Heritage Management

Helene Simoni, *Geographical Information Systems in Urban Archaeology and Urban Planning. A case study of a modern Greek city, built on top of an ancient city*. (British Archaeological Reports 2812). pp. 83, 36 tables, 35 figures. Oxford: BAR Publishing, 2016. ISBN 978140731477-8 paperback, £25.00.

This book, which is based on a PhD Dissertation submitted at the Department of Architecture of the University of Patras, focuses on management issues in urban archaeology, by incorporating the capabilities of GIS for the purposes of rescue archaeological work in a densely inhabited city, with a rich historical heritage. The case study selected was the city of Patras and especially the area included in the City Plan. The classical-hellenistic acropolis, forming the core of the city, the subsequent expansion as a colony founded by the Romans in 14 BC, with the development of infrastructures, the harbor, public and private buildings etc., and the continuous habitation of the castle area throughout the medieval, post-medieval and Ottoman area, up to the expansion of the modern Greek city in the 19th century, have created a rich testimony of the city's archaeological heritage. S.'s study contributes with new perspectives and fresh ideas to issues of modern city planning, the management of building activities in a contemporary city and the preservation of the cultural heritage.

The main problem encountered in several modern, multi-layered cities in Greece, where the historical center has often been intensively reconstructed, replacing with modern constructions older buildings of the early modern period and bringing into the surface older archaeological remains of the city's past life, is the lack of coordination between different public or private bodies and stakeholders involved in urban development (Dakouri-Hild *et al.* 2003 for the example of Thebes). When archaeological remains come to light during construction works, rescue excavations are employed as the main tool of preventive and rescue archaeology. Building regulations and city planning, on the other hand, don't take into account beforehand the possible existence of archaeological remains in the subsoil. This often results in considerable delays during construction, pressure and tension between the public sector and the private interests, as well as to additional costs. This situation leads, sometimes, to threats to the archaeological heritage or even to a biased protection of the archaeological remains. In the case of Patras, as S. demonstrates in her statistical analysis based on a large sample of rescue excavations conducted during the period 2004-2008, the chances of recovered antiquities being preserved after the completion of the archaeological rescue investigation in the buildable zones of the city is small, as 36.6% more demolitions take place in privately owned plots in the buildable zone of the city in comparison to public areas. Large scale infrastructure works in the cities or in the countryside also increase the pressure, as has been the case in several public building projects in Greece (cf. Anagnostopoulos *et al.* 2017 for the current debate on the in situ preservation or repositioning of the Byzantines antiquities found at the Venizelos station of the new city Metro line in Thessaloniki; Caskey 2011 for the incorporation into the architecture of the new Acropolis museum of the antiquities that were found beneath it).

S.'s study provides a model for incorporating urban archaeological research into the planning procedures, especially by the use of predictive modelling as a way to deal with the threatened archaeological resources of a city during city planning and construction. From a methodological point of view, the interesting approach of the book is that predictive modeling is based on the processing of a 5 years' sample from rescue excavations reports of the local Ephorate of antiquities, which is a kind of source not usually open to the public, as well on a series of structured interviews with experts involved in the planning of the city and with the archaeological research. The entering of the relevant information into a database, linked with a GIS, was followed by the implementation of several methods of spatial analysis and of statistical processing, up to the generation of predictive models for the existence of potential archaeological surfaces in the City Plan of Patras. Information on the existence or non-existence of archaeological remains was entered into the system and the relevance of different factors was tested statistically, in order to demonstrate the statistical relationship between data from urban planning and rescue excavations in the city and assess quantitatively and qualitatively the reliability of the predictions.

The book's six chapters start with an introductory overview (Chapter 2), which surveys the contribution of GIS applications to the management of complex databases, spatial analysis and predictive modelling,

especially in an urban context. Chapter 3 investigates the methodology followed in urban planning and urban archaeology for the management of the archaeological resources in a city. It introduces the concept of ground disturbance as a source of information, which incorporates archaeological information that comes to light during rescue excavations, but includes, also, any other kind of information on the lack of archaeological remains recorded during an excavation. The incorporation of such data into a city database and a GIS system, creates a new source of digital cartographic layers, suitable for interdisciplinary analysis during construction and city planning. Chapter 4 presents the city of Patras as a case study, and discusses methodological issues for the model's construction, concerning the collection and digitization of the data, as well as the tools of spatial and statistical analysis that were applied in the case of Patras. Chapter 5 covers the application of the model and the presentation of the results. A predictive model of potential archaeological sites in the city of Patras plan area was created using Thiessen polygons, derived from data of the large sample of rescue excavations conducted by the Archaeological Service in the period 2004-2008 (p. 34). A predictive model of maximum known depth of non-archaeological deposits in the City Plan of Patras was also created (p. 39). The final result of the procedure followed was a predictive model that combines the model of potential archaeological sites with the predictive model of potential minimum depth of discovery of an archaeological layer within the City Plan of Patras (p. 42). In this way, a model was generated of the depth of detection of archaeological remains in the zones of the city, which constitute the potential archaeological horizon. Additionally, a series of statistical tests examine the relationships between archaeological variables and factors related to the building regulations, such as floor area ratio, maximum permitted height and coverage of the building activity and depth of the excavation. Thus, S.'s work offers a model for analyzing such data with the aim to produce a city map of probable depth without archaeological deposits, verified by the actual results of past archaeological research in the city. In the light of the above analysis, the concluding chapter (Chapter 6) discusses the results and the future prospects and proposes an adaptation of the Building Regulations, so that it takes into account the possibility of finding antiquities during construction and excavation activities in the city. Maximum permitted excavation depth is suggested as an important building regulation in the potential archaeological surfaces of the city.

The integration of archaeological research in the construction procedure and city planning is an approach found in several other examples of historic cities, where information on urban archaeological research is made available to the public through a Web-GIS system operated by public or private bodies. A good practice is the management of such systems centrally by the Ministry of Culture and the Archaeological Service or by other central or local administrative structures involved in the archaeological management, so that the GIS platform and associated database is monitored centrally and is constantly updated with new information, which is made accessible to the public. A relevant example is offered by SITAR – the Geographic Archaeological Information System of Rome, which allows users to query and visualize data on the excavations conducted by the Archaeological Service of Rome (Serlorenzi *et al.* 2013; https://www.archeositarproject.it/en/). As in the case of S.'s model for Patras, important in the case of Rome is the recording of the absence of archaeological data during excavations, displayed as polygons in the GIS system, and of the depths of existing archaeological remains (Farinetti 2015). In this case the existence of an organized database, run by a public institution, which guarantees the accuracy of the data, and the existence of a WebGIS system, which is consistently updated, enables interested parties to process through a dynamic webGIS information on the cultural heritage of the city and avoid disturbances during construction planning. Incorporating into this system the capabilities of predictive modeling for possible archaeological surfaces, as suggested in S.s book, would enhance the functionality of the system. On the other hand, SITAR offers a model of a functional, constantly updated system, that makes archaeological data accessible through a WebGIS platform with several functions, allowing users to explore and download data in various formats, useful for local development planning or communication.

The use of such GIS-based applications, at the national or local administrative level, as a working tool during planning and heritage accounting management and protection is expanding, and might provide a functioning model for other countries too (cf. Marian and Iacob 2022 for the example of ArchTerr, a web-based application of the Romanian Ministry of Culture, which gives to investors or other entities access to detailed geospatial information on archaeological remains for the purpose of heritage accounting management and monitoring). In another relevant example of urban planning in Istanbul, the integration of the urban archaeological and geological data in the

urban planning process is suggested (Emre and Erbaş 2020), as a way of taking into account not only the visible archaeological heritage of the city, but also the underground cultural inventory to ensure sustainable planning and development. In the evaluation process the geological structure was included as one important component, together with the archaeological drilling evidence, permitting a three-dimensional planning approach. In this case, matching of the geological structure with the archaeological drilling points serves as an additional guide for the existence of potential archaeological finds in the underground layers. In recent years, the approach of using GIS for producing risk maps of threatened archaeological sites has been extended for assessing various types of anthropic and natural hazards and vulnerability risks of monuments and archaeological remains, and this kind of data would also be a relevant factor that should be integrated into predictive models for planning with an eye to archaeological heritage protection (cf. Howard 2013; Yıldırım Esen and Bilgin Altınöz 2018; Filippaki *et al*. 2023).

The above approaches to incorporating the capabilities of GIS for the purposes of urban planning are complementary to S.'s predictive model of the presence of archaeological remains at construction sites. The Archaeological Service in Greece or analogous public or private institutions, responsible for the protection of the archaeological heritage, would benefit from such a cooperation and management regarding city planning and archaeological work and the adoption of a GIS approach, which interlinks the archaeological research with the city planning and the construction procedure. S.'s book establishes an example of good practice of urban archaeology with a rescue character, which monitors the construction activity in a city and enhances the role of cultural heritage in modern planning.

Kostas Sbonias
Department of History, Ionian University, Greece
sbonias@ionio.gr

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Historiography

Kim Beerden and Timo Epping (eds) *Classical Controversies. Reception of Graeco-Roman Antiquity in the Twenty-First Century*. pp. 234, 10 ills. Leiden: Sidestone Press Academics, 2022. ISBN: 978-94-6427-036-5, paperback €35.00; 978-94-6427-037-2, hardback €95.00; 978-94-6427-038-9, e-Pdf €15.00.

A widespread preoccupation among scholars of classical antiquity is the worry about an often perceived growing irrelevance of the ancient world for the present one. The volume under review illustrates in many ways the opposite phenomenon, i.e. concern over multiple modern uses and abuses of aspects of the Graeco-Roman past and its study, particularly for non-academic purposes: *Classical Controversies. Reception of Graeco-Roman Antiquity in the Twenty-First Century* deals in large part with 'the misuse of the ancient world' (32) in the modern political arena, besides exploring how especially the material remains of the ancient world are (mis)represented or (under)explored in museum contexts and on archaeological sites. In broad terms, the volume offers a range of case studies concerned with recent appropriations of subsets of Graeco-Roman history, primarily in north-western Europe and the USA; it argues for the importance of academic intervention in the debate about the uses to which antiquity is put in modernity – what Beerden calls in her Preface to the volume 'a call for action' (11).

The volume is divided, like Gaul under Caesar, into three parts: the editorial Preface (Beerden, 9-14) and a long Introduction (Naerebout, 15-39) make up Part I; Part II presents six chapters that are grouped under the heading 'Controversies and literary traditions' (41-153); Part III offers four chapters under the 'Controversies and heritage ethics'-banner (155-229). This division is indicative of a major disjunction in the thematic coherence of the volume: Parts I and II are chiefly concerned with what Naerebout calls 'the conservative steal of my discipline' (33), i.e. 'the abuse of Antiquity for political ends' (15) by those with centre-right and right-wing views; by contrast, Part III deals with seemingly more benign uses of the past principally in conservation contexts (both regarding collections and in-situ remains), even if the four chapters also criticise underlying conservative agendas (including racist and transphobic attitudes).