.

The catalogue, sorted by year of publication, is preceded by an alphabetically ordered list of the main journals used to produce the catalog and other bibliographical tools useful for a more detailed analysis of GIS applied to Archaeology and Cultural Heritage.

[J.B.]
Active journals that commonly publish contributes about GIS and Archaeology

- *Archeologia e Calcolatori* (since 1990) – published by Edizioni all’Insegna del Giglio, Italy.
- *Journal of the Association for History and Computing* (since 1996) – published by the American Association for History and Computing, U.S.A.

Of great interest are the proceedings of the following conferences organized by international organizations:

- *CIPA - Heritage Documentation* (Comité International de la Photogrammétrie Architecturale), since 1968.
- *CAA* (Computer Applications and Quantitive Methods in Archaeology), since 1975.
- *VAST* (Virtual Reality, Archaeology and Intelligent Cultural Heritage), since 2000.
- *ArcheoVirtual*, since 2006.
- *ArcheoFOSS*, since 2006

For works published before 2005 there are some formidable bibliographical tools, as:


Ethnikē Chartothēkē (Greece). 2006. E-Perimetron. [Hellenic National Centre for Maps and Cartographic Heritage].


Knowles, Anne K. 2008. *Placing History: How Maps, Spatial Data and GIS Are Changing Historical Scholarship*. Redlands: ESRI. http://books.google.com/books?hl=en%7B%7Dlr=%7B%7Did=VN1v7rzhsQEC%7B&%7Did=VN1v7rzhsQEC%7B&%7Doi=fn%7B&%7Dpg=PP1%7B&%7Ddq=Placing+history:+%7B&%7Dots=1jv1jcPABq%7B&%7Dsig=So4vS2K%7B&%7Ds5UDmwtOHZGCew.


