

The conservation of mosaics In situ

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A review of the methods used in treating mosaics must proceed hand in hand with an analysis of the meaning, history has given mosaics themselves. Technical solutions have always been the fruit of cultural choices somehow bound to the use of the work or artefact. An example of this is the attitude of considering mosaics as simply "aesthetic" objects, detachable from their surroundings and turned into movable effects.

The 17th-century "discovery" of archaeological sites and their subsequent transformation into mines for treasure-seekers, was the beginning of the process of demolition that would continue for almost 200 years. In this period, the single option offered was to detach, to remove. The sites and their buildings were divested of their most important elements, which were moved to museums, palaces, storage, dealer's shops. There was no documentation; contexts were destroyed; information regarding origins was ignored.

The mosaic become only the image created by a fine layer of tesserae.

The detachment itself was carried out in way that vary from lifting whole blocks at a time including all the bedding layers, in sizes and shapes determined by the cracks in the mosaic itself, to cutting pieces, usually larger than one square meter, after first gouging the section using glues or natural resins.

The bedding layers were removed and the tesserae were re-attached to stone-slabs, or mounted on metal or plaster plaques, or even directly onto a wall or in the floor of its new location.

The first change came about thanks to the reevaluation of archaeological sites as they were increasingly appreciated in all their components. Public attention to the ancient world expanded from the objects in museums to their places of origin. Mosaics were still lifted, the layers beneath the tesserae destroyed and surface irregularities flattened out. But floor pieces were occasionally replaced in their original positions on new supports that were fixed or moveable.

Attention is still payed only to the tessellatum but a new option is slowly asserting itself: to present mosaics in their site of provenience. The detachment procedures have not changed, with the exception of new options: roller detachment, for instance, or the lifting of very small sections at a time. New fixed supports appear, usually made of reinforced concrete. A suggestion was even made to reproduce surface irregularities in the new bedding layers.

This is a very important moment due to the consequences produced in the future. This increased attention payed to the mosaic and specially to the archaeological sites will create an increasing number of projects and initiatives. Practical result of this will be new experiences and more and more applications of "modern technologies". This is the moment of the "inventions" of the restorers.

This was the moment of cement, synthetic resins, panels, light panels, heavy panels, foams. It is particularly the moment of the "experiments", the results of which we can only partially judge today. (The various "unsuccessful experiments" can no longer be evaluated since the mosaics, without any documentation, have been lost.)

The restorer acts by himself (or in group of restorers); his attention is given to a single mosaic at time; his work proceed day by day, or it is planned on week-base; his work is secret; his work ends with the direct treatment of the mosaic.

Questions in restorers' head were: how do I cut? which will be the weight of the pieces? which was the original motiv for the reconstructions? how do I clean the tesserae? will be better the resin number 345 or the number 2? how do I polish it? how to riassemble the pieces? how much will I spend (and how much will I gain?) how can I

save money?

But, together with the proliferation of restoration projects, an undercurrent of cultural evolution was slowly maturing. A different understanding of history was growing up.

Slowly but finally, history is being viewed as a dynamic entity, stratified in time. Archaeological sites are the places where history has occurred, where the signs of life have been printed and preserved in layers. General attention is lent to these signs, towards what we can call the cultural valence of the site. Cities, settlements, buildings and even objects have increasingly taken on the role of material evidence of a single process: the 'place-life'.

Attention has slowly moved from the single object, the mosaic, to its context: the room, the building, the site. There is now a tendency to keep in their places all those elements that qualify and identify the site: movable objects in the on-site museum, frescoes and mosaics in their original locations.

This leads to increasing knowledge about mosaics, and the many components of the ancient structure begin to be appreciated: the material it's made of, the techniques used, the traces time has left are studied and documented. A tendency of non-interference grows into policy, not just regarding the aesthetic image of the mosaic, but also referred to its material substance. An archaeological mosaic is made of aesthetic image, but it has, as well, a body (its material composition); a mosaic is the result of the technical process (working-production techniques) and of centuries of ageing (its history).

Increasing cultural evolution leads to studying, documenting and respecting all these elements.

From this moment, methods and techniques for the treatment of mosaics follow the evolution experienced by the conservation of frescoes, with perhaps twenty-years delay. This means to move from regularly lifting of the mosaics and re-laying them on movable panels, to in situ consolidation, and only in specific cases to detachment. Also for mosaics, treatments follow this new sensitivity. Techniques are modified on the new principles and methods. Materials and treatments are reproduced as by the original receipts (mortars and the phases of their application), and the signs time has left on the mosaics are respected.

The restorer became a conservator.

The work is no longer "transformed"; the message carried from ages past is preserved, made evident and passed on.

In situ treatment of the mosaics is precisely this. *In situ treatment* does not refer to the specific place where the work is physically dealt with - and it refers even less whether or not the mosaic is replaced in its original position. Instead, the term means respecting and preserving all the cultural valences of the monument, including historical, technical and material ones. The mosaic is kept in its original position within distinct structural systems. The layers that make up a floor must be saved. The signs, or scars, left in time - the changes, the tampering, the irregularities - must be studied, interpreted, preserved and made understandable to the public.

The material the mosaic is made cannot be changed by using extraneous un-compatible products. The intervention does not depend upon "miracle cures", far afield from the original methods used.

In its technical details, the *in situ treatment* of mosaics is distinguished by various phases: documentation and study; the actual physical treatment of mosaics; the steps to be taken to protect them.

The importance each of the steps has in the general economy of the intervention depends upon the kind of mosaic that it is being considered, its state of conservation but, above all, it depends upon the time elapsed between the excavation and the treatment.

Parallel to the new ethic, the technical ability to keep the mosaic in situ, with thorough respect for the work and its archaeological context, is growing. Increasingly important also, with regard to conservation problems, is the

principle of no stopping at the mosaic, but analyzing its surroundings, taking them as a whole together with the larger environment. Problems are considered on a wider scale, in order to prevent them rather than to cure damages.

From dedicating the greatest care to the tessellatum while destroying its context - as was true in the 1800s (and in some instances even today)- we have shifted to giving minimal treatment to the tesserae layer and concentrating instead on context and surroundings. Whereas once the mosaic was treated in a single intervention, we are trusting instead to future operations for any eventual strengthening or supplementary steps, or even doing the very least possible and depending upon maintenance for the future preservation of the work.

A number of indirect steps become part of those activities at the conservator's disposal. Water drainage, roofing, seasonal covers, back filling, protection from animals and vandals, suggestions and solutions for a proper use of the site, such as trials, information tools, training courses for local operators and tourist guides, enters the programs of the conservator.

Conservator must reclaim the mosaic and must at the same time arrange the conditions for its future active and passive protection, safeguard and maintenance. Which is to say, potential risks must be prevent ahead of time, in order to set up precautionary protection suitable to curtailing, if not avoiding, subsequent direct intervention on the mosaic.

Here we met the great cultural change in the professional figure of a conservator: his attention is no more given to a single mosaic, but to a building; his work does not proceed day by day, but it is planned; work is not planned on weeks, but on year-base; conservator does not work anymore by himself, but he works in teams of different professionals; his work is not secret, but great attention is paid in informing public; conservator's work does not end with the restoration of a mosaic but it continues in maintenance and protection.

Some of the questions in the conservator's head today are: which are the priorities? how to prevent risks of further damages? what is the program? which resources and funds are available? which is the objective? which are the working steps and the calendar? how to plan future maintenance? which part of the building will be backfilled? how can the documentation become friendly? how to inform the public?

These indirect actions share all a common characteristic: high effectiveness level at low cost (without considering the cultural value added of damages spared). Exactly the opposite is true of direct treatment, where costs are usually very high and the benefits are very thin.

Indirect actions, instead, can achieve excellent results in terms of damage prevention.

But there is a high cultural cost to be faced: indirect actions must be planned.

They must be anticipated before damage occurs. They must prevent damages and treatments. They are instead form of insurance.

In practical terms, everything we have said translates into the need of to wide out the range of action of the traditional restorer/conservator. He must be prepared to consider, together with the direct treatment of the mosaic, also the surrounding parameters that can change the immediate environment. In this way his intervention will lead to the conservation of the mosaic as well as to the planning of its future active and passive protection. And this also means to change the attitude of institutions and teachers when planning courses for the new generations of professionals: less and less courses on restoration and more and more courses on prevention, management, archaeology, communication.

The aim of this analysis was to demonstrate that "treatment" of mosaics does not mean anymore just applied direct technical operations, but it means combination and interaction between direct and indirect activities,

implemented according to precise theoretical methodologies. Mosaic is part of archaeological contexts and it has to be examined into this environment.

Direct treatment must be propaedeutic to future plans for maintenance and protection. Archaeological context and mosaics must be brought back in use, to live rather than be fossilized. As in the ancient times, mosaics will meet their hope of survival in their daily practical significance. The difference is that today this significance will not be their residential, religious, or political use, the significance will be their cultural valence. The significance will be the historical message and the needs of its transmission, according to a global view and a general management of the archaeological site.