

# The archaeology of architecture for the knowledge and preservation of the 'modern'

**Daniela Pittaluga** | [daniela.pittaluga@unige.it](mailto:daniela.pittaluga@unige.it)

DAD (Dipartimento Architettura e Design) - University of Genoa

## Abstract

The aim of this research is to find new tools to know, understand and consequently preserve the most recent architectural heritage (20<sup>th</sup>-21<sup>st</sup> century). This particularly interesting heritage needs attention, often its state of degradation undermines its conservation. This need is evident not only in the Italian context but also in the western world. The 1972 Unesco Convention defined an initial concept and definition of Heritage, and this concept now became increasingly broader; today, more recent artefacts are now looked upon as elements to be protected, in the same way as older ones. The writer started this research, years ago, currently a close collaboration between DAD Genova and Universidad del Pais Vasco brought more enlightening. The objectives are: verification of the applicability of the tools already adopted in the archaeology of the architecture of traditional constructions and development of the specificities in the interpretation of contemporary constructions.

## Keywords

Archaeology, Modern architecture, Contemporary heritage, Restoration, UNESCO conventions.

## An Archaeology for Contemporary Architecture?

The term 'archaeology of architecture' refers to the direct analysis of a building in order to obtain data on its history from the material source<sup>1</sup>.

This essay discusses the necessity-utility of applying the tool of "archaeology of architecture", which has long been indispensable in the study of architectural structures of the past, to 20<sup>th</sup> century buildings as well. In particular, the question was raised as to whether it might be so necessary to have tools that would allow one to understand and decipher interventions that took place in a relatively short and close period of time. As a further reflection, the question was raised as to how this type of analysis could also be made possible for 20<sup>th</sup> century architecture and whether the tools previously used by architectural archaeologists could be considered already suitable or rather in need of partial modifications and adjustments. All architectures, in relation to their conservation, must be considered in the same way: the theoretical debate following the conference "Conservation of Modern Architecture?" organised by the ICOMOS committee in '96 in Leipzig would seem to leave no doubt as to the necessity and truthfulness of the postulate established on that occasion according to which monuments of the Modern Movement need no 'special status' and no other treatment criteria than those adopted for any monument under protection. According to this view, even a substantial part of our most recent architecture can and should make use of all the tools and precautions for its preservation and protection, as is the case for architecture from other historical periods. In other words, the possibilities offered by the archaeology of architecture can and must also be granted to these artefacts<sup>2</sup>.



Figg. 1,2 "Ex Dopolavoro ", Ferrania. (left-1936, right-2021) Stratigraphies of volumes. (Source: A.Acquisgrana, F.Brunengo, R.R. Chelo Fiamma, "Restuaro e riuso dell'Ex Dopolavoro di Ferrania", Postgraduate thesis "School of Specialisation in Architectural and Landscape Heritage, supervisor S.F. Musso, co-supervisors G.Franco, D. Pittaluga, aa 2020-2021)

The discipline of the archaeology of architecture, like others, or better than others, succeeds in understanding and investigating through matter, the testimonial, historical and social values of architecture and thus, also, of these architectures. Moreover, the archaeology of architecture could also be a useful instrument of knowledge for other reasons: 1) The 20<sup>th</sup> century is a complex and articulated period for building production<sup>3</sup> and we have little knowledge of it despite it being the period closest to us. As much as other historical periods, if not even more, it brings along a condition of complexity in which collective and individual actions, economic, political and social values are intertwined. Looking at these architectures through the lens of archaeology, setting them in time, observing even the most minute modifications, thus allows an understanding of meanings that would otherwise be impossible to grasp. 2) Recent architecture can be as stratified as other historical periods, perhaps even more. For some decades now, in fact, even 20<sup>th</sup>-century architecture seems to require no less care and effort to preserve than older buildings. The problems are due in part to "rationalist" construction characteristics (maximum stereometric simplicity and consequent absence of projections and protections, sharp edges, perfectly orthogonal planes), to exaggerated distribution choices, to the use of materials unsuited to the existing conditions, and to the use of innovative technologies not supported by the long testing time. Degradation is also often caused by incompatible transformations of use<sup>4</sup>. All this has led to the multiplication of interventions, repairs, sometimes restorations. Another factor of transformation with more or less invasive actions is linked to the need for legislative adaptations of various kinds (e.g. regulations on technical systems<sup>5</sup>, on anti-seismic structures, adaptations on accessibility, etc.)<sup>6</sup>. The archaeological analysis could therefore be extremely useful to connect and bind together these operations and also to decipher the history of the changed attention to the level of safety through its material traces. Finally, the political reasons for and against the various regimes can also be counted among the reasons for the transformation of and on architecture, and the 20<sup>th</sup> century is a particularly interesting century from this point of view. Even if we only limit ourselves to the Italian context, in the period from the Fascist twenty-year period (1922-1943) onwards, there are historical and political events that profoundly changed the way of doing architecture and the use of materials. 3) The precarious conditions of preservation, as we have said, endanger some of these artefacts; on the one hand, in fact, the structures may be subject to collapse or partial destruction due to degradation phenomena, and on the other hand, they may be subjected to restoration, which, however, if not conducted with the appropriate knowledge and caution, may prove equally destructive and dangerous. An emblematic example is Wright's FallingWater<sup>7</sup>: its countless restorations constitute an overview

of the intervention methodologies of the last eighty years. The archaeology of architecture, in this sense, can help to reconstruct a history of the different modes of intervention by deciphering from the direct source ways, techniques, tricks. It is therefore possible to trace a sort of history of restorations, sometimes even to carry out yet another 'restoration of restorations'. This last aspect is another reason why an archaeological analysis of contemporary architecture may be necessary: how to intervene with correct methods in the event of a restoration? how can use the knowledge acquired with the archaeological method? The archaeology of architecture, and consequently the accurate knowledge of buildings it brings, must not be used instrumentally in restoration to endorse this or that destruction in function of a hypothetical (as unreal) return to an 'original' situation. The archaeological analysis must look at the complex, the material archive of the building as the outcome of different social, economic and technical contributions, but also as a repository of knowledge, construction practices, aesthetic perceptions, representative wills and participatory patronage<sup>8</sup>. The archaeological analysis, furthermore, by allowing a good understanding of the compatibility between materials (their composition but also their production, workmanship, treatment) can really make it possible to make more conscious restoration choices and thus ultimately contribute to the fact that in the intervention the informative richness of the artefact is not lost and that the present can allow for more re-readings of the past <sup>9</sup>.

### **The research**

The research into the possibility of an archaeology of architecture applied to 20<sup>th</sup>-21<sup>th</sup> century architecture has been conducted by the writer with the aid of various integrated research projects, in some cases in collaboration with other Italian and foreign departments (Universidad del Pais Vasco), PRA (University Research Project) 2014-2016 "Archaeology of architecture and the restoration site", 2018 "Conservation and restoration: methods of analysis and monitoring strategies", 2019 "Conservation and restoration: methods of analysis and strategies for the maintenance of material and immaterial heritage" and 2020 "Conservation and Restoration: Strategies for Quality Design", Archaeological readings of contemporary buildings were also carried out with members of DO.CO.MO, year-long work within the Restoration Laboratories of the University of Genoa's degree course in Architecture, and degree and specialization theses. From a methodological point of view, we initially looked at the research conducted within the discipline of archaeology and then searched for applications of it. The case studies identified allowed us to focus more attention on the specifics of this archaeological reading of recent buildings. The results were interesting. The discipline of archaeology has been looking at what has been called the archaeology of the contemporary for some time now, and various studies have highlighted the potential that could be drawn from it and together with the caution that this type of application imposes. There are not many high archaeological investigations of recent buildings to date. For the most part, they have been carried out since the 1990s. These first applications were in some cases rather problematic and generally limited to only a few aspects of the architecture, but over time the studies progressed and interesting perspectives were glimpsed. These studies have in common to be to support restoration projects. From these studies as a whole, a number of aspects emerged on which it will be necessary to dwell in the future in order to make the archaeology of architecture a reality in all studies of contemporary architecture. Future research will therefore have to be concerned

with A) managing complexity, B) refining the reading of the most minute differences, and C) the skilful use of oral sources and images.

A) Managing complexity: The 20<sup>th</sup> century is a complex era in that we often witness experimentation with innovative materials and the confirmation of traditional forms. Because of the formal impact they have on contemporary architecture, some architectural elements have undergone more modifications and innovations than others; think, for example, of all the variety of window and door frames in the recent past, or the offer and production of claddings of all kinds. In the archaeological reading of these architectures, therefore, one must bear in mind all these variables and be sufficiently ductile and open to know how to use the most appropriate tools from time to time. Chrono-typologies, for example, based on the characteristics of the materials used, on the forms, finishes or measurements (mensiochronologies) of constructive and architectural elements, will have to be increasingly developed and expanded with the particularity of the spatial extension that often transcends even national borders. The application of these tools, so much used in the archaeological analyses of the past, in the study of 20<sup>th</sup> century architecture is more complicated precisely because of the great variety of products expanded by the global market. However, one cannot forget the great development of the network that allows one to draw on 'global' information. There is a lot of work to be done on these aspects, both to identify possible reservoirs of information and to read the data in a shared language. It will also be appropriate to look at both the global and the local market at the same time. These two extremes, the standardized, compliant and generic element found on the net and the ad hoc, specific solution developed by the craftsman, are two aspects of the same coin in these recent architectures<sup>10</sup>. Another difficulty is represented by the fast pace of transformations, the strong acceleration of processes, the rapid introductions and equally sudden exits of products, materials and technologies.

B) Capturing the small differences in industrial production: The difficulty highlighted above, however, does not exclude another one that might appear to be diametrically opposed: being able to identify interventions in the presence of materials, technological pieces and elements still available on the market. The homologation of certain production processes and the belonging to the same architectural culture complicate archaeological interpretation to no small degree. In recent architecture, therefore, the distance of time separating the first construction from a new building site can also be very limited and one may find oneself having to identify and record changes that have taken place in a very short time. In fact, the only thing that helps is the evidence of mechanical joints, bolting, joints and hinges: having to recognize any replaced element implies considerable knowledge of finishing details and any small variations between one industrial production and another. It also poses the problem that if the replacement has in fact taken place within a very short time, there is no way to recognize the replaced element. But if we look at the solutions of the past, similar difficulties can also be encountered in trying to stratigraphically analyze a wooden floor, a wall with a wooden grating, a vault hung in reed... Perhaps, in some cases, the recognition of the prefabricated element, of the company that produced it, could help in the reconstruction of events (provided that memory has not already been lost).

C) The skillful use of the oral source and images: Studying and deciphering material traces also through the oral source is a well-known way of proceeding in the field of archaeology, particularly for the archaeology of the contemporary. This way of working allows for an effective understanding of both intentions and motivations as

well as of what has actually been achieved in accordance with or beyond initial predictions. However, these undoubted benefits can be associated with limitations and risks. In the case of contemporary architecture, it is in fact possible that the narrative about the object itself is transformed in real time by its author, the designer at the time of construction; this in particular can create problems of no small magnitude if the object has to be restored. In the archaeology of the contemporary, in fact, the comparison with the oral source can and must play a central role, and therefore the methodological approach we intend to pursue will have to question the role and weight of this precious source in relation to others. The presence of documentation conveyed mainly through images (photos, videos), necessarily influences and modifies the research strategy, but "...not everything is fixed on paper or even in photographic images. Maintenance, minor adaptations, painting, replacement of fixtures or elements of a technical systems often have no reason to be recorded, yet, in such cases, these are the changes that have made the history of the building and that one wants to know in detail in order to 'restore' it or simply to specify its vicissitudes". It is however necessary to learn how to use this important information correctly, integrating and interpreting it in the light of the other data in our possession without letting the power of the image overwhelm everything. Even a photograph, in fact, despite its claimed objectivity, could somehow give a distorted image of reality: this is another danger to which we must pay particular attention. There may in fact be artfully constructed photos and videos sometimes simply to emphasize a perception that does not occur in reality or worse still to mystify and defraud. In all cases, however, we must bear in mind that we are always dealing with a 'non-continuous' testimony, but placed in a precise given time and space. So, while using photos and even videos, precious allies for the study of recent constructions, it is good to keep in mind this principle of caution and necessary comparison with all sources.

### **Conclusion**

The subject of the archaeology of contemporary architecture is undoubtedly a very topical issue in research in Italy, but also in other countries in Europe and around the world, and it poses a very interesting problem: the elimination of chronological constraints for archaeological practice. In addition, the study of contemporary materiality is very important and strategic because it makes it possible to connect history with the meaningful memory of the community, thus reinforcing the significance of the cultural asset, its use, utility, etc. These issues are increasingly important in the preservation and enhancement of heritage, whatever it may be, material or immaterial, and to which era it belongs. The social and ideological importance of craftsmanship, present as we have seen in contemporary architecture as well, as opposed to industrial production, prevalent in more recent eras, is another important factor in studying contemporaneity, not only in economic terms but also in theoretical terms, in order to understand the coexistence of a diversity of production models and activities in the past. Finally, an archaeology of contemporaneity is essential to overcome the paradigm of a purely diachronic archaeology; it is useful for a thematic and transversal approach, in which the power of recent sources also allows for a profound dialogue with historical realities. Since the Convention Concerning the Protection of the World Cultural and Natural Heritage adopted by UNESCO in 1972, many things have changed: there has been an increasingly articulated and inclusive definition of Heritage, including more recent architecture. The need to better understand these architectures as well requires that adequate reading tools be developed. The results of the





Fig. 3 Casa Malaparte (1937) (source: G. Pertot).



Fig. 4 Casa Malaparte, Coating stratigraphy (source: G.Pertot)

research presented here show how the archaeology of architecture can meet these needs. The current difficulties and the further need for specific studies in the future are also evident. However, the study presented here shows how the advantages of an accurate archaeological study of a high level can outweigh the possible limitations.

<sup>1</sup> Pittaluga D., 2009, *Questioni di archeologia dell'architettura e restauro*, ed. ECIG, Genova.

<sup>2</sup> Franco G., Musso S.F., 2016, *Architetture in Liguria dopo il 1945*, Genova, p.14.

<sup>3</sup> Olmo C., 2010, *Architettura e Novecento. Diritti, conflitti, valori*, Roma.

<sup>4</sup> Pertot G., 1993, *Analisi stratigrafica per il Moderno. Casa Malaparte a Capri: i rivestimenti*, «Ananke» 1, pp.75-81; Casciato M, Morinati S., Poretti S. (eds), 1999, *Architettura moderna in Italia. Documentazione e conservazione*, Atti del I Convegno Do.Co.Mo.Mo Italia, Roma.

<sup>5</sup> Technical systems to a greater or lesser extent are present in both recent and older buildings, but due to the changed requirements and different levels of comfort we are used to in newer architecture (efficient architecture that always outdoes itself), they are in fact more modified in the latter and often also involve substantial work on masonry structures

<sup>6</sup> Musso S.F., Franco G., 2020, *Il tempo del secolo breve. Crescita dei valori e deterioramento della materia*, «TECHNE», 20, pp.255-264

<sup>7</sup> Fallingwater evolution synthesis: '36-'39 construction; '37-'63 insertion of vents in rooms to reduce humidity problems, '51 repainting, '69 interventions on finishes, '71-'72 interventions on interior paintwork, '76 repainting of all steel profiles, '78-'79 interventions on exterior, '82 reconstruction of east terrace beams, '87 replacement of kitchen floor, '87-'88 insertion of EPDM membrane, '88 Wasa engineering and architectural firm involved in conservation of Fallingwater, '89-'92 stone wall cleaning work, '90 paint sampling for replacements, '92 steel work on G. Seekircher, '94 Western Pennsylvania Conservancy turned to Robert Silman Associates (RSA) of New York, a prestigious name in the field of conservation and restoration, for an overall monitoring of the structures, '95-'98: WPC restoration work with Wank Adams Slavin Associates and Norman Weiss, '97 placed props for beam movement, '98 waterproofing IRMA system terraces by Wank Adams Slavin Associates WASA, '99 WPC revised consolidation and waterproofing plans (from Jerome P., Weiss N., Ephron H., 2006, *Fallingwater Part 2: Materials-Conservation Efforts at Frank Lloyd Wright's Masterpiece*, «APT Bulletin», 37, 2/3, pp. 3-11.

2006, pp.3-11 )

<sup>8</sup> Treccani G.P., 2007, *Archeologie del presente, Tradizione e modernità*, in A. Ferlenga, E. Vassallo, F.Schellino (a cura di) *Antico e nuovo. Architetture e Architettura*, Padova, 2007, pp. 93-105. Mannoni T., 1997, *Metodi pratici ed attendibilità teoriche delle ricerche archeologiche*, in *I Congresso Nazionale di Archeologia Medievale*, a cura di S. Gelichi, Firenze, pp.14-15

<sup>9</sup> Pittaluga D., 2009, *op.cit.*; Pittaluga D. 2001, *An analysis of building methods: chemical-physical and archaeological analyses of micro-layer coatings on medieval facades in the centre of Genoa*, in *Journal of Cultural Heritage*2(4), pp.259-275; Boato A., Pittaluga D., 2000, *Building archaeology: a non-destructive archaeology*, 15<sup>th</sup> world conference on nondestructive testing, Roma, [www.ndt.net/article/wcndt00/papers/idn365/idn365.htm](http://www.ndt.net/article/wcndt00/papers/idn365/idn365.htm) [agosto 2022].

<sup>10</sup> An artisan knowledge marks all of Scarpa's work (Manzelle 2002), even Rietveld, perhaps the most successful exponent of De Stijl, "had a background as a carpenter and cabinetmaker ... especially his early works, show strong indications of craftsmanship" (Casciato et al.1999, p.470).