



Centro Universitario Europeo
per i Beni Culturali
Ravello

Territori della Cultura

Rivista on line Numero 23 Anno 2016

Iscrizione al Tribunale della Stampa di Roma n. 344 del 05/08/2010



Sommario



Centro Universitario Europeo
per i Beni Culturali
Ravello

Comitato di redazione

5

Paesaggio culturale e architettura rurale
per valorizzare il binomio turismo-cultura
Alfonso Andria

8

Organizzazione della giustizia in Egitto nella seconda
metà del XIX secolo (Diritto e mentalità coloniale)
Pietro Graziani

12

Conoscenza del patrimonio culturale

Giovanna Greco Roscigno: tra la città rudere e i ruderi
del Parco Archeologico del Monte Pruno

24

Luiz Oosterbeek Shaping a scientific culture through
the territories of the silk roads: the dawn of
Portuguese scientific archaeology

40

Cultura come fattore di sviluppo

Giovanni Carbonara La formazione universitaria
per la tutela dei beni architettonici:
laurea, specializzazione, dottorato

48

Giuseppe Imbesi Federico Gorio,
un maestro dell'urbanistica

82

Metodi e strumenti del patrimonio culturale

Bruno Zanardi Caravaggio in 3D, tutela e ambiente

96

Comitato di Redazione



Centro Universitario Europeo
per i Beni Culturali
Ravello

Presidente: Alfonso Andria

comunicazione@alfonsoandria.org

Direttore responsabile: Pietro Graziani

pietro.graziani@hotmail.it

Direttore editoriale: Roberto Vicerè

rvicere@mpmirabilia.it

Responsabile delle relazioni esterne:

Salvatore Claudio La Rocca

sclarocca@alice.it

Comitato di redazione

Jean-Paul Morel Responsabile settore
"Conoscenza del patrimonio culturale"

jean-paul.morel3@libertysurf.fr;

Claude Albore Livadie Archeologia, storia, cultura

morel@msh.univ-aix.fr

Max Schvoerer Scienze e materiali del
patrimonio culturale

alborelivadie@libero.it

Beni librari,

documentali, audiovisivi

schvoerer@orange.fr

Francesco Caruso Responsabile settore

francescocaruso@hotmail.it

"Cultura come fattore di sviluppo"

Piero Pierotti Territorio storico,

pierotti@arte.unipi.it

ambiente, paesaggio

Ferruccio Ferrigni Rischi e patrimonio culturale

ferrigni@unina.it

Dieter Richter Responsabile settore

dieterrichter@uni-bremen.de

"Metodi e strumenti del patrimonio culturale"

Informatica e beni culturali

Matilde Romito Studio, tutela e fruizione
del patrimonio culturale

matilde.romito@gmail.com

Adalgiso Amendola Osservatorio europeo
sul turismo culturale

adamendola@unisa.it

Segreteria di redazione

Eugenia Apicella Segretario Generale

apicella@univeur.org

Monica Valiante

Velia Di Riso

Rosa Malangone

Progetto grafico e impaginazione

Mp Mirabilia - www.mpmirabilia.it

Info

Centro Universitario Europeo per i Beni Culturali

Villa Rufolo - 84010 Ravello (SA)

Tel. +39 089 857669 - 089 2148433 - Fax +39 089 857711

univeur@univeur.org - www.univeur.org

Per consultare i numeri
precedenti e i titoli delle
pubblicazioni del CUEBC:
www.univeur.org - sezione
pubblicazioni

Per commentare
gli articoli:
univeur@univeur.org

Main Sponsors:



ISSN 2280-9376



Luiz Oosterbeek

*Luiz Oosterbeek
Instituto Politécnico de Tomar.
Instituto Terra e Memória.
Centro de Geociências da
Universidade de Coimbra.
Centro Universitario Europeo
per i Beni Culturali.
Conseil International de la
Philosophie et des Sciences
Humaines.*

Shaping a scientific culture through the territories of the silk roads: the dawn of Portuguese scientific archaeology

Abstract

From the 16th century, the growing interest on Asian cultures, driven from the commercial interest on building sea alternatives to the land silk roads, seats at the heart of the dawn of Portuguese scientific reasoning. This is the case of Garcia de Orta on botanic and Duarte Pacheco Pereira on geography and cosmology, or Gaspar da Cruz on China, but also Diogo do Couto or Tomé Pires. This shaped a Portuguese experimental approach to nature, that would become crucial in the approach of the first Portuguese archaeologists, once the interest on classic remains emerges, first with André de Resende, the “father” of Portuguese archaeology (16th century), but leading to Frei Manuel do Cenáculo (18th century) and, ultimately, to the scientific approaches of the 19th century.

Since the middle Ages, the growing contacts with the East revealed the possibility of alternative civilization processes. The capacity of observation by then seems restricted to the recognition of characteristics that were valued in the European society as well, such as wealth, strength or gentleness, but nevertheless they introduce a dimension of scale, in size and distance, that will growingly impact.

But it will be the navigation expansion of the 15th and 16th centuries that will combine the curiosity with the technical needs associated to the complex logistics of the process, generating a specific new epistemological positioning, known as experimentalism. Rooted in the consideration of the prevalence of reason in the theology of St. Thomas Aquinas, cartographic accuracy will become the key driver of such new trend, later expressed in the collection of evidences from different species, patterns of behaviour or local knowledge.

The Portuguese literature of this time includes important texts that would have a later impact in shaping the posture of the Portuguese cultural and academic world. These are the cases of the letter of Pero Vaz de Caminha in 1500, describing the first contact with Brazil (with abundant description of the natural features but, also, a quite remarkable observation of the indigenous populations characteristics, with a clear attempt to recognise positive relevant values in their different cultures),



the treaty of Duarte Pacheco Pereira on geography in 1508 (*Esmeraldo de Situ Orbis*), the treaty of pharmacology of Garcia da Orta from 1563 (*Colóquio dos Simples e das Drogas*), the extensive and detailed book of Frei Gaspar da Cruz on China from 1570 (*Tratado das Cousas da China e de Ormuz*) or the *Summa Oriental* of Tomé Pires. The impact of these texts would shape the understanding of the Portuguese academia of its alleged specificity in the context of the wider renaissance period: a closer relation to experiment (cheered by the epic poet Camões, in his *Lusíadas*, published in 1572), combined with a solid cartographic knowledge and humanistic values. Later episodes, such as the burning of the bones of Garcia da Orta by the Inquisition, would not diminish the influence of this generation of the 16th century, as the republication of the *Colóquio...* in 1891 and 1892, or the first publication of the *Esmeraldo...* in 1892 exemplify.

Particularly important would be the *Tratado da Sphera* of Pedro Nunes, from 1537, the first mathematical approach to navigation. Pedro Nunes was a prominent mathematician, also the inventor of the *nonius* (a system for detailed measurements with the astrolabe). Despite a robust theoretical basis, he valued experimentation. In fact, the navigations generated not only new knowledge, but a new approach to the natural world (Leitão, 2013), that would be shared by society (the epic poem of Camões echoes this) while being strengthened through new institutions.

The context of the Portuguese and Spanish navigations introduced a new scale that could be observed, not only inferred. While the understanding of the features such as the spherical dimension of the Earth were accepted from Aristotle (*Sobre os céus* – “*On the heavens*”), the navigations rendered it observable. At the same time, the scale of the Oceans required new techniques for asserting the position and the itinerary of the travels, namely correcting the magnetic declination of compass readings using new tools and mathematic calculations, but also new teaching methods (not only learning by doing, as was used for traditional crafts, but also academic training) and new professions. Part of this process involved also what we name today as dissemination, namely through the use of Portuguese and not only the Latin.

It was in such a context that a new natural world came to consideration. The economic interest, but also the intellectual appeal to the different, explain this new understanding of the



Fig. 1. Cover of the book by Pedro Nunes: “*Tratado da Sphera*” (1537).



Fig. 2. Cover of the book by Amato Lusitano: "In Dios Coridis" (1553).

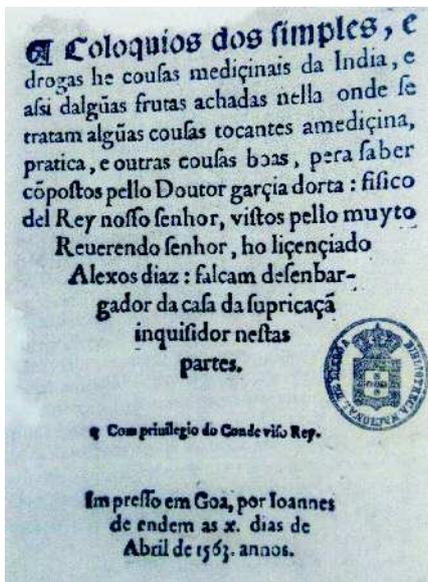


Fig. 3. Cover of the book by Garcia da Orta: "Colloquio dos Simples e drogas" (1563).

diversity of species. The implications were crucial: from an authoritative knowledge, studies evolved to oppose observed facts to classical assumptions; from single individual reflective thinking, scholars evolved to the incorporation of teams, including assigning credibility to non-specialists as sources of information.

While in the religious sphere the Jesuits developed an adaptive strategy (*accommodatio*), the naturalists improved mainly in the observation and description. This led to a systematic, but on occasions acritical, attitude.

The most lasting advance was a specific methodological approach, based on experiment and observation. While being a major innovation, this epistemological approach elected authority, but also abstract non-mathematical reasoning, as the obstacle for knowledge improvement. This would explain, in later periods, a lesser importance of the humanities in the Portuguese tradition that evolved clearly to a divergence between two parallel routes: scientific positivism and literary humanism. While the former would lead to the emergence of a very prestigious prehistoric archaeology, the latter would become more relevant for classical archaeology.

In the 16th century, André de Resende elaborated the first study of Roman inscriptions (*De Antiquitatibus Lusitaniae*, Évora, 1593) and organised the first archaeological-epigraphic collection. But apart from this pioneer collection, very few initiatives followed. Among them, Jerónimo Contador de Argote (1676-1749), one of the founders of the Royal Academy of History, and Frei Manuel do Cenáculo (1770-1814), focused on collecting the antiquities without assigning them to biblical origins, thus promoting an early rupture with the established knowledge. A tradition that would allow Portugal to initiate excavations of the Roman site of Tróia (Troy), south of Lisbon, in the 18th century, in parallel with the first systematic excavations in Herculaneum and Pompeii, in Italy. Also from this period, in 1721, dates the first law of protection of monuments.

But it is clear that Portugal didn't experience a significant archaeological systematic interest on the antiquities, as opposed to the renaissance movement, in Italy, France or even Spain. Likewise, the lack of a disseminated interest on past material culture also accounts for the scarcity of collections not only from Portugal but also from the colonies, as opposed to most of the other colonial empires. And even in the late 19th century, when finally a vision on pre-Roman origins of the nation is of-

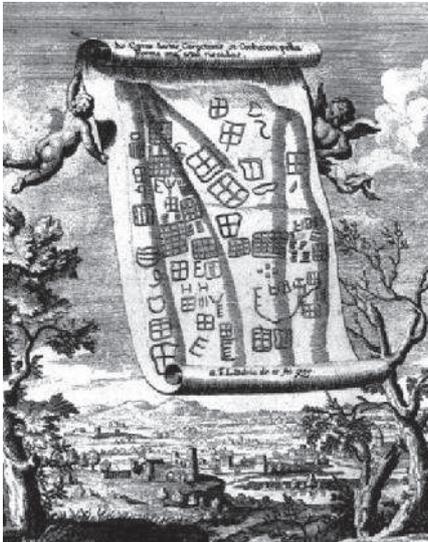


Fig. 5. First rock art depiction in Portugal, by Gerónimo Contador de Argote (1734).

a result of the international establishment of Prehistory. Names like Carlos Ribeiro or Nery Delgado, associated to the geological commission created in 1857, were then responsible for a flourishing study of the quaternary terraces, the megalithic monuments or the human remains associated to shell middens. As part of this early research episodes, in 1890 Lisbon would host the 9th session of the International Congress of Anthropology and Prehistoric Archaeology (the ancestor of UISPP). This consolidated the prevalence of the scientific archaeology, rooted in geology, namely discussing the nature of the shell middens of the Tagus valley. Not only it became a very important scientific congress (the anthropic nature of the shell middens was finally recognised), it also had a very strong social impact, with daily news in the newspapers. This popularity was in line with the interest that for three centuries was defining the academic elite of the country: attention to the natural world and valorisation of description and method, while not considering so much the interpretation of observed data: besides a minority, Portugal would remain largely apart from evolutionism until the end of the century. Yet, by the end of the century, Prehistoric archaeology was recognised as being mainly rooted in natural sciences and contribution for evolution theory, as was stated by Filipe Simões in 1878, in his introduction to the archaeology of the Iberian Peninsula, framing it within biology, philosophy and palaeontology.

Acknowledgements

This research was undertaken as part of the strategic programme of the Instituto Terra e Memória and the Geosciences Centre of Coimbra University, having benefitted from a financial support of FCT-MEC through national funds and, when applicable, co-financed by FEDER in the ambit of the partnership PT2020, through the research project, UID/Multi/00073/2013 of the Geosciences Center.

The paper was presented at the International Conference on the Science and Civilizations of the Silk Roads, organized in Beijing, December 2015, by the University of the Chinese Academy of Sciences (www.cipsh.net).



Brief bibliography

- ARGOTE, JERÓNIMO CONTADOR de (1734). *Memórias para a história eclesiástica do Arcebispado de Braga, Primaz das Hespanhas*. Braga: oficina de Joseph António da Silva.
- CAMINHA, PERO VAZ de (2000). *Carta do achamento do Brasil*. Lisboa: Comissão Nacional dos Descobrimentos Portugueses. (manuscript: 1500).
- CARDOSO, JOÃO LUÍS; MELO, ANA ÁVILA de (2001). Correspondência anotada de Carlos Ribeiro e de Nery Delgado: contribuição para a história da Arqueologia em Portugal. IN: *Comunicações do Instituto Geológico e Mineiro*, t.88: 309-346.
- CORTESÃO, ARMANDO (1987). *Cartografia e cartógrafos portugueses dos séculos XV e XVI*. Vol. 1. Lisboa: Imprensa Nacional Casa da Moeda (1st edition: 1960)
- CRUZ, FREI GASPAR da (1997). *Tratado das coisas da China*. Lisboa: Edições Cotovia (1st edition: 1569-1570).
- GOUVEIA, ANTÓNIO JORGE ANDRADE de (1986). *Posições de Garcia da Orta e de Amato Lusitano na ciência do seu tempo*. Lisboa: Academia das Ciências.
- LEITÃO, HENRIQUE (2013, coord.). *360º. Ciência Descoberta*. Lisboa: Fundação Calouste Gulbenkian.
- MARTINS, ANA CRISTINA (2013). The Association of Portuguese Archaeologists and the establishment of archaeology in contemporary Portugal. IN: Delicado, Ana. *Associations and other groups in science: an historical and contemporary perspective*. Newcastle upon Tyne: Cambridge Scholars Publishing, pp. 30-44
- MARTINS, ANA CRISTINA (2014). A *Sociedade Archeologica Lusitana* no contexto da arqueologia de oitocentos. IN: *Setúbal Arqueológica*, vol 15: 2013-216.
- PIRES, FREI TOMÉ (1996). *O manuscrito de Lisboa da Summa Oriental*. Lisboa: Instituto Português do Oriente.
- RAPOSO, LUÍS (2010). As origens da arqueologia científica em Portugal no século XIX. IN: *100 anos de património, memória e identidade. Portugal 1910-2010*. Lisboa: IGESPAR, pp.47-56.
- RODRIGUES, PAULO SIMÕES (2014). Arte, Arqueologia e Identidade Nacional na valorização da arte rupestre em Portugal (1880-1930). IN: *IV Simposium Internacional de Arte Rupestre de Havana*. Havana: Instituto Cubano de Antropologia (dact.).
- SEABRA, LEONOR DIAZ de (2011), Macau e os jesuítas na China (séculos XVI e XVII). IN: *História Unisinos*, vol. 15 (3): 417-424.
- SIMÕES, ANTÓNIO FILIPE (1878). *Introdução à Archeologia da Península Ibérica. Primeira parte. Antiguidade Pré-Histórica*. Lisboa: Livraria Ferreira.