

The Development of Conservation

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What does the word "conservation" mean? Not long before our time the words conservator, curator, keeper, custodian, all meant the same thing: the chap who was meant to guard and preserve the exhibits in a museum from harm, though he was never given any precise instructions about how to do this.

Today, because of the very proper concern over risks to our environment and natural heritage, the words "conservator" and "conservation" have almost ceased to retain useful meanings. But even before this, the keeper or conservateur had become a scholar who delegated "conservation" to specialists with rather low salaries. The word may not remain with us for much longer. But in spite of this, all of us here at this moment understand conservation as the profession which is concerned with the preservation and repair of cultural objects.

The Beginnings of Conservation

If something gets broken in your home, whether it's a washing machine or a piece of jewellery, and neither you nor the local man can mend it, you send it back to the makers or throw it away. In the former course of action we can discern the very beginnings of conservation, which, by the way, for many years and still for most people today meant repair rather than preservation — sending it back to the makers.

Naturally a painting went to a painter for repair. But, painters being notably creative, their work could often be rather easily discerned from the original, and so the special craft of painting restoration was early to develop, very probably during the late renaissance. It was certainly well established in the 18th century.

A simple application of science, however, could have even worse results than the re-painting of a painting. In 1893 Bather described how the Greek

Government's official method for cleaning bronzes with acid sometimes led to their complete disintegration.

But we could step back 40 years earlier than this and find a much more modern concern with true conservation:

"In considering the position of the National Gallery, our attention was drawn to the vicinity of several large chimneys, particularly that of the Baths and Wash-houses, and that connected with the steam engine by which the fountains in Trafalgar Square are worked, from which great volumes of smoke are emitted. In the neighbourhood also the numerous chimneys of the various club-houses are constantly throwing out a greater body of smoke than those of ordinary private residences."

This statement was uttered by no less a man than Faraday the chemist, in a report to a parliamentary committee. When we consider the concern for conservation exemplified in this report of the mid-19th century, by the work of Pettenkofer in Germany in 1870 and of Russell and Abney on the fading of watercolours in 1888, it is a puzzle I have never been able to resolve that, while science and technology snowballed in a multitude of directions, conservation in the museum declined into a sort of Dark Ages. This lasted, with a very few exceptions, until after the Second World War.

Indeed the darkness was now dispelled by something that boded even worse for conservation — light in the form of batteries of fluorescent lamps, and museums with glass walls, and heat which could turn a temperate-country museum into a winter Sahara of dryness.

But behind the scenes things were at last beginning to move. This was only yesterday! Several of that first generation of modern conservators, founder-members of the International Institute for Conservation, are still with us. Almost old enough to be among them, a distinguished Australian

conservator, William Boustead, is unfortunately unable to be present today. Though the history of the vacuum hot-table for relining paintings has not been documented, as far as I can see it is to Bill we owe the essential element, the application of vacuum.

There is a new generation of architects, who do not build museums with glass walls, and who understand problems of environment at least as well as the museum staff who commission their work. One of them, Colin Madigan, designer of the Australian National Gallery, I am delighted to find is speaking at this conference.

Science in Conservation

Actually science still hasn't found its feet in museum conservation. Lines of least resistance are not usually the best guidelines, and two lines of least resistance here have been fake-hunting and treasure-hunting: fake-hunting in the world of paintings and treasure-hunting in archaeology.

Because the public finds romance in certain criminal activities, and anyway basically doesn't believe there's all that much difference between a masterpiece and its copy, fake-hunting is always popularized by the news media. But it's a tiresome diversion from our proper work.

We also need to grumble about how archaeologists tend to use science. Not so long ago archaeology was treasure-hunting. You had only to go and see the recent Tutankhamun show on tour to confirm that to the public it still is. And remnants of this greedy past yet cling, especially in underwater archaeology. Therefore science in archaeology is most likely to mean electronic apparatus for finding artefacts. I'm being unfair, of course: responsible excavations are mounted to enrich our knowledge of the past, and science has made big contributions to both discovery and analysis. But science in archaeology very rarely means preservation.

The mention of analysis reminds me that analysis is the bedrock of conservation science. Without it restorers work with uncertain knowledge, art historians can go wildly astray on matters of technique, and to me, most important, we rely on analysis to further our knowledge of deterioration processes.

The Problem: Australia

I have a lot to learn about the Australian situation, but I do know that for many years large collections have been gathering, and in some cases gathering dust and decay. All this has been most ably documented with telling photographs in the report "Museums in Australia, 1975" written by the Committee of Inquiry on Museums and National

Collections for the Special Minister of State. In 1967 UNESCO helped by enabling Dr Werner to survey and report on problems and solutions.

There is nothing peculiarly Australian about all this of course. The problem is world-wide. But museums are beginning to get on top of it in all but the very poorest countries. Australia is not a poor country, and it will certainly be acquiring new and important antiquities, both on the world's markets and from within its own territory. These will augment its responsibilities in conservation.

We now need to put the general problem into some kind of perspective, so I will try to list the aims, first of the older form of conservation, restoration, and then of preventive conservation.

The aims of restoration planning are easily stated but difficult to attain. As I see them they are simply:

1. To enlarge the present nucleus of trained conservators, and
2. To provide them with good facilities.

The aims of the second kind of conservation, preventive conservation, are:

1. To ensure that the internal climate of new museum buildings is correctly controlled. I think the information for this is now widely available and is being acted on.
2. To improve the internal climate of existing buildings. To raise the money for this usually requires arduous and persuasive work by the Director and his staff.
3. To ensure that at least one member of staff, whether conservator or curator, has the necessary training to be able periodically to check the environment. It is important that the building users as well as the building maintainers carry out this check. Training is not a difficulty. A concentrated course need last no longer than a fortnight. The Rome Centre now has good experience in giving such courses.
4. The fourth aim of preventive conservation is to learn by research much more about what factors in the environment cause which kinds of damage, how fast they act, and what the chemical or biological mechanisms are. At present biodeterioration is quite well understood, but we have nothing like sufficient knowledge in the chemical field to be able to claim that our control of the indoor climate rests on a sound foundation.

Thus preventive conservation is concerned with creating the right environment — right to the best of our knowledge — with maintaining it, and with learning how to improve it.

Other Countries

In many countries, until quite recently, conservation facilities have just grown without any attempt at central organisation. But if there is an opportunity to plan, as there is now in this country, it should obviously be taken, and the experience and mistakes of other countries should be made full use of. The general problem at the start is how to get the right balance between fully dispersed and highly centralized facilities.

Extreme solutions are rarely the right ones, and it must be obvious first of all that to attempt to carry out all the conservation of a continent at one centre would be an extremist approach doomed to frustration. Equally the opposite, the *laissez-faire* attitude of letting studios and laboratories arise and grow or languish without any central co-ordination cannot make the best use of resources.

A trip round the world today would demonstrate a great variety of approaches within this spectrum.

The smaller socialist countries naturally favour fairly extreme centralisation, and one West European country, Belgium, due to the energy of one man, Paul Coremans, has followed the same course. Italy would be a great deal worse off without her Istituto Centrale in Rome, but I think no Italian would claim that its capabilities are sufficient or even could be in a country as complex as Italy and as full of supreme antiquities. In France the high status of the Louvre has ensured quite a firm dominion over provincial museums in all matters of museology, including conservation, though without complete centralization. At the present time Canada is experiencing the birth pangs of a very new central conservation institute. In America, free enterprise extends to all spheres, including the museum, though there is the interesting and successful example of pooled conservation facilities at Oberlin, founded in 1953. A National Conservation Advisory Council was formed in 1973¹. In the UK the rudiments of a regional conservation network now exist, but inadequately funded and well behind the national museums in facilities and attainments.

Each plan, each experience is different. Several of you will have seen more than I have around the world, and I certainly think that it is most important for the decision-makers and advisers here in Australia to see for themselves what has been and has not been achieved abroad before finally committing Australia. For what it's worth I myself consider that a national centre offers advantages in training, in special facilities and in the maintenance of professional standards, but that the creation of such a national centre should not impede the growth and adequate funding of a suitable

number of regional museum centres. Training in conservation is so important that a central institute ought to be considered for this reason alone.

Scientific specialisation

Now the national centre and certain of the regional centres will include qualified scientists on their staff who will undertake research. Please allow me here a little indignation that nowhere in the world has scientific research been properly set up in a museum.

Scientific analysis is no problem. As I have said, it forms the bedrock of scientific conservation. It is easily staffed and easily equipped.

Scientists have also done impressive work on the improvement of conservation processes, especially with metals.

But the scientific study of deterioration processes and what causes them, our sole means of improving preventive conservation, has scarcely begun. The varied climate of Australia and her strong scientific tradition could make this the ideal country for such work.

There will be people, especially among government administrators, who assume that museum problems can just be handed over to university scientists. Because now and then this old-fashioned view still prevails, I must briefly touch on the relation between university and museum science.

When the London National Gallery laboratory was founded in the mid-thirties, a Scientific Advisory Committee was also formed, and still exists. Very distinguished scientists, among them Sir Lawrence Bragg, Sir Harold Hinshelwood, Sir Robert Robinson and Sir Harold Hartley, have served on this Committee. But the leading idea behind its creation surely sounds a little naive today: it was that these distinguished men, with their cohorts of scientists behind them, ought to be able to solve any museum problem handed to them.

In the event, of course, this idea was seen to have been misconceived for two reasons. First of all even a small bite of a problem may take three years of dedicated work, and successful men have not the spare time available. Secondly, I have had the privilege of discussing our kinds of problem with leading scientists, and my regard for them has been in no way lessened by the realization that they haven't got the background. Our work has become specialized like any other kind of scientific endeavour. I should add that, though it is now clear that our problems must be set and solved by ourselves more or less alone, a scientific advisory committee drawn from outside the museums can give invaluable advice, open up contacts, and lend weight to decisions.

In spite of the limitations I have just spoken of, there seems some possibility of expanding our capacity by setting up specific research projects and persuading a university to take them on. This I have tried with some perseverance. I have attempted to find money for closely-defined post-graduate research projects under a professor well-established in the field, and after close discussion with him. The difficulties are such that this tactic rarely succeeds. Here are three probable obstacles: (a) A vicious circle is set up; either a candidate but no funds, or funds withheld unless a candidate is first found. (b) With the best will in the world your aims and the professor's will never be identical, and this will become increasingly apparent as the work proceeds. (c) The work is just too difficult and non-routine for the average-to-bright post-graduate.

Are there any other alternatives to setting up a research laboratory truly dedicated to research into deterioration processes, within and not outside the museum organisation? I think not.

Status of the Conservator

Of course the problem behind all conservation

planning is not so much what to do but, as always, how to get the money to do it. Money means not only facilities and training. It means adequate salaries, and we are concerned not so much with the money but with the status that an adequate salary confers. Conservators are not, or should not be, after status for personal aggrandisement, but for two other reasons: first, to attract good people, and second in order that their opinions are given proper weight. After all, they're the guardians.

I have no doubt that a museum can only be run at proper efficiency if the head conservator has a rank next below that of the Director. This has nothing to do with the ambitions of the profession. It is the only way of ensuring that the lines of communication on matters of conservation go straight to the Director. That is what is necessary.

Though in Europe and America since the war there have been a few modest successes in conservation, mixed up with a great deal of fumbling around, Australia now has a rare opportunity to get its organisation productive from the start, and in so doing to teach the next generation of the world's conservators how things really should be done.

1 Soon after giving this talk I received the first report of this Council, *Conservation of Cultural Property in the United States* (1976). Its recommendations are so succinct and relevant to the Australian situation that they are worth quoting in full:

Recommendations for National Conservation Planning

1. A nationwide cooperative effort must be made to provide expert care for the preservation of our national artistic and historic heritage.
2. A permanent national advisory council for conservation should be established for the purpose of coordinating and directing activities aimed at solving the problems described above.
3. A national institute for conservation should be established to act as the center for the interchange of ideas, techniques, and methods, for research, for gathering and disseminating information, and for technical support of materials standardization.
4. A network of regional conservation centers should be established at appropriate locations throughout the country (a) to provide conservation and some analytical services for those institutions that cannot support an adequate staff independently; (b) to help the conservators in museums, libraries, archives, and centers of historic preservation; and (c) to advise the national institute concerning the most pressing problems of examination and conservation.
5. Expanded and improved education of the persons — curators, directors, and trustees — who are ultimately responsible for the care of collections is necessary to better the present state of conservation. Increasing their awareness of the rate of deterioration and the hazards that confront the materials in their care must be given high priority.
6. At the same time that a wider recognition of the needs is being developed, the training of professional conservators must be pursued in order to create a cadre of trained personnel who can meet the increased demand for services. The shortage of trained personnel is a critical problem.
7. Extremely limited scientific support in analytical services, developmental and basic research, and quality-control testing are presently available for conservation purposes. The proposed national institute should provide services intramurally in at least some of these areas; and funding should be available to support relevant research in highly qualified laboratories extramurally.
8. Standards of practice and professional qualifications are needed and are properly the responsibility of professional conservation organizations. However, the advisory council and the national institute for conservation should encourage the development of and adherence to such standards.