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Carmine Gambardella

XII International Forum



La scuola di Pitagora editrice

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Collana fondata e diretta da Carmine Gambardella

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Best practices in heritage
conservation and management
From the world to Pompeii

Le vie dei Mercanti _ XII Forum Internazionale di Studi

Carmine GAMBARDELLA

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Carmine Gambardella (a cura di)

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Manuela Piscitelli

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Best practices in heritage conservation and management From the world to Pompeii

Le vie dei Mercanti
XII Forum Internazionale di Studi

Aversa | Capri
June 12th- 14th, 2014

Conference topics:

Heritage

Tangible and intangible dimensions, History, Culture, Collective Identity, Memory, Documentation, Management, Communication for Cultural Heritage.

Architecture

Surveying, Representation, Modelling, Data Integration, Technology Platforms, Analysis, Diagnosis and Monitoring Techniques, Conservation, Restoration, Protection, Safety, Resilience, Transformation Projects, Technologies, Materials.

Landscape

Cultural landscapes, Territorial Surveying, Landscape Projects, Environmental Monitoring, Physical Parameters, Government of the Territory, Sustainable Development, Social Sustainability, Economic Sustainability.

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Peer review

Scholars has been invited to submit researches on theoretical and methodological aspects related to Architecture, Industrial Design and Landscape, and show real applications and experiences carried out on this themes.

Based on blind peer review, abstracts has been accepted, conditionally accepted, or rejected.

Authors of accepted and conditionally accepted papers has been invited to submit full papers. These has been again peer-reviewed and selected for the oral session and publication, or only for the publication in the conference proceedings.

Conference report

238 abstracts received from:

Australia,
Brazil,
China, Colombia, Cuba, Cyprus,
Denmark,
Egypt,
France,
Greece,
Indonesia, Italy,
Japan,
Madagascar, Malta, México,
Portugal,
Russia,
Saudi Arabia, Slovakia, Spain, Sweden,
Turkey,
United Kingdom, U.S.A,
Yemen.

About 400 authors involved.

196 papers published.

Preface

The XII International Forum Le Vie dei Mercanti has the aim of promoting a debate on local and international experiences relating to the themes of the conservation and management of cultural, architectural, archaeological, landscape and environmental heritages. This debate is particularly relevant in Italy, with it not only being responsible to the world for housing the largest number of UNESCO sites but also having a natural and landscape heritage of great variety and beauty in a region characterised by an intrinsic geological fragility. The management of this vast heritage requires both a serious planning of the interventions as well as adequate funding. The same goes for the protection of the landscape, which in the past was systematically devastated within a myopic perspective that did not take into account the enormous amount of damage caused by wild speculation and hydrogeological instability.

Furthermore natural disasters, such as earthquakes, have led to the transformation and loss of environments which reflect local identity no less than the cultural heritage, in addition to economic damage and in terms of human lives.

In order to conserve and manage the heritage, it is necessary to adopt an integrated and resilient approach in which different skills contribute to the development of improvement and restoration projects, carried out through knowledge, sharing of decisions and proactive sharing, taking into account the social and environmental sustainability of interventions that should characterise the design method in all its aspects.

The key issue is the exchange of ideas so as to give life to a *technological humanism*, understood as the union between the cultural vitality that has characterized humanism and the Renaissance, producing excellent results in all fields of knowledge, and the possibilities currently offered by technological innovation to create platforms in order to support this knowledge. Thus, Pompeii, the most famous archaeological site in the world, is taken as the prime example of the need to adopt a virtuous cycle of conservation and management, supported by the dialogue between the different skills that interact by sharing the same technological platform.

The international debate can be an opportunity to share prime examples of the conservation, management and development of the archaeological, architectural, landscape and environmental heritage through the integration of ideas and experiences of specialists working in different disciplines as well as geographical and cultural contexts.

The conference is open to multidisciplinary experiences on one or more of the proposed themes. Scholars are invited to present research on either the theoretical and methodological aspects or concrete applications carried out on these issues.

Carmine Gambardella

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Musealization and Exhibit Questions inside the Archeological Site

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Abstract

The archaeological area is increasingly seen as a place of connection with the space of the active, cultural and civil life, towards the overcoming of the idea that archaeological sites are places situated on a separate dimension, which is unrelated to everyday life.

This tension obviously implies the need for special attention paid to the problems of preservation and protection, but it opens up the fields of action and research to a growing awareness and management of the communicative possibilities and of the opportunities to spread knowledge through physical and direct experience of the site.

This process is widely evident in all those cases in which fragments of architecture, frequently discovered by chance in stratified cities, interpose themselves within urban routes, public and also private spaces, providing the opportunity for the construction of an awareness of the history of the places even for a distracted citizen, who is not driven by a particular intention of knowledge and of realization of the idea of widespread museum.

But this is also found in the increasing attention paid to the possible, even if temporary, exhibits, achievable within the sites, which allow the general public to a more intense use, and the scholars to an even more depth one, thanks to the use of technologies and techniques, which are less and less invasive in terms of materiality, but more and more effective.

Keywords: memory space, urban life, widespread museum, communication, stratified cities

1. Relationship with the urban context

The problem of archaeological sites located in urban areas allows us to verify the path taken by museum design over the last hundred years in the direction of overcoming an idealistic conception of the cultural legacy as well as in the direction of a progressive reduction of the distance between what is the object of musealization and the daily lives of its users. How this process has been able to sustain the design research of the museum and its setup is the subject of extensive and numerous treatises, reflecting, in the materiality of the spatial structure and manner of presentation, the instances underlying the evolving of the ways of cultural fruition and the broadening of the target audience of museums and exhibitions. In practices related to museums this has resulted in the passage from a contemplative dimension, drawn from the flow of everyday life, of cultural fruition to a greater tension to participation and understanding of the meanings attached to the objects displayed. The architecture of the museum has abandoned its traditional aspiration to being a temple, in favor of the vocation to be a place of communication which is particularly meaningful in contemporary social life. Similarly, the techniques and the exhibiting methods have been refined to facilitate the exploitation of documents and in bringing them to different users, for all ages and interests. The concept of cultural legacy itself has undergone a process of extension beyond the concept of excellence and masterpiece, has included examples of material and immaterial culture capable of returning the complexity of human life and thought in a given time or in a given context. As a corollary of the renewed concept of cultural legacy, a lot of importance can be returned to the context of source and documents and works, as opposed to the process of extrapolation from the target issue and favoring instead the reading of ties

with the physical and cultural environment of belonging, as well as the theory on the idea of widespread museums has deeply investigated.

The area of urban archaeological sites offers the opportunity to read this passage from a situation of exclusivity to inclusivity in the relationship between the site and the context and between the site and the user. Work on sites and fragments found underneath, within, in between the gaps among other existing buildings and layered over them offer the opportunity to make some observations on the relationship between integration and mutual enrichment between architectural design and construction and archaeology. This framework also emphasizes the importance that the spaces of connection between the archaeological sites and the active city, as well as from one site to another have: in fact these are the sites of a link not only physical, but also conceptual, between the values of which the remains are carriers, and contemporaneity.

This discussion does not want to get into the substance of the arrangements for the restoration of archaeological sites, but in the way it deals with the problem of their exploitation and the way it treats the relationship that they weave together with surrounding spaces, in which the vision of the findings dissolves in the most diverse and daily functions.

As in every other dimension linked to the problem of musealization, even that of archaeological sites is struggling between instances of conservation and those of communication, both essential, but in hindsight, in conflict with each other. Paradoxically speaking, from the point of view of conservation, once a site is found, after having studied and drawn the most scientific information, the best assurance of its preservation may just be given by its backfilling.

But this would go against one of the purposes underlying the archaeological interest, which is to enrich the lives of present and future generations with the historical, cultural, aesthetic values substantiated in those remains. Communicating those values, enhancing the sites, and deciding how to treat the problem of their connection with the context is no longer just a problem of conservation, but rather of design, which writes the archaeological site fully into the flow of transformation processes of the contemporary city.

Traditionally, the archaeological site was drawn from this flow, protected and isolated from the environment, even physically, by a wide margin of green area, legacy of a romantic view of the ruins and a symbol of a sort of transition necessary to be able to reach the ruins themselves, from a prosaic and mundane dimension to an "other" dimension, lofty and extrapolated from everyday life.



Fig. 1: Hans Hollein, Michaelerplatz Archäologiefeld, Wien, 1991-1992

This forcing the archaeological site into an *enclave* conflicts with the implicit vocation of urban archaeology to highlight the processes of stratification experienced by historic cities where it is not possible to extract and crystallize the contribution of a given epoch from those preceding and following: almost all European cities clearly show how each building or street, or square has been designed on the trail of pre-existing ones, using this as “project material”, in the concrete or conceptual sense.

The permeability in the arrangement of the archaeological site can allow not only to marginalize the remains and to promote the fruition, but to read the continuity between the various measures of change between the built environment and the human stories that have generated the same action.

An example of maximum permeability, woven by the plan of the arrangement between the discovery and the urban context, is given by the solution of Hans Hollein for the Michaelerplatz Archäologiefeld in Vienna, built between 1991 and 1992. The design of the pavement, of the minimum structures of protection and viewing, summarizes in a contemporary feature the comparison between the signs and sedimentation of the different historical periods experienced by the urban fragment, already the scene of the encounter, as never in history emblematic of architecture, between the Looshaus and the Baroque architecture of the Hofburg.

The permeability and integration between the site and the context must not, however, be seen as coinciding with the lack of boundaries or transparency, which often becomes a commonplace in architectural design solution for the protection of archaeological finds. Like the protective band of green, the frequent use of the *glass box* at times seems obvious and predictable, where building an architecture with its materiality mediates, protects, introduces, interprets or at times evokes, is a more responsible and intentional act, although more risky. Action taken in 2001, always in Vienna, by Christian Jabornegg and András Pálffy for the redevelopment of the archaeological area underneath the Judenplatz, with the rearrangement of the Holocaust Monument by the English artist Rachel Whiteread, is an example of strong integration, but not so much visual, as conceptual. The Monument is made up by a rectangular cement block, of approximately 10 meters by 7, almost 4 meters high, consisting of walls of books, objects not normally present in the urban space, a symbol of the stories of the men involved in the tragic events, arranged so as to present the spines inward, thus anonymous; on the base are the names of the places of extermination. The books cannot be read, their decoding refers to a further deepening of the events of the story. The monument, highly *site-specific*, is located above the remains of a medieval synagogue, which was destroyed in one of the many persecutions suffered by the Jewish community, found in recent times. The path that leads to the excavation, completely underground, starts in the arrangement of the pedestrian area where the monument is located and leads within the Mizrahi Haus, where a branch of the Jewish Museum is set up, focused on the life of the Jewish community in the Middle Ages. In this embodiment, both the urban development and the draft of the Monument, and the museum set up and enhancement of the archaeological site flow into the next, materially reflecting the connection among the various interrelated historical events.



Fig. 2: Christian Jabornegg & András Pálffy, with Rachel Whiteread, Judenplatz Museum, Wien, 2001. View of the model.



Fig. 3: Christian Jabornegg & András Pálffy, with Rachel Whiteread, Judenplatz Museum, Wien, 2001. Room with the remains of the synagogue.



Fig. 4: Christian Jabornegg & András Pálffy, with Rachel Whiteread, Judenplatz Museum, Wien, 2001. The square with the monument.

2. Hybrid spaces

One area of special importance is given by those hybrid archaeological spaces, oftentimes found casually in the layered cities, where the action of valorization and protection of the site joins easily with projects of places entrusted for the most various functions. These cases constitute realization examples of that ideal of widespread museum that aims at connecting the object of the musealization action with its context of belonging: in these cases the works, the sites, the artefacts, to meet the visitors, who carry out their normal daily activities, showing with evidence their presence, and with that aura of fascination that are capable of exercising, the density of the historical layering of the city where they live and work. The city of Naples continuously offers these occasions of similar interventions, exactly for the thousand year layering on top of the same track: the building of the Line 1 of the Underground railway, about to be completed, took on an important occasion to verify this phenomenon and to test, through various media, different solutions to the fruitful living between instances of efficiency of a contemporary infrastructure and valorization of the identity and wealth of a city full of history.

The excavation works necessary for the building of the Metro have unearthed a huge amount of artifacts, ranging in time from the prehistoric period to the Spanish domination. While this has caused a huge slowdown in the advancement of the works, on the other hand it has provided an important opportunity not only for the advancement of archaeological studies on the city, but also for the work of the designers involved that had to deal with the need to adapt the design solutions to the needs dictated by the finds.

The quantity and quality of the finds was such as to suggest the creation of Neapolis Station, an exhibition space open access that lies along the railway museum and in fact falls below the National Archaeological Museum, of which it forms a part. This showroom is not particularly significant for the display solutions, but rather for being a museum out of its traditional isolation to meet the potential visitors, carrying out the same working approach to the citizen by culture which is at the basis of the general idea underlying the project of the Art Stations by Achille Bonito Oliva, a museum where you find yourself immediately immersed, while tending to your own daily tasks.



Fig. 5: Oscar Tusquets Blanca, Toledo Station, Line 1 of the Metro, Naples, 2012.

If the Neapolis Station brings together small artifacts, sculptural works and utensils, the architectural finds fall into the contemporary project of the stations where they have been found, becoming for instance a key of clear indication of the descending into the various historical and physical layers of the city, like in the Toledo Station, by Oscar Tusquets Blanca, where the wall fragments of the Aragonese epoch talk equally with the materials of the architectural project and the contemporary works of art, like the mosaics by William Kentridge or the “Galleria del mare” [*Gallery of the sea*] by Bob Wilson.

The 1st century temple A.D. found in the area of the Duomo Station becomes the focus of the Fuksas project, visible from outside through a clear cover that can be visited from the inside, along with the other archaeological remains found.

In these projects, the archaeological remains become the protagonists of the architectural projects, together with the works of the contemporary art, combining past and present, but also combining functional and efficient response to the infrastructural needs of the city of the present day with the opportunity to enrich the culture and beauty of everyday life, and not just on special occasions, in line with the most current meaning of the sense of the action of a museum.

This combination of factors ultimately becomes the qualifying factor of the urban invested by each intervention, finally overcoming the enclave status as alluded to earlier.

The most important intervention playing for the urban impact is the one designed by Alvaro Siza with Eduardo Souto de Moura for the area of Piazza Municipio, where a significant and extensive archaeological area has highlighted the port areas of antiquity.

Due to the layout of this area, which will remain largely in the open, even if it includes within it a museum of some vessels found *in situ*, it will be possible to read the transformations from the coastline bringing together the archaeological site with the built landscape, from various ages, with the natural one, something precluded to the underground arrangements.



Fig. 6: Alvaro Siza and Eduardo Souto de Moura, Municipio Square Station, 2000, work in progress, view of the model.

3. Exhibit and space experience

These actions show how extensively archaeology can fuel and substantiate the architectural design, which is forced to evolve with the progress of the excavations and hone its ability to interpret the site and reestablish a connection with the context. As mentioned earlier, every action of interpretation and exploitation becomes an act of design that exceeds the size of the conservative direction of greater bond with the contemporary project.

The architectural design can work depending on the strengthening of its ability for fruition and reading of the archaeological site, acting on its fringes, beside and around it, mediating the relationship with the environment. But it can also act on the inside, with minimally invasive tools on the material plane as effective in terms of the effects obtained. All types of communication support which can be placed inside of an archaeological site, such as plastic panels, showcases containing smaller artifacts and furnishings, can increase understanding of the values of the sites that you visit. They can become tools for reading the spatial and architectural values of the site, not only for the scientific depth and reliability of the information contained or supported, but for project control and compositional sensitivity at the base of the way they are designed: for example, *lining-out* can complete the reading of partial remains or allow to read the position of interventions in different times with a much higher efficiency than that of site plans and engineering drawings placed on the side of the ruins, since the spatial allusion allows to immediately build the distribution and dimensions of the architectural space. A very difficult field of intervention, which can be only mentioned here, is that of protection covers, which can assist the primary function of a cultured interpretation and reconstruction role of environmental effects. Similarly the use of *ghost structures* may return, for instance, the idea of the complexity of the *raumplan* of the Domus, typically mortified in the common perception of only layout reading. Therefore inserting of showcases containing furnishings or projections aimed at rebuilding the treatment of the walls tend to mend relations among the space, decoration and furnishings which were made either by time or mutilated by previous conservation interventions and museums that separated the space from the furniture, frescoes and even decorated mosaic floors.

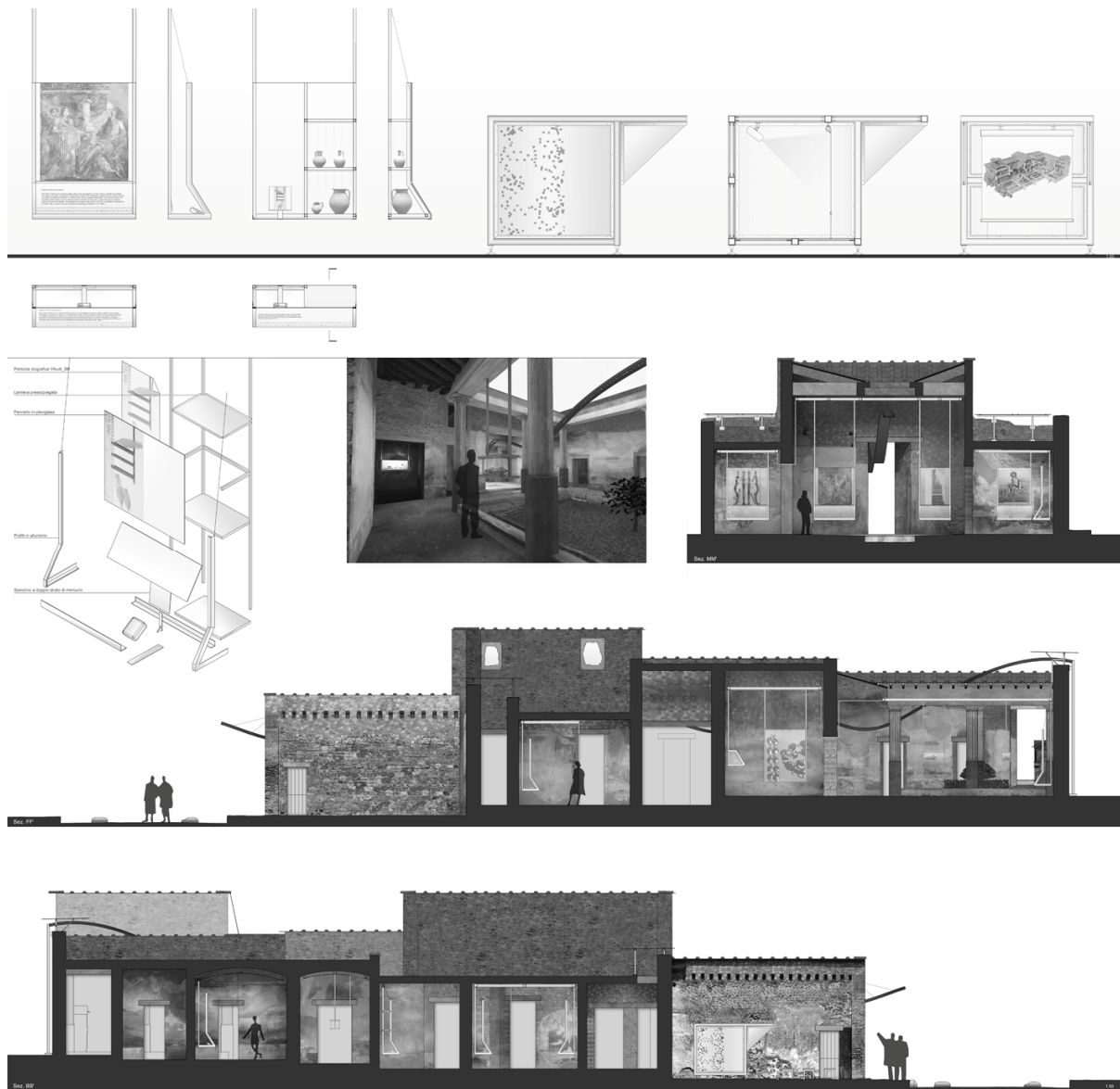


Fig. 6: Design of a temporary exhibition in the House of the Tragic Poet in Pompeii. Thesis of L.Celli, Corso di Laurea Magistrale in Architettura, Arredamento e Progetto, Università degli Studi di Napoli "Federico II".

The use of multimediality and virtuality is rightly seen as an opportunity of huge interest for communicating archaeology, precisely due to the possibility these tools offer to return to the spaces of the past their entirety and completeness through decorations, furnishings, lost colours. Oftentimes however, these reconstructions bring back an image which, although an interpretation, draws the space represented by the flow of transformations, freezing it in a predetermined time. The resulting image is often deprived of many of the qualities that belong to the physical space. The potential of multimediality are huge in helping us see what is not visible, such as what has gone destroyed or what has been backfilled, or even operate network connections between sites and museum contexts among which there are significant cultural and historical ties. Of course the use of the *touch screen*, is very advantageous as with the use of a plain *app* that each and every one of us can download on our phone, allowing us to intensify and widen the information related to visiting the archaeological site. However, I believe it is important to reflect on whether the communication tools offered by augmented reality are seen as useful aids in intensifying the experience of archaeological sites, carefully avoiding the risk of replacing it. The physical and sensory experience of the site is essential despite the success that many exhibitions collect that make use of more sophisticated tools of modern technology: being in front of a screen, although we believe to manipulate and guide the exploration of the images being offered, is absolutely not as meaningful as being inside. Often these exhibitions are independent from the actual site, far from it, as well as alien to the involvement of other kinds of materials. As such they belong more to the operations connected to on line museums than those actions aimed at valorising the actual sites. Even when making use of technologies that bring together the body gestures with the images projected on the screen, borrowing systems widely used by the world of videogames, as in the case of the recent exhibition in the Palazzo Te at Mantova, "Order and light. A virtual tour in the evolution of interior spaces in the history of Greek architecture up to the Renaissance", not all too convincing however is the discounting of the subject of the study to pure image, its stripping of all those meanings linked to the sensorial experience, the tactile dimension, the opportunity to read the relationship with the context and landscape, and, last but not least, the possibility of measuring the space to the bodily dimension, that's to say all those aspects intrinsically connected to the actual architectural space. The importance of the physical experience remains essential in my opinion, the role of the design and construction of a museum may be of great weight in the effectiveness and intensity of the experience of this reality, whose value also lies in the fact that it has "materially" come to us. The massive and above all unique appeal to virtuality moves in the direction of spectacularization and discounting to pure image of the architectural heritage and may for that matter proceed towards distancing this from the actual and cultural life, in the opposite direction of the work accomplished by modern museums.

Bibliographical References

IRACE, Fulvio. *Design & cultural heritage, Immateriale, virtuale, interattivo*, vol.1. Milan: Electa, 2014. ISBN 9788837097516

MANIERI ELIA, Mario. *Topos e progetto. Temi di archeologia urbana a Roma*. Roma: Gangemi, 1998

RUGGIERI, Maria Clara., Urban archaeology without the archaeology / Archeologia urbana senza l'archeologia, in GERMANÀ, Maria Luisa., RUGGIERI, Maria Clara. *Urban archaeology enhancement / Valorizzare l'archeologia urbana*. Pisa:ETS, 2013. ISBN 9788846734440

RUGGIERI TRICOLI, Maria Clara, *Musei sulle rovine*. Milano: Lybra Immagine, 2007. ISBN 9788882230920

RUGGIERI TRICOLI, Maria Clara, SPOSITO, Cesare. *I siti archeologici. Dalla definizione del valore alla protezione della materia*. Palermo: Dario Flaccovio, 2004

VAUDETTI, Marco, MINUCCIANI, Valeria, CANEPA, Simona. *Mostrare l'archeologia, per un manuale-atlante degli interventi di valorizzazione*. Torino: Umberto Allemandi & C., 2013. ISBN 978-88-422-2248-4

VENEZIA, Francesco. *Che cosa è l'architettura*, Milan: Electa - Collana Architetti e Architetture. 2011. ISBN 9788837086619