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## Arts Trade Association Dinner: Speech Research (1963-1967): Article 09

Sheldon Keck

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Sheldon Keck

## TRAINING FOR ENGINEERS IN CONSERVATION

In a recent article<sup>1</sup> our colleague, Rutherford J. Gettens, very correctly observes that 'only a small portion of the riches of the past has survived. Much has been destroyed by fire, earthquakes, flood, war and rebellion. A small residue and a precious one is left, but that is threatened by the most inexorable agency of destruction of them all—time itself and slow decomposition. What disaster has spared time may eventually destroy.' Those of us who have worked in one museum for more than a quarter of a century, or who, like Ugo Procacci<sup>2</sup>, have studied photographic records of the last half century, realize the truth of Gettens' statement and are well aware, from first-hand experience, that deterioration is a slow but inevitable occurrence, continuing day in and day out in our most precious artistic possessions. We believe, however, that though only a minute number of artifacts can escape forever, deterioration can be slowed, perhaps almost stopped. But we know that few people are conscious of the speed of this deterioration, fewer are interested in doing anything about it and fewer still know what to do.

As our artistic heritage decreases with age, however, the need for deeper knowledge of how to preserve it for the future has become more urgently apparent to those of us who are active in the field.

The responsibility for the conservation of our art extends to many people. In the museum everyone from the director to the guard who patrols the gallery has the duty of protecting works of art. Not only those who work in museums, but collectors, artists, government personnel and private citizens share this responsibility. All need to be better informed about the causes and rates of deterioration, as well as what should and can be done to preserve our art. An informed public, aware of the problems involved, will support research and will appreciate the results of a well-done restoration. Artists need, more and more, to be taught the principles and practice of sound construction to avoid 'inherent vice' in their creations. Collectors and curators need information on proper environment, as well as safer methods of handling, transporting and exhibiting works in their care. They also need to know what standards govern procedures for treating or restoring works of art.

Most of us are aware that, in spite of the richly informative publications of UNESCO, ICOM, the Rome Centre, IIC and others, much more remains to be done to educate museum personnel, collectors, dealers, art packers and carriers to put into effect the principles and standards for care and preservation already clearly delineated. Dramatic and graphic propaganda\* is continuously needed until everyone involved in art is forced to realize the insidious action of 'time itself' and how persistent efforts are indispensable to counteract it.

While a programme of general education is extremely important, we recognize above all the urgent necessity for comprehensive education and practical training of the person who is entrusted with the actual preservative and restorative

operation on a work of art. On him falls the ultimate responsibility for prolonging the existence of the work. If he is ignorant or inexperienced, his failure can result in damage or total loss. Primarily it is the training of this person, sometimes called 'restorer', sometimes 'conservator', that we are considering here.

Perhaps at this point a few definitions are in order to be sure we share a common understanding, especially since terms such as 'conservator' and 'restorer' have different meanings in various languages. The term 'conservation' is a broad one and certainly not a new one as applied to art\*. It has already been defined in the Articles of Association of our organization†, but I think conservation may be more simply described as a concept including (a) 'preservation'—namely, action taken to prevent, stop or retard deterioration—and (b) 'restoration'—action taken to correct deterioration and materialize.

Preservation seeks to maintain an unchanging physical and chemical condition. It therefore stresses the scientific phase of conservation. It may involve only the continuous application of environmental controls or it may include treating the object with an additive or preservative. An apt comparison is furnished in the preservation of foods, accomplished by refrigeration, vacuum, dehydration or treatment with heat and additives which inhibit decay. One way provides a favourable environment, another produces a more stable chemical state.

Restoration is conceived as a more temporary operation, with a beginning and an end, completed when the structure has been returned, as nearly as circumstances permit, to what is considered its original physical and esthetic state. This includes rehabilitation of an already degraded structure, removal of deteriorated or later additions and compensation for losses. Restoration attempts to undo the alterations of time even to the extent of reversing chemical processes where possible. Restoration leans heavily on the critical judgement of the operator and stresses, therefore, both the esthetic and historical phases of conservation. But, if it relies entirely on esthetic criteria, the result may be, as it too often has been, a beauty treatment which neglects underlying and continuing disintegration.

The first question, perhaps the main one, which must be answered to our common satisfaction, is what kind of a position in the world of art and museums the student of conservation will occupy on completion of his education and training. Do we have a clear picture of the specific functions, professional or otherwise, for which the 'conservator' or 'restorer' who graduates from a training programme will be prepared? Is he

\* The term 'conservazione' applied to paintings appears as early as 1833 in an unpublished manuscript by Giovanni O'Kelly Edwards on the *History of the Restoration of the Pictures of Venice*, Academy of Fine Arts, Venice.

† *Articles of Association of the IIC*, London, 1950, p. 9. Conservation is defined as 'any action taken to determine the nature or properties of materials used in any kinds of cultural holdings or in their housing, handling or treatment, any action taken to understand and control the causes of deterioration and any action taken to better the condition of such holdings', and directly following is the statement that 'the word "conservator" shall be construed accordingly'.

\* Means to educate museum personnel as well as the public, for example, include exhibitions, motion pictures, demonstrations, lectures and posters concerning the care and handling of works of art.

to be just a highly skilled mechanic or will he be only a theoretician, a combination art historian and scientist, who directs technicians in a delicate operation on the complex body of a deteriorated and previously restored work of art?

Considering the variety of response to treatment that may unpredictably occur from area to area in the same work, especially in the field of painting, even after detailed examination, there seems little doubt that while the conservator must be a skilled craftsman, he must also have the initiative to act with authority on the basis of both wide practical experience and precise knowledge of materials and principles. Unless he is an expert operator himself he cannot with confidence direct the hands of others when a crisis demanding an immediate decision has occurred. As Stout<sup>3</sup> very aptly expressed it in 1950, 'The man who does the work is the man who must know what he is doing.' But what must he know, in order to know what he is doing? What must he know in order to fulfil his function as a conservator or restorer?

There is not, in my opinion, a danger that the restorer will be replaced by the art historian or scientist, or that he must protect himself from their encroachment into his domain. At the same time, Philippot<sup>4</sup> has noted that a number of forms of deterioration have been neglected or left without solution because they go beyond the competence of the restorer. The restorer then must cease to be trained only as a craftsman, artisan or artist. In order to progress technologically and to perform with esthetic judgement he must combine his craft with a knowledge of art history and an understanding of science.

If conservation includes preservation and restoration, then a 'conservator' is one who has mastered the knowledge and artistic skill needed for both of these areas of activity. A 'restorer' may be one who has mastered only the art of restoration, but since, today, an acceptable restoration includes physical rehabilitation as well, it seems essential that a well-trained restorer should also have mastered both phases of conservation. The product of today's training should qualify as an 'engineer in conservation' even though, in actuality, he is called a conservator or restorer. Primarily he must himself be able to perform the actual repair of a deteriorated work of art, because he knows its structure, understands the causes of alteration and is skilled in applying the indicated treatment. In order to complete the treatment with judgement and sensitivity, this engineer must have knowledge of art history, art technology and art criticism. Though not a scientist, he must be familiar with the scope, methods and applications of science. And though he may not be able to operate all of the specialized equipment used in examination and analysis, he must know what scientific instruments will give the particular information sought. He must be familiar with their limitations and with the significance of their results. Because his knowledge covers both art and science he will be able to act as the liaison between art historian, curator or art collector and the scientist who may make the analysis. He should be able to translate for him the findings of the scientist. In other words, in addition to his primary duties in conservation, the conservator-restorer has a secondary function\* since, in our time, the scientific examination has become an essential part of the study of works of art, not only as an aid in treatment, but to reveal evidence of condition and authenticity to the art historian.

To achieve a high standard of professional competence, therefore, the student of conservation must first be trained in his

craft. He must develop manual skill through continuous supervised practice. His eye must gain experience and his mind learn to interpret what the eye sees. Skills of this kind can be learned, but not taught, though guidance is essential in the process. Added to craftsmanship he must acquire a profound knowledge of materials, of environmental agents of deterioration and of the histories of art and technology. Involved in these subjects are principles of chemistry, physics, mechanics, history and art criticism. Where can he receive all this education? Who can teach him? And how long will it take him to become professionally trained? The questions of precisely what curriculum and how much time will produce a conservator remain open. It may take considerable experiment before a satisfactory working result is formulated. To gain the advantages of wide knowledge and experience so very important to the conservator requires a long time, but this can be shortened with teaching and guidance by experienced and communicative instructors.

Philippot<sup>5</sup> has concluded that instruction takes place either in small restoration studios or, more systematically, in art schools or institutes for conservation. In England, at the University of London's Courtauld Institute, the study has been placed on a university level. In the United States we have followed the British pattern with the establishment in 1959-60 of a Conservation Center at the Institute of Fine Arts, New York University\*. Until then the only ways of learning the practice of conservation in the United States were through apprenticeship in small studios, self-teaching† or study in Europe. As practised in the United States, the apprenticeship system involves neither a system nor a binding contract, as it did in early times. The relationship of master to pupil follows no established tradition. It is often informal and haphazard, with no definite agreement regarding scope of curriculum, duration of training, costs or remuneration. For just these reasons, as well as for others, very few conservators in museums or in private practice have been willing to take the time or responsibility to train an apprentice. This method, together with self-training, has resulted in the widespread treatment of works of art by partially trained and inexperienced operators. It is hoped that the Center at New York University will eventually exert a potent influence in setting professional standards for enduring preservation and for ethical restoration practice in the United States.

It appears to me that training centres‡ which have emerged in

\* The Center was established through a grant of the Rockefeller Foundation, July 1959, and is housed in the Institute of Fine Arts, 1 East 78th Street, New York.

† A book on the restoration of paintings published in 1959 in the United States advertises itself as follows on the flyleaf: 'The artist who wishes to learn restoration will find this book an indispensable must. His income from a single restoration commission, which is usually easy to obtain, generally pays for the book more than ten times over.' The author proceeds in the book to explain how an artist may teach himself restoration.

‡ The Institut Royal du Patrimoine Artistique, Brussels; the Courtauld Institute, London; the Doerner Institut, Munich; the Istituto del Restauro, Rome; the Institut für Technologie der Malerei, Stuttgart; the Akademie der Bildenden Künste, Vienna; Conservation Center, Institute of Fine Arts, New York University, New York. All except the last are concerned mainly with the conservation of painting and sculpture. The programme of the New York University Center embraces broad principles governing the care of all the plastic and archaeological arts. This inclusive approach does not prevent eventual specialization which, in fact, is encouraged after the student has been introduced to the extensive variety of materials of all art forms and the problems of their preservation. Nevertheless, the aims and scope of education and training remain the same for all.

\* Murray Pease of the Metropolitan Museum of Art presented this aspect of the conservator's role at a lecture entitled 'The conservator and the museum curator' at New York University, April 14, 1961.

art schools, conservation institutes and universities since the original recommendations in *Mousseion* in 1927<sup>6</sup> are probably better than any other way, methods and facilities for the broad enough specialized training modern conservation requires. Each of the three different types has advantages and disadvantages, but all, by their very nature, can more easily and more methodically expose the student to learned specialists in different fields, to various points of view about procedures and philosophy and to a broad vista of the problems to be solved than can the individual restorer in the small restoration studio. Most of the centres pursuing a planned and published curriculum allow three to four years\* to give the student the necessary practical instruction and knowledge of art and science.

Because I feel they deserve much more penetrating study by a competent committee, I have not attempted in this paper to make any critical analyses or comparisons of current schools or training centres. For instance, I lack information on centres in Vienna, Lisbon and Barcelona, in all of which I believe teaching is done. Some others I know only from published brochures or brief visits. I would like, therefore, to direct attention to some areas which should be included in any detailed study:

1. At the Institut für Technologie der Malerei in Stuttgart, entrance requirements for students in restoration include one year of practice in a restorer's studio, plus a special aptitude test. In addition the first two semesters are considered probationary. Selection of students who have manual dexterity as well as intellectual ability, integrity, objectivity and patience is extremely important. Methods of selection cannot be too carefully formulated.

2. An analysis of the curriculum of the Istituto del Restauro, in Rome, shows that in their 3 to 4 year course about 79 per cent of the time is devoted to actual studio practice to gain skill and experience; 21 per cent is given to sciences, art history and theory of restoration. While this ratio may not be considered ideal by everyone, emphasis on the development of practical skills is essential to producing a high standard of practice after training is completed.

3. At the Doerner Institut in Munich certain advanced students are permitted to earn as they learn. Privately owned works of art are treated under supervision and students who need financial aid receive remuneration for what they do. Such a system may involve organizational, legal, ethical and practical difficulties, unless all aspects have been very carefully studied and are clearly delineated to everyone concerned. This method, however, may help the advanced student to prolong the duration of supervised study and to acquaint himself with professional practice.

4. The amount of time required to educate and train a conservator is considered to be about 3-4 years. Can a completely competent conservator be trained in this period or is an

additional period of supervised practice needed, perhaps an internship year or a conservator's apprenticeship?

5. The Doerner Institute and British Council in London have since 1956 presented a compressed two-week course on the conservation of paintings which is open to practising restorers as well as to others concerned with the preservation of paintings. In a less formal way, the Institut Royal du Patrimoine Artistique in Brussels has done similar educational work by inviting restorers from many parts of the world to spend as much time as they can in observing and practising with the staff of the institute. Refresher courses or highly specialized courses can be of great value and inspiration to older restorers who want to keep abreast of advances in the field.

6. In order to promote growth and progress, research and development of new materials and methods should be encouraged and undertaken in teaching centres as is presently done in Rome and Brussels.

7. The question of licensing remains a matter of the laws of individual countries, but should continue to be studied by educators in our field for the purposes of having as nearly as possible an international unity in requirements and standards.

The field of art conservation is composed of a small number of persons, compared, for instance, with those of medicine, law, architecture, creative art or art history: and it is an extremely specialized field. Since this is so, it seems logical that the very few educational centres now extant should cooperate in the teaching process by exchanging curricular ideas, students and teachers. Without loss of autonomy on the part of each centre, it might be possible for IIC and the Rome Centre to aid in this cooperation and to coordinate a kind of international training programme. Involved would be a thorough study of the present curriculum, teaching procedures and conservation processes in each of the present schools to make use of the strong points of each for the common benefit of all schools and students. Just as a start, centralization at the Rome Centre of information on all schools of conservation, including scope, aims, duration of courses, costs and requirements for admission, would simplify the present problem for young people seeking an education in this field. It might be feasible for IIC to have a standing committee of interested members from different countries which would work closely with the Rome Centre in studying means of education and training, set standards and suggest changes in present curricula. Through international cooperation and through cooperation, in each country, of the teaching conservators with art historians and scientists, it should be possible to produce engineers in conservation who surpass in skill and knowledge those of us who are practising today. Only through progress in our field can we save our dwindling patrimony.

#### References

\* Information on period of training, though incomplete for all centres listed in the previous footnote, is as follows:

Doerner Institut	3 years
Istituto del Restauro	3-4 years
Institut für Technologie der Malerei	6 semesters
Conservation Center, New York University	4 years

In Appendix V, pp. 27-29, of *The Conservation of English Wall-Paintings*, by the Wall-painting Committee, published by the Central Council for the Care of Churches, Aberdeen, 1959, a proposal is made for a three-year postgraduate course in the conservation of wall-paintings with possibly two additional years for advanced study.

<sup>1</sup> GETTENS, R. J., Teaching and research in art conservation, *Science*, 133 (1961) 1212-1216.

<sup>2</sup> PROCACCI, U., Fresco crisis, *Connoisseur*, 142 (1958) 154-158.

<sup>3</sup> STOUT, G. L., The viewpoint of the conservator, *Alumni*, 19 (1950) 283.

<sup>4</sup> PHILIPPOT, P., Réflexions sur le problème de la formation des restaurateurs de peintures et de sculptures, *Stud. Conservation*, 5 (1960) 61-69.

<sup>5</sup> PHILIPPOT, P., reference 4, pp. 65-66.

<sup>6</sup> EIGENBERGER, R. et al., Pour une éducation professionnelle des restaurateurs d'oeuvres d'art, *Mousseion*, 19 (1932) 83-85.