
CONFERENCE REVIEW

by Andrea Chevalier

Surface Cleaning— Material and Methods

The third annual conference of the Verband der Restauratoren (VDR, Association of Conservators) took as its topic “Surface Cleaning.” It was held in Dueseldorf, Germany from Sept. 29-Oct. 4, 2003 and was sponsored by the museum kunst palast. Most of the over 450 participants were conservators but some conservation scientists and art historians attended. Lectures covered a broad range of conservation—paintings, decorative art, textiles, archaeological and ethnographic objects, murals, furniture, leather, frescoes, lacquer, outdoor sculpture, and architectural conservation.

As the first speaker, Dr. Ernst van de Wetering gave a very erudite and witty talk on how a viewer perceives images/surfaces and how artists as well as conservators manipulate these perceptions. His review of certain philosophical theories of vision served as a fitting leitmotif for the conference.

Christian Scheidemann continued some of the same topics as applied to modern and contemporary art. Dirt is frequently seen as a patina layer desired by the artist or even purposely applied during the creation of a piece. He showed numerous examples of treatments which involved considerations of the preservation or removal of such layers.

Paolo Cremonesi, chemist and conservator, reviewed resin soaps, solvent gels, buffered cleaning solutions, and detergent solutions used in Italy to remove surface dirt, soot, and consolidant residues.

A conservator from the host institution, Gunnar Heydenreich, recounted the massive cleaning effort needed after a fire in 1993 which spread soot throughout the galleries, contaminating over 760 artworks. Erasers, microfiber and leather dust cloths, triammonium citrate solutions, solvent gels, poultices, sponges, and adhesive tape were used to remove soot in a four year project.

Tiarna Doherty and Chris Stavroudis introduced the Modular Cleaning Program, a database which assists in formulating water-based cleaning systems.

The speakers used the database to demonstrate the numerous variables which can be easily changed to arrive at an appropriate cleaning solution. The database can be accessed by registering with Mr. Stavroudis, and it will clearly become a very useful tool for the conservator. (See annual meeting abstract, page 18.)

The next speaker, Tanja Roskar Reed, presented some objectives for examining and treating ethnographic objects. Surface residues on ethnographic artifacts may relate to the historical or anthropological use of the object. The speaker demonstrated a flow chart which she uses on her examinations and which assists her in developing treatments.

Jorun Ruppel gave a review of methods for cleaning plaster casts and her results when she used various techniques on test panels. She included the newest method using lasers to remove surface grime. This seemed promising but requires further testing before becoming a standard cleaning method.

Hans Portsteffen succinctly discussed definitions of surface dirt and surface residues and how conservators determine what to remove. He summarised cleaning methods for numerous materials and preventive measures to minimise deposition of surface grime. As a continuation of this topic, Ulrich Winkelmann focused on dust and particulates—characteristics, deposition mechanisms, classification, and preventive measures.

Clemens von Schoeler discussed cleaning of 18th-c. wood paneling, some with partial gilding, a console table with original surface coatings, and an 18th-c. wood floor. Treatments were relatively straightforward and ranged from surface cleaning with water to using resin soaps, solvent gels, or enzymes to reduce coatings or remove stains.

A textile conservator, Cornelia Hofmann, presented a 16 year project to clean textiles woven of feathers. The collection, manufactured in 1720 in London, consists of a bedspread, wall hangings, and chair coverings. In addition, the carved wood canopy and bed are also covered with feathers. Water with surfactants was used locally or in a bath to remove accumulated soil and residues of earlier

consolidants. The conservators perfected a technique to dry the feathers with cold air to prevent clumping.

Dirk Bockmuehl presented his tests of numerous cleaning materials on leather. He discussed whether the type of tanning process used on the samples influenced microbial activity after cleaning.

The cleaning of an exterior limestone relief at the Alte Nationalgalerie in Berlin was the topic of Andreas Rentmeister’s talk. The stone surface had accumulated a heavy soil layer and a build-up of gypsum crusts which obscured much of the details of the carving. Ammonium carbonate poultices were used for the cleaning. Steam and mechanical action were used to clear the poultices. Several weeks after the first section had been cleaned, uniform brown discolorations appeared. These were extensively tested and found to be caused by iron inclusions in the limestone. A second proprietary poultice was successfully used to remove these stains or convert the Fe+2 to colorless Fe+3.

Eddy de Witte presented the Arte Mundit poultice method to clean interior stone surfaces. This stabilised aqueous dispersion of natural latex is sprayed or brushed on to a surface and peeled off when it has formed an elastic film. Various additives can be used to treat specific types of surface accumulations (stains, soot, etc.). He presented results of tests on mock-ups and discussed the pros and cons of the poultices.

Jane Rutherford described the cleaning of four unusually large tuchlein paintings using mechanical methods to remove glue layers, overpaint, dirt, wallpaper residues, and tidelines. Mini-drills with a variety of tips proved extremely useful.

Treatment of a large Communist party mural in New Zealand was the topic of Agyro-Stefania Chiliadaki’s talk. The original materials—poster paints on fiberboard—were very fragile, stained, and dirty. After consolidation with methyl cellulose, surface soil was removed by vacuuming or with erasers. Tidelines were removed or reduced by applying moisture through several layers of tissue.

Anne-Katrin Laessig described her conservation thesis work on soot—definition, effects on surfaces, methods of removal. Silke Tham presented the topic of her conservation thesis—the effects of ammonia on oil paint films. Artificially aged oil paint test panels were treated with ammonia solutions of differing pH. Chemical alterations were observed in the medium as well as in the pigments themselves.

The characteristics of the surfactant Surfynol 61 and its effect on various test panels of paints and varnishes were discussed by Kerstin Muerer.

Hans-Christian Leitner presented issues relevant to treatment of wall paintings (interior and exterior) and decorative architectural paint.

Aqueous cleaning of photo-degraded Oriental lacquer was the topic of Nanke Schellmann's lecture. Results from a number of samples and aqueous solutions suggest that the gloss of lacquer is dependent on the pH of the cleaning solution. Aged lacquer is acidic and solutions with a pH higher than this surface cause blanching. Solutions with a slightly lower pH leave glossy, intact surfaces.

Bronwyn Ormsby presented a collaborative project which tested numerous cleaning systems (dry, aqueous, solvent) on samples of acrylic emulsion films. A variety of analytical methods were used to evaluate the acrylic surfaces after cleaning.

Removal of non-original linseed oil coatings on 18th-c. marquetry panels from choir stalls, altars, and organ paneling was the topic of Katharina Walch-von Miller's talk. These thick uneven coatings covered original toned varnishes, and Ms. Walch discussed their removal with deoxycholic acid resin in one case and solvent gels in another. In a related talk, Johann Koller at the Doerner-Institut presented his analysis of linseed oil coatings. He described methods of preparation from the Middle Ages to the 19th century and presented the results of chemical analysis of aged linseed oil and stand oil samples and reviewed the degradation mechanisms of both.

Postprints of the papers are in preparation.