POLY(VINYL ACETATE) AND BORAX CROSS-LINKED GELS: A NOVEL SYSTEM FOR THE CLEANING OF ACRYLIC SURFACES

SNAP-SHOT DAY 1 WEDNESDAY, JUNE 9, 14:00 - 15:00

LORA ANGELOVA, RICHARD G. WEISS Georgetown University, Washington, USA and
BARBARA H. BERRIE The National Gallery of Art, Washington, USA

A novel gel system for the cleaning of painted surfaces has been developed from partially hydrolyzed poly[vinyl acetate]s and borax. A rigorous scientific approach to the study of the gels with a consideration of the final conservation applications of the system is underway. Through the use of fluorescence, we have demonstrated that the gels leave no detectable deposit on an acrylic test panel. Fluorescence studies will also be used to characterize the depth and rate of solvent diffusion from the gels. Through the use of spectrometry, the contents of the gels after exposure to a test surface will also be studied to assess what components are being removed from the varnish and paint layers. The gels show great potential for the removal of dirt and unwanted layers from sensitive and delicate surfaces.

GARGOYLE BY TONY OURSLER: A CASE OF MATERIAL AND IMMATERIAL CONSERVATION

ALESSANDRA BARBUTO MAXXI Museum, Rome, Italy

The work, installed for the first time in 2007 after the acquisition by MAXXI museum, is a contemporary interpretation of 'gargoyle', the terminal part of the gutter used like rain-water drainage system. The Gargoyle made by Oursler takes its shape from the medieval ones: between the jaws of the dragon made of iron and fragments of mirror, a small television projects a video in which two players pronounce confused words about the evils of contemporary society. The critical issues identified during this first exposure should be taken in consideration in future exhibitions and concern both the material and immaterial aspects of the work. The loss and the detachment of some mirror's fragments and the fall and the scratch of certain portions of the varnish layer are some of the material problems concerning the sculptural aspect of the work. Immaterial problems concerning the display of the images were created by the obsolescence of the electronic equipment (the video recorder, the television set, one 1986 model, whose monitor is subject to a rapid warming) and by the fragility of the VHS, now obsolete support. The artist did not express his point of view about the different possibilities of conservation and installation of this work, leaving the museum responsible for applying its theoretical and practical guidelines.

CONSERVATION AND DOCUMENTATION OF NEW MEDIA ART. ITALIAN THEORY AND INTERNATIONAL STRATEGIES

LAURA BARRECA Universita' degli Studi della Tuscia, Viterbo, Italy

Today the primary duty of museums is preserving, displaying and documenting and the artwork in its physical appearance, but also the artist's intent, that in contemporary art practices means to understand the specific nature of the work through its historical and aesthetic significance. Among others, the relationship between the historical instance and the aesthetical instance is one the most interesting principle that Cesare Brandi has stressed in his *Theory of Restoration* (1963). Although the theory refers primarily to 'traditional' art, I am convinced that some of those principles remain applicable to the preservation of contemporary art, or at least, they could be an interesting starting point for the definition of the process of conservation strategies. I will confront some of those concepts with some of the problems facing the conservation of new media art (material-structure and material-appearance in software art and digital art). We recognize today the necessity to connect the Italian approach with the international strategies on conservation, developed in the last 15 years. In Italy, although an extensive knowledge on the restoration and conservation of traditional art, we have to say that due to the limited participation of public institutions within the international debate it has been not a significant effort into the conservation and preservation of new media art.

TECHNICAL GUIDE FOR CONSERVATION OF KINETIC ART

SNAP-SHOT DAY 1 WEDNESDAY, JUNE 9, 14:00 - 15:00

OLIVIER BÉRINGUER freelance conservator, Paris, France

Confronted with specific problems that raises most of the conservation projects concerning kinetic artwork, different tools were developed like decision-making or documentation models to consider these conservation treatments. On the other hand, there is, at least, a lack of accessibility, to a common methodology of intervention. In addition, there are today many isolated suitable solutions answering these very specific technical problems and ensure a 'better' material and conceptual integrity of these artworks. Conservators have to propose practical and suitable solutions to perpetuate the concept or/and the materiality of an artwork. The knowledge needed to consider these projects is very important and spreads on many fields of competence. So, conservators need assistance. As a result, we are developing a technical guide of intervention. Its aim is to direct conservators in their interventions or to guide them when they need the assistance of a technician. This guide proposes a typology of alteration, suitable technical solutions and all the linked sources. This tool in progress comes in the form of an interactive online database.

‘MONA BY THE NUMBERS’ BY H. PHILIP PETERSON, CONTROL DATA CORPORATION, 23 OCTOBER 1965.

R.S. CHIGGIATO, C. ROSTENBACH and M. GIUBILATO Institute for the Protection of Graphic and Visual Arts / ITOG, Venice, Italy

Mona by the Numbers by P. Peterson (1965) is an artwork which appears obtained through the printout of a computer algorithm. The FTIR-ATR analysis reveals that the paper surface has been coated with an acrylic polymer. The texture of the print is composed by spaced numerals that yield the final image. Today the artwork is quite completely faded. We show here the result of a digital restoration performed through the elaboration of several photographic images. The final result shows a coarse image overprinted on a regular grid of numbers. However, the same sequence of digits occurs below different gray levels of the image. This finding suggests that the artwork was not obtained in an one-step way with a printer and further studies are in progress to identify the technology utilised by the author. The fading of the artwork is due to the degradation of the ink, possibly a diazo compound, making it difficult (if not impossible) the recover of the image through a chemical treatment of the original print.

BREAKING MEANINGS AND SUSTAINING DISAGREEMENTS

Developing a framework for recording divergent specialist opinions on the care and display of installation artworks

LAWRENCE CHIN, CLAIRE LIM The Conservation Studio, Singapore EUNICE NG, GUO JIEYING LASALLE College of the Arts, Singapore

Artworks, besides conveying visual meanings, also carry a multitude of other meanings – as material artefacts, artistic intentions, curatorial studies, physical assets and cultural markers, among others. The multi-faceted perception of an artwork will invariably give rise to conflicting approaches in terms of its preservation. The quality and value of any future course of preservation or conservation must depend on the knowledge of such disparity of opinions so that a fully-informed decision can be taken. Recording of potentially conflicting information could be achieved on a matrix grid with colour-coding to highlight differences amongst specialists and respondents on various issues.

EXTENDING THE LIFE OF A KINETIC WORK OF ART

ANNA BARBARA CISTERNINO Galleria Nazionale d'arte Moderna e Contemporanea / GNAM, Rome, Italy

Grazia Varisco's *Schema luminoso variabile n. 2* (1962) kinetic work of art consists of a wooden box which contains two coloured screens with black stripes. The external screen, the cover, is a blue Plexiglas square which in the middle has a circle made of black adhesive paper stripes. Behind it, there is a reticulated Plexiglas circle, that rotates because of an electric engine fixed at the bottom of the box. The movement of the Plexiglas circle makes the reticulate circles cross and creates a kaleidoscopic effect of changing images. This effect is projected by a circular neon lamp that lights up the two screens from the back. The stripes of adhesive paper became unstuck in several points because of the heat generated inside by the power unit of the neon light and by the engine. Because they touched each other during the rotation, they stuck together twisting and tearing each other. Once we restored it from the esthetical point of view, we managed to find some devices to prevent the same damage coming up again. These devices were to limit the overheating caused by the inner mechanisms of the box. This intervention produced an increase in its absolute performance levels and therefore the extension of its life prospects.

DEGRADATION OF FLUORESCENT INK COLOURS FOUND IN SCREEN PRINTING ARTWORKS

ALAIN COLOMBINI and CLAIRE VALAGEAS Centre Interrégional de Conservation et Restauration du Patrimoine, Marseille, France

Alteration mechanisms of fluorescent ink colours, found in cultural heritage, are significant from a pure conservation point of view and yet, these have not been investigated up until now. Two different types of recent screen prints have undergone UV and weathering artificial ageing test. The fluorescent inks employed are either water based or solvent based, and are mainly designed for posters and cardboard papers. Even though, the use of solvent based paint is strictly restricted for health and safety reasons, they are found in artworks. The characterization of the chemical changes occurring during the ageing process is assessed with the help of FTIR. Severe ageing conditions were purposely simulated, as this relates to the stressful environment surrounding the works of art, in particular poster exhibited in public places. This study shows that screen prints are particularly prone to UV degradation while some weathering accelerated ageing conditions did not show any significant transformation. Alterations are irreversible resulting to an overall discolouration, which is probably due to the combined interaction with of light and oxygen. Whether or not the discolouration comes from the loss of fluorescence rather than the degradation of pigment/medium, or a combination of both, is still to be assessed.

FINE-TUNING ATMOSPHERIC PLASMA FOR CONSERVATION TREATMENTS ON PLASTICS IN CONTEMPORARY ART

SNAP-SHOT DAY 1 WEDNESDAY, JUNE 9, 14:00 - 15:00

ANNA COMIOTTO Bern University of Applied Sciences, Bern University of the Arts, Switzerland

This poster delivers insight into the development of a miniaturised atmospheric plasma-pen, specially designed for small-scale improvements of the bondability and coatability of non-polar plastics in contemporary art. The plasma-pen, designed and tested since early 2006, is fine-tuned with regard to an effective, reproducible and low-temperature pre-treatment of heat sensitive plastics in contemporary art. The pen's effectiveness for enhancing the bondability of poly(ethylene) and poly(propylene) has been successfully proved by tensile shear testing adhesive joints. Long-term tests, performed two and a half years after plasma pre-treatment and bonding, indicate that the adhesion improvements are long lasting. Furthermore, through plasma pre-treatment the application of mechanically resilient water-based and water-removable gouache retouchings on poly(ethylene), poly(propylene) and poly(styrene) became feasible, as quantified by pull-off tests. The plasma pre-treatment hereby opens new pathways to gain long-lasting, but reversible bondings and retouchings on hydrophobic plastic surfaces, helping to prolong the expected lifespan of conservation measures on non polar plastics in contemporary art. As analysed by infrared spectroscopy (ATR-IR), the leading chemical mechanism during plasma pre-treatment is surface oxidation. From the conservator's point of view it seems necessary to clarify, whether this oxidation accelerates the further autooxidative aging of the pre-treated surfaces and surrounding materials. First results of long-term monitoring of the oxidative stability of plasma pre-treated polymers, using chemiluminescence-analysis, will be presented.

PENETRÁVEL MAGIC SQUARE Nº5, DE LUXE:

Challenges involved in conservation of works of contemporary art

AMANDA CORDEIRO, CONCEIÇÃO LINDA DE FRANÇA, KLEUMANERY DE MELO BARBOZA and LUIZ ANTÔNIO CRUZ SOUZA School of Fine Arts / Universidade Feral de Minas Gerais - UFMG, Santa Luzia, Brazil

As with other types of works on traditional media, preserve and restore a contemporary work involves knowing and understanding the materials that compose it, as well as its context. More than undress preconceived definitions of standards that define and distinguish what is a work of art and what is not, think about contemporary art in the field of conservation and restoration means to turn flexible the rules and methodologies previously used in the study of traditional works of art; especially with regard to the attempt of understanding the techniques and materials employed in it. Considering this issue through a partnership between the School of Fine Arts at the Federal University

of Minas Gerais and Instituto Cultural Inhotim - Brazil, this paper aims to present the complexities and challenges involved in keeping and maintaining a contemporary work of art, scoring a study methodology as an initial procedure for future interventions, taking as case study *Penetrável Magic Square No. 5, De Luxe* (1978), Hélio Oiticica, belongs to the collection of that institution.

A CASE STUDY: CONSOLIDATION & RETOUCHING OF ALKYD PAINT ON AN INFLATABLE PVC-BAG FROM 1967

SNAP-SHOT DAY 1 WEDNESDAY, JUNE 9, 14:00 - 15:00

ELKE CWIERTNIA Kunsthaus, Zürich, Switzerland BARBARA SOMMERMEYER Hamburger Kunsthalle, Germany and U. HALLER

The poster describes the conservation and restoration of the inflatable multiple Deutsche Werte (aufblasbar) from 1967 by KP Brehmer. As an artist of the Capitalist Realism movement, working in Hamburg and Berlin during the 1960s and 70s, he is mainly known for socio-critical themes and for illustrating communication processes. The object is composed of two PVC air chambers, featuring linocut prints with alkyd paint. Leakage, losses, and flaking paint along with surface grime endangered the object's stability and integrity. Research was therefore undertaken to determine an appropriate adhesive for consolidation and retouching. The consolidant Degalan® N742 was tested to treat the areas of minute flaking paint found on the inside and the outside of the chambers. New techniques were developed for its application. Inside, where access was only possible through a very narrow valve, consolidation was achieved by means of a flexible hose steered with magnets from the exterior. On the outside, a Rotring®-pen helped to implement the treatment. Retouching was conducted using a layering-system of primer (Degalan N®742) and paint (Aquazol® 200 and spinel black). The devised application techniques and chosen materials provide new options for conserving inflatable objects made of PVC and alkyd paint.

CONTEMPORARY ART AND THE OBSOLESCENCE OF TECHNOLOGY

CÉCILE DAZORD, CLOTILDE BOUST C2RMF, Paris, France and MATTHIEU DUBAIL

Since 2006, the Contemporary Art Group in the Research Department of the French Museum Conservation and Research Center (C2RMF - Ministry of Culture) has been working on the phenomena of technological obsolescence. The group's purpose is to study the impact of technological advance on contemporary art and, more specifically, on its preservation. Our first and main research project deals with time-based media and film digitization. Faced with the combined obsolescence of media, devices and formats, heads of collections frequently carry out the digitization of their repositories. Because art works are unique and non-standard objects, the methods of mass digitization used in other

domains (e.g., television and library archives) cannot be directly imported into the field of art. By focusing on the digitization of avant-garde and experimental cinema, we aim to evaluate the visual modifications that necessarily occur due to changes in technology. Hence, we worked with one of the main French repositories of art film (Light Cone) and collaborated with a postproduction company (Teletota) in order to analyze digitization based on the colorimetric characterization of the devices.

EXAMINATION OF CLEANED ACRYLIC PAINT SURFACES BY 3D-MEASUREMENT TECHNOLOGY

PAUL-BERNHARD EIPPER conservator, Graz, Austria

Summary Due to the complex mixtures of acrylic paints, grime and dirt are greater hazards to those then to others paint-surfaces. To remove these impurities, paintings are usually cleaned dry or wet with surfactants in aqueous medium. Modern acrylic paints produced by Schoenfeld Lukas and Hermann Schmincke, Düsseldorf were studied. To examine the effects of different cleaning methods, acrylic paints were treated dry with a latex sponge and wet with tap-, demineralised-, and magnetised water; saliva; methyl- and carboxymethyl-cellulose; Marlipal 1618/25; and Sodium dodecyl sufate. The treated paint surfaces were examined by 3D-measuring technology, which provides fast measurements during the cleaning process and produces measurable images. If ilmpurities on acrylic paints are removed dry, or wet with surfactants in aqueous media, it is very difficult to show the changes of the treated surface, even if abrasions of the surface have taken place. Particles of dirt were absorbed in the paint film. Wet cleaning methods cause swelling of the paint surface. After drying the not visible changed surface contains absorbed particles and appeares quite similar to its previous state. Sometimes dry methods are not sufficient to clean surfaces completely. Therefore modifications of aqueous cleaning methods (such as: using mild non-ionic surfactants, thickening of the solutions used, reduction of contact humidity, and increasing temperature and pH) are possible but should be avoided. Due to the properties of the acrylic paints it can be concluded that 3D-exminations of oilpaints show more differences in the surfaces.

THE ANATOMY OF A MONSTER

Investigating the manufacture of a polyurethane sculpture by Lee Bul

TRUDE ELLINGSEN National Gallery of Victoria, Melbourne, Australia

In 2004, the National Gallery of Victoria acquired several major contemporary works for the exhibition *World Rush*. Amongst the axquisitions was *Untitled* one of Korea's most prominent contemporary artists, Lee Bul. *Untitled* (2003) is composed of 75 parts which when installed are suspended in mid-air. The raw materials specified by the artist were polyurethane, aluminium wire and enamel which promted further investigation into the structural integrity of the object. This was achieved using X-radiography. The x-ray images

showed a complex internal metal armature supporting the polyurethane foam body. This was deemed strong enough to support the weight of the object; but the compatibility of the materials caused concern. The strong hard metal armature is clad with soft foam which is painted in rigid thick car paint, giving a work that was showing signs of wear even when first installed.The results of the analysis and further reserach into the manufacture of the sculpture will be outlined. Additionally, some of the conservation issues faced will be discussed.

THE CLEANING OF CONTEMPORARY WORKS OF ART: AN AFM STUDY

SNAP-SHOT DAY 1 WEDNESDAY, JUNE 9, 14:00 - 15:00

J.L. FERREIRA, A.I. PEREIRA, A.M. RAMOS, M.J. MELO Universidade Nova de Lisboa & REQUIMTE, CQFB, Lissabon, Portugal M.H. SÁ CEFITEC Universidade Nova de Lisboa, , Lissabon, Portugal P. EATON REQUIMTE, Lissabon, Portugal S. SHÄFFER Universidade Nova de Lisboa, Lissabon, Portugal and T. LEARNER Getty Conservation Institute, Los Angeles, USA

In the present work, the surface effects and efficiency of cleaning treatments on aged acrylic glass (PMMA) and vinyl emulsion (PVAc) paints are evaluated by Atomic Force Microscopy (AFM). The Portuguese artist Lourdes Castro worked with acrylic glass and applied commercial cleaning and polishing products as a final treatment on her works. Joaquim Rodrigo, Ângelo de Sousa and Julião Sarmento, used vinyl paints. Affinity for dirt pick-up leads to an eventual necessity for cleaning. The commercial products used by the artist on the acrylic glasses were tested. For the vinyl paints, traditional cleaning methods were selected: water, water and surfactant and soft rubber; white-spirit was also tested. Samples of transparent acrylic glass, as well as PVAc aqueous emulsion paints, were aged under a xenon-arc lamp; treatments were applied on the aged samples and accessed at the nanoscale. Results on PVAc paint films demonstrate that smaller scan areas are the most useful due to the heterogeneous nature of the paint surface and technical difficulties when scanning bigger features deposited on the samples. On the contrary, the homogeneous surface of PMMA sheets leads to prolific results with larger scans. With these different scales it was possible to evaluate the usefulness of AFM for assessing the effectiveness of cleaning treatments on acrylic glass and the harmfulness of the tested procedures on PVAc latex.

CONTEMPORARY UNCONVENTIONAL PAINTINGS: A SHIFT IN THE APPROACH TO LOSS COMPENSATION

L. FUSTER Universidad Politécnica de Valencia, Spain A. MURRAY Queen's University, Kingston, Canada M. SÁNCHEZ, J TEIXEIRA and D.J. YUSÁ Universidad Politécnica de Valencia, Spain

This research is part of a larger project that deals with the conceptual and technical issues regarding the treatment of missing areas in modern and contemporary paintings. More specifically this poster deals with the appropriateness for loss compensation in unconventional contemporary paintings. Most of the issues posed by loss compensation in modern and contemporary paintings deal mainly with how the missing areas interfere with the conception of the work of art; how the areas determine the criteria to follow; and what role the artist plays in the intervention process. Relevant conceptual questions should also include how invasive an intervention should be when degradation is implicit in the artist's intention and how much differentiation of the added materials should be acceptable. Technical issues mainly deal with the compatibility and stability of the materials added by conservators. The application of traditional intervention protocols without interfering with the work of art itself (its ideological background as well as its creative and artistic characteristics) usually poses concerns. Apart from the inherent aesthetic and descriptive characteristics of traditional art, modern and contemporary works incorporate additional dimensions that go beyond formal, technical, and chromatic aspects: the artist's intention, the functionality and readability of the work of art, the artist's intellectual rights as creator of an object as distinguished from other objects by its originality and communicative aspects, the interference of conservators with the intellectual property laws, the interests of owners and curators, the power and pressure of the art market, and the many other aspects that make these works of art 'live' as individual objects. These issues significantly determine the decision-making process in the conservation treatment.

BILL SEAMAN'S INTERACTIVE VIDEO INSTALLATION 'EXCHANGE FIELDS', 2000

SNAP-SHOT DAY 1 WEDNESDAY, JUNE 9, 14:00 - 15:00

JULIA GIEBELER FH Köln, Germany and TIZIANA CAIANIELLO ZERO Foundation, Cologne, Germany

The authentic preservation of interactive video installations and their appropriate reinstallation is challenging because of the often upcoming conflict between the preservation of the material equipment and the preservation of the functionality of the installation. This conflict is exemplarily discussed in the case study about the interactive video installation *Exchange Fields* by Bill Seaman which is in possession of the Museum am Ostwall in Dortmund. In order to develop an appropriate conservation concept for the installation, it

was essential to find out the work-defining properties that in this case were linked to the interactivity of the work. A test reinstallation of *Exchange Fields* in the Museum am Ostwall in August 2009 enabled the determination of the installation specifications and the minimum requirements for the exhibition space. Additionally, the technical parameters which influence the effect of the whole installation were documented. A model for the documentation of the interactive properties of installations (number of users, sensory mode, communication possibilities, selection and modification possibilities of the user, reaction possibilities of the system, etc.) was drafted and tested on the example of *Exchange Fields*. The case study of the inter media art institute imai Düsseldorf) was carried out in an interdisciplinary cooperation between the art historian Tiziana Caianiello (Gerda Henkel-Research Fellow at the imai), who chose the installation as part of her research project *Materializations of the Fugitive*, and the conservator Julia Giebeler who wrote her diploma thesis about interactive video installations at the Cologne University of Applied Sciences (supervisors: Prof. Dr. Gunnar Heydenreich, CICS, Cologne, and Antje Janssen, chief conservator at Kunstmuseum Bonn).

TOWARDS A CONSERVATION STRATEGY OF EPHEMERAL ART. A CASE STUDY OF JOSEPH BEUYS

SNAP-SHOT DAY 1 WEDNESDAY, JUNE 9, 14:00 - 15:00

JULIE GILMAN University College Ghent, Belgium

Research into the conservation and presentation of ephemeral art with foods is inter-disciplinary, qualitative and case-based and aims to resolve issues relating to the conservation of these type of artworks. Aspects of authenticity, originality and integrity are not only related to the materiality of the object but have to be placed in a broader cultural context to evaluate what is meaningful and what needs to be conserved. The meaning of ephemeral artworks is mostly situated in between material en conceptual authenticity and this may have consequences on the kind of preservation technology that is to be applied. The aim of this poster is to present a theoretical scheme developed to elaborate on conservation issues of artworks that contain foodstuffs, this through the case of *Butter and Beeswax* by Joseph Beuys.

DANGEROUS CURVES AHEAD: THE TECHNICAL STUDY AND CONSERVATION OF ANTHONY POON'S PAINTINGS IN SINGAPORE

SNAP-SHOT DAY 1 WEDNESDAY, JUNE 9, 14:00 - 15:00

SELINA HALIM and MAR GOMEZ LOBON Heritage Conservation Centre, Singapore

Singaporean artist Anthony Poon (1945-2006) is known for his brightly coloured acrylic abstract paintings on canvas, which evolved into the creation of the 'wave series'. The construction method of these unusual three-dimensional paintings was the late artist's

trademark which remained unknown during his lifetime career. During the preparation for a retrospective exhibition of Anthony Poon in 2009 at the Singapore Art Museum, conservators at the Heritage Conservation Centre embarked on a research project to study the artist' materials and techniques. Documentary research included interviewing the late artist's family, his local art materials supplier and correspondence with Liquitex®, the main acrylic paint brand used by the artist. The conservation treatment of 37 paintings uncovered the structure of the artworks, the evolution in his methodical use of materials, the link between the systematic naming of his paintings and Liquitex paints color codes; and the most suitable materials for conserving them. Conservation solutions included the innovative design of handling /storage devices for the artworks. The structural treatment of one painting involved the repair of a large tear on its curved canvas. This allowed the observation, for the first time, of the construction method of his three-dimensional 'wave' paintings. The publication of the project findings in the exhibition catalogue was a major contribution to the area of technical art history in Singapore. [more infowww.hcc.gov.sg]

ARTISTS' INTERVIEWS AND THE PURSUIT OF MEANING

REBECCA GORDON and DR. ERMA HERMENS University of Glasgow, United Kingdom

Interviewing artists about their materials and techniques has become an important tool in the contemporary-art conservator's arsenal. This research project takes a new tack by adopting the methodology of artists' interviews in order to explore the meanings of materials and the significance of the decisions artists make in relation to their creative processes and material choices. These decisions often prompt certain assumptions about how the work should be interpreted and experienced in terms of 'authenticity', and may even usher in implications for the artist's original intent and authorship. In conducting filmed in-depth interviews with Scottish artists, artists based in Scotland, or represented by a Scottish gallery or collection, these artists have been given a platform on which to explore their choices and uses of materials and the interplay of the physical and conceptual identities of their work. As a result, it is possible to gauge something of the socio-cultural stimuli that may underpin these choices. Video and audio clips from these interviews, along with written transcriptions, will be stored in a restricted-access online database as a resource for curators, conservators and invited members. The poster gives the example of work by Lucy Skaer and Karla Black: their decision-making processes in relation to colour and material choice.

FROM NEW AND IMPROVED TO OLD AND DEGRADED: THE ANALYSIS AND TREATMENT OF POP ART

SHARRA L. GROW Winterthur / University of Delaware Program in Art Conservation, Wilmington, USA

SPOONK (1964), a moisture-damaged Pop Art collage was recently gifted to the Zimmerli Art Museum at Rutgers University, New Jersey. The artist, Marion Greenstone (1925-2005), painted collages which most resemble the palette and popular imagery found in multi-canvas works that New York Pop artists including James Rosenquist used to create. In fact, the same cake batter advertisement image inspired both Greenstone, as seen in *SPOONK*, and Rosenquist in his painting Highway Trust (1977) which was created years after Greenstone's collage. Technical analysis of *SPOONK* revealed that the crumbling and discolored green paint contains emerald green and cadmium yellow pigments which, in the presence of moisture, reacted together to form black copper sulfides, disfiguring the original paint. Methods of consolidation, textured fills, and inpainting were created to accommodate the fragile, matte paint layer. Mold was present on a water-sensitive orange oil paint layer. A hypothesis for the water solubility of the oil-containing paint and a unique method for mold stain reduction using cyclomethacone were developed. Storage and exhibition guidelines were developed for the future care of *SPOONK*, including periodic colorimeter readings in order to monitor any further fading or changes in the paper elements, organic colorants, and paints in the composition.

TRANSFIGURATIONS: A COLLABORATIVE INSTALLATION WITH BRIAN JUNGEN

SNAP-SHOT DAY 1 WEDNESDAY, JUNE 9, 14:00 - 15:00

ANNE TURNER GUNNISON, SUSAN HEALD, PAUL CHAAT Smithsonian Institution, NMAI, USA and JIA-SUN TSANG Smithsonian Institution, Museum Conservation Institute, USA

In 2009, the National Museum of the American Indian (NMAI) acquired Brian Jungen's Crux (as seen from those who sleep on the surface of the earth under the night sky) [26/7253], a mobile made of plastic suitcases, and installed Strange Comfort, an exhibit of Mr. Jungen's work, which is often characterized by his use of mainstream consumer goods. Mr. Jungen (Dunne-za First Nation/Swiss-Canadian) has never shown his work at an Indian art museum and, conversely, this was NMAI's first major exhibit of a living contemporary artist. The acquisition, exhibit, and Mr. Jungen's tenure at the museum during installation provided opportunities for materials research with conservation scientists and consultation with the artist, as his work became part of the exhibit and the museum's collection. While consultations with Native community constituents are standard practice in NMAI's conservation department, consultation with a contemporary artist has a different dynamic. Conservators, exhibits staff, and curators assisted Mr. Jungen, at times suggesting methods and materials, when he wished to make changes to Crux and other

exhibition objects. Postings on the museum's blog about this project facilitated greater public access to contemporary art and the conservation issues it presents.

THE MUSIC SHOULD BE HEARD! CONSERVATION OF THE INTERACTIVE AUDIO INSTALLATION 'KELLER-DUO' BY DIETER AND BJÖRN ROTH

MARTINA HAIDVOGL Academy of Fine Arts Vienna, Austria

The poster presents a diploma thesis, that deals with the presentation and the preservation of a work of art from the 1980s, including analogue audio tape technology. The recorders and players are almost all broken due to material fatigue and the musical artwork has gone silent. Therefore, the interactive role of the recipient has been reduced to the bare minimum. Thick layers of paint applied on the players and the construction of the installation itself inhibit a simple intervention to repair the original players. The poster is focused on the discussion of two different strategies referring to the artists' intentions to preserve interactivity, while considering both the historical dimension of the artwork and the notion of reversibility of intervention. One strategy to be discussed is the addition of new hardware as the artists proposed. A new analogue cassette player, that could provide all the features given in the installation, could be placed next to the artwork. Another effective strategy might be the application of Radio Frequency Identification (RFID) technology, which may be used for emulation. Sensory and digital technology would thereby be used to replace the function of the obsolete analogue cassette technology.

'NON, NON, NON'

Conservation of an artwork by Pier Paolo Calzolari (1969/70)

ANDREAS HARTL, GERDA KALTENBRUNER and MARTINA PFENNINGER Academy of Fine Arts Vienna Institute for Conservation, Austria

The project is focused on an artwork by Italian artist Pier Paolo Calzolari. The installation combines different components as there are tobacco leaves, solid lead-tin bars and letter-shaped light tubes operated with high voltage. Main tasks of the conservation project are the research on the artistic intention and analysis of materials as well as the investigation of degradation processes. Other focal points are the examination and treatment of damaged tobacco leaves and the treatment of the high voltage light tubes. Conservation treatments were limited to an absolute minimum. Especially along the edges the tobacco leaves showed small losses, crack-patterns and delaminating of the synthetic film. To stabilize the cracks, a bridging-technique was used, delamination was treated and losses were retouched. A major problem of the light tubes is the fragility of the glass tubes. In cooperation with a specialist, two partly broken tubes will be restored and reactivated. One missing light tube will be reconstructed. These fragile components are especially susceptible to damage due to inappropriate handling or display. It was also

crucial to modify the crate: a complex system for storage and transport was designed. The detailed documentation includes a manual for handling, re-installation and maintenance during exhibition periods. Furthermore guidelines to safeguard the electrical installation were completed.

PRESERVING MEXICAN CONTEMPORARY ART

SNAP-SHOT DAY 1 WEDNESDAY, JUNE 9, 14:00 - 15:00

CLAUDIO HERNÁNDEZ Museo Universitario Arte Contemporáneo, Universidad Nacional Autónoma de México, Mexico City

Throughout the last decades due to political, social and economical changes, contemporary art experimented great development. International museums and private collectors have acquired Mexican artwork. Contrarily, it was not possible for the state to enrich the national collections. Due to political and economic instability, other historic periods and their research were privileged. UNAM as a leading institution has the biggest scientific and cultural structure in Latin America. It undertook the most ambitious cultural project in the last 30 years. Museo Universitario Arte Contemporáneo (Muac) opened in Mexico City on November 27, 2008. The museum is the latest architectural monument on a campus declared as a World Heritage Site by UNESCO (2007). Muac features state-of-the-art facilities, meeting the rigorous standards in terms of curatorial research and conservation. It protects the biggest public contemporary art collection in Mexico. The preservation of cultural heritage begins not only with an acquisition policy, but also with a commitment for its creation and study. Collaborative work between Mexican institutions is a priority for the conservation program. Its aim is to lead and encourage state and private institutions to set up diverse projects. Muac expects to be a positive reference for the preservation work in the region.

AUTHENTICITY IN INSTALLATION ART

Innovations in the interpretation of the authenticity of works of art

MONIKA JADZINSKA Academy of Fine Arts, Warsaw, Poland

Preservation of installation art involves the correct diagnosis of its identity and establishing what its authenticity consists of. This requires not only the analysis of the material, but also the ontological and axiological spheres, through an interdisciplinary approach involving the philosophy and semiotic as well as the theory and practice of conservation. The authenticity of an installation is situated in the maintenance of the unity of all the elements that form the work: the correct relationship between the intangible elements and material elements.

A proposal of a three-stage strategy is suggested in the poster:

1. Analysis of the "anatomy" of the artwork (tangible aspects). Reflection of the significance and value of material and changes in the thinking about its permanence

and preservation. Model basing on semiotic theory by Charles Peirce, with especial attention to index, symbolic and iconic signs.
2. recognizing its intangible spheres (concept, context, relativity, process, sensible elements, space and presence)
3. establishing a strategy of interpretation and conservation measures. Among these are conservation-restoration processes carried out directly on the object (including the replacement) as well as a whole range of activities going beyond the original: the creation of replicas, reconstructions or emulations.

CONSERVATION IN A FOUR-DIMENSIONAL WORLD: AUTHENTICITY AND SUBSTITUTION IN THE TREATMENT OF CONTEMPORARY ART

SNAP-SHOT DAY 1 WEDNESDAY, JUNE 9, 14:00 - 15:00

IRIS KAPELOUZOU Royal College of Art, London, United Kingdom

One of the most ethically challenging questions conservators incessantly encounter is how to ensure that artworks retain their identity or authenticity while they also change. Traditional conservation principles prohibiting removal of original material try to secure authenticity by minimizing change. The persistence conditions of some contemporary artworks however demand constant substitution, which contradicts such principles. Conservation perceives of objects as existing in three-dimensional space exhibiting change over time, change defined as gain or loss of properties. But according to Four-Dimensionalist philosophy, gain or loss of properties does not affect authenticity. Through a hypothetical puzzle concerning a Dan Flavin installation work, with the aid of Four-Dimensionalism, the poster shows that, while in traditional art-forms the life of the material exceeds that of the work, in contemporary art it is the lifespan of the artwork that exceeds that of the material. Conservation principles prohibiting substitution have been built upon the conception that the material necessarily has a longer life than the artwork, or at least the same. In contemporary art however, the successive coinciding of the work with new material constituents seems to favor authenticity. In contemporary art substitution becomes ethical; authenticity is secured not in-spite of substitution but in-light of substitution.

FROM DUMMIES AND MOCK-UPS TO WORKS OF ART

Restoring transparent unsaturated polyester works of art.

ANNA LAGANÀ Netherlands Institute for Cultural Heritage / ICN, Amsterdam

Works of art made of transparent unsaturated polyester (UP) can, due to their low impact strength, easily break as happened with two artworks made by the artist Mathilde ter Heijne in 1969 and submitted for research to ICN. An investigation into materials and methods for adhering these artworks started in 2009 at ICN and is still in progress. In this research, a conservation treatment was chosen after final testing on new and naturally aged UP dummies. It was found that in order to obtain an invisible joint, the difference between the values of the refractive indices of the adhesive and the artwork material has to be within 0.02 units. The best adhesion performance on dummies was obtained using the epoxy adhesive Fynebond. But what happens when this application is transferred from testing to conservation practice on a real object? Is the behaviour of the adhesive on the artwork the same as on dummies? Is the method applicable to a work of art with all its complexity? This poster describes the behaviour of the conservation method investigated on a broken UP artwork of the ICN study collection, serving as a 'real mock-up'.

ASSESSMENT OF POLYURETHANE FOAM DEGRADATION

A. LATTUATI-DERIEUX, S. THAO-HEU and B. LAVÉDRINE Centre de Recherche sur la Conservation des Collections, CRCC, Muséum national d'histoire naturelle, CNRS, MCC Paris, France

This work focuses on objects made of polyurethane (PU) foams which are widely present in museum collections either as part of the artefacts, or for their storage. Polyurethanes often exhibit specific conservation issues, particularly when they are in the form of foams, and many of these foams are in poor conditions. The aim was to better comprehend PU foam alteration phenomena. The impact of some environmental factors on the foam deterioration were evaluated. We will present the main results provided by complementary analytical methods on a large set of polyurethane foam samples. They were modern PU samples with different chemical compositions subjected to artificial light and thermal ageing as well as 'real' on-site samples sampled from museum artefacts, from daily life objects and collected in storage areas. In a comprehensive approach to the study of PU foam degradation, we investigated morphological changes, insoluble fractions and volatile fractions from all these artificially and naturally aged foam samples. The analytical methods employed are based on visual and optical observations (binocular and SEM), pyrolysis-gas chromatography/mass spectrometry (PY-GC/MS), non-invasive solid-phase microextraction (SPME) and infrared spectroscopy (FTIR). This research is part of the POPART project supported by the European Commission (grant agreement n° 212218).

CONSERVATION OF PLASTICS IN BRAZIL

CONCEIÇÃO LINDA DE FRANÇA, KLEUMANERY DE MELO BARBOZA and LUIZ ANTONIO CRUZ SOUZA Escola de Belas Artes, Universidade Federal de Minas Gerais, Bello Horinzonte, Brazil

One of the main problems faced by professionals in conservation and restoration in museums of modern and contemporary art is the identification of types of degradation in the works of art composed of polymeric materials as well as the monitoring of these objects and actions to intervene in them. Besides the complexity of the material, there are two other issues relating to works produced in plastic: works that were created to be reproduced without the need to preserve the object exposed, but with the need to preserve the design work, and works that are designed to be preserved, despite the brevity of the material. To assist in the process of decision making at the moment to intervene in these works, we accomplish a original research in a country where we have identified some of the major collections of works of plastic in Brazil, including the collection Gilberto Chateaubriand, cataloged the types of degradation that they had to create a database with this information, and as case studies, we report a few interventions in these institutions in compliance with the criteria used.

SUBSTANCES USED LIKE COVER COATINGS IN CONTEMPORARY ART WORKS

AINARA ZORNOZA INDART, ROSARIO LLAMAS PACHECO and DOLORES YUSÁ MARCO Instituto de Restauración del Patrimonio, Universidad Politécnica de Valencia, Spain

In this work the use of cover coatings in contemporary art is studied identifying and quantifying the use materials by an opinion poll realized to 40 Spanish relevant contemporary artists. From this research we conclude that the 75% of the interviewed artist usually use cover coats for protective and aesthetic reasons being varnishes the most used materials. Less used are acrylic or vinilic latex and mineral and animal waxes. Between varnishes, matt and gloss are the most applied, all compounds of acrylic resins, organic solvents, turpentine essence and different additives. The artists apply these cover coatings with precise artistic intention, choosing accurately the finish of their works turning it fundamental and having a great influence in the message communication. One of the major goals of the interviewed artist is the conservation of their works. Then, the alteration of the mechanical and optical properties of these cover coats due to internal or external factors, will suppose for the most of the interviewed artist the interruption of the correct interpretation of their works. This will be one of the major problems for the conservation of contemporary art works. The future intervention of these cover coats is determined for the reversibility problems of the constitutive materials, the problematic of intervention without harming pictorial layers and the difficulty of obtaining the finish given in origin by the artist to return the correct interpretation and the artistic intention of the art works.

DIGITALCONSERVATION@AKTIVEARCHIVE

Preserving computer and web-based art

SNAP-SHOT DAY 1 WEDNESDAY, JUNE 9, 14:00 - 15:00

TABEA LURK, JÜRGEN ENGE Bern University of the Arts, Switserland

In the conservation of computer- and web-based art we are confronted with the susceptibility of dynamic media objects and artistic applications. Their dependency to software or system environments encourages especially two strategies: migration, as based on long-term archiving and legitimated for maintaining the artworks functionality, and encapsulation, as passed in a wider sense on the preservation of substance.
In order to demonstrate our methodology at DigitalPreservation@AktiveArchive two recently developed tools are presented: an Interactive CD-Library for displaying participatory art on vintage CD-Roms and the so called Netart Router, a tool for analyzing, documenting, preserving and displaying internet-based artworks and dynamic web-content. Both tools examine the development of bridging technologies between art, technology, computer sciences, media-archeology, conservation sciences and preservation ethics. They are based on concepts of encapsulation and try to expand strategies of long-term archiving to the specific requirements of dynamic media art. Seeking for permanency and sustainability we try to enable future access to dynamic, digital artworks. Especially challenging is to convert objects with a high system-caused fixity into a more portable and stable condition without losing authenticity and integrity.

CORRODING THE UNCORRODED

TAMAR MAOR and VANESSA GRIFFITHS Tate, United Kingdom

Tate Thames Dig (1999) is an iconic work created for Tate which is a result of months of Dion's excavations on the Thames foreshore. The finds are displayed in a traditional museum display cabinet showcasing the findings in an interactive display. Dion adopted the role of archaeologist to create a contemporary work based on Victorian style presentation. Over time one of the drawers displaying iron objects had rapidly corroded necessitating interventive conservation work. Dion hoped that the finds could be returned to their original condition. Using photographs from the original display as a reference point, elements were methodologically removed from the drawer and stabilised using archaeological conservation techniques. In order to achieve the friable mildly corroded original appearance of the iron, modern powdered pigments were carefully dusted onto the surface. The treatment for this work was developed by balancing the artists' conceptual vision and the museum's commitment to conservation through a collaborative approach. The juxtaposition between these two ideologies is an underlying theme in contemporary art conservation. Conservation approaches are rethought and reversed in this treatment in order to accomodate the artists' methods and ideas. With the aid of artist input, a baseline strategy for the preservation of this work has been establised

which has hopefully resolved ethical questions regarding future treatments. This project highlights the lateral thinking, flexibility and unorthodox approaches that define contemporary art conservation.

CONSOLIDATION RESEARCH IN THE RESTORATION OF GLORIA FRIEDMANN'S 'VANITÉ DES BÂTISSEURS'

AURÉLIE MARTIN Centre National des Arts Plastiques, France

La vanité des bâtisseurs (1993) is an installation of the collection of the Castle of Oiron (France). One of the three elements of this work, a large clay disk named Tondo, poses serious conservation problems. Gloria Friedmann created this piece using a core made of expanded polyurethane foam applied to a wood structure, entirely covered with clay. Today, the most important alterations include a stiffening and dustiness of the foam, and cracks and losses in the clay. In order to conserve Gloria Friedmann's Tondo, the polyurethane foam and the clay must be consolidated. The logical answer to this problem seems to be to impregnate the foam with a consolidant. Considering the difficulty linked to the different natures of the two deteriorated materials (one mineral, the other organic) and the potential risk of creating new structural problems, a research project was necessary in order to find the appropriate products and methods. This research is currently in progress with the help of ARC Nucléart laboratory (Grenoble, France). We are testing consolidants well known by conservators for this type of application, as well as testing organofunctional silanes with molecules that combine the functionality of a reactive organic group and the inorganic functionality of the silane.

LESS IS MORE: THE RATIONALE BEHIND THE DECISION NOT TO TREAT A PAINTING

LAURA MILLS Tate, London, United Kingdom LOUISE WIJNBERG and ELISABETH BRACHT Stedelijk Museum Amsterdam, the Netherlands

During a three-month internship at the Stedelijk Museum, Amsterdam, the materials and techniques of Willem de Kooning were researched, with the aim of surface-cleaning *Rosy-Fingered Dawn at Louse Point*, 1963. The surface exhibited a greyish dirt layer and cleaning tests showed the imbibed dirt was readily removed with aqueous cleaning methods, visibly brightening the colours. However, cleaning proved problematic as areas of high-gloss became matte, dramatically changing the appearance; this occurred with both wet and dry cleaning methods. Analysis showed that a film of medium was removed or abraded upon cleaning. Extensive research revealed that de Kooning often added various materials to his oil paints, including charcoal particles and slow or non-drying oils such as safflower, to achieve a dirty appearance and distinct variations in gloss. This enlightening information influenced the decision not to clean the painting, as this could not be done safely without removing original material and irrevocably changing the intended appearance of the painting. This project is a great example of the 'less is more' principle, highlighting the importance of understanding the materials used and the intentions of the artist to avoid misinterpretations of phenomena observed on the surface and using the information to make judicious choices for treatment.

DOCUMENTING AND ARCHIVING CONTEMPORARY ART: THE ROLE OF THE CURATORS

JO ANA MORFIN Bristol University, United Kingdom

Major cultural institutions and organisations have developed some documenting strategies as well as initiatives for preserving and archiving variable media art. Yet, curators leading art spaces, non-profit galleries and documentation centres have been slow in applying these models and strategies, or instead, they usually follow their own tactics to document their shows. This poster describes the research findings of a study that is being conducted within non-collecting institutions located in Mexico City and the North East of England. The survey reveals that curators have prevailed exhibiting and commissioning issues over collecting and archiving matter. However, they recently have begun to address the complexities involved in documenting and archiving these variable media art. How curators document their shows? Where are they keeping these documents? Which type of media are they selecting? What challenges curators face in order to document the artworks exhibited at their venues?

UNDERSTANDING PUBLIC MURALS: THE MATERIALS AND THE MESSAGE

AMANDA J. NORBUTUS University of Delaware, USA

The development of modern synthetic paints assisted the spread of community-driven art and public murals, but it may have introduced new preservation concerns for the next generation. This poster will present research into the complicated materials and techniques, relate the sometimes controversial history and meaning of murals, and suggest practices that may extend their expected lifetime. With local buildings serving as art galleries, muralists used modern paints to boldly depict political statements, cultural heritage, and neighborhood treasures on walls. Unlike art hanging in a museum or private collections, these vibrant murals can be damaged by constant UV exposure, fluctuating environmental conditions, graffiti, neglect, and pollution. Material choice and protective coatings can contribute to the longevity of a public mural, but they are not cure-alls. My research investigates paint-and-coating systems using colorimetry, cross-sectional analysis, FT-IR, and SEM-EDX, which may help determine the best practices for creating and preserving the large-scale works of art. The need to understand the chemical and physical properties of modern paints is an emerging concern, particularly when considering graffiti removal or other restoration treatments. New conservation guidelines should be written to allow participation by artists and communities as appropriate, incorporating advanced research on modern mural materials.

'WIN, PLACE OR SHOW' – A 'RETROSPECTIVE' DOCUMENTATION

ARNAUD OBERMANN Württembergischer Kunstverein Stuttgart / WKV, Germany

The poster *Win, Place or Show* – a 'retrospective' documentation illustrates the results of a master thesis, which was elaborated during a period of four months. The aspired goal of this thesis was the all-embracing, 'retrospective' documentation of the two-channel video installation *Win, Place or Show* by Canadian artist Stan Douglas according to its presentation during the exhibition *Stan Douglas. Past Imperfect – Werke 1986-2007* at the Württembergischer Kunstverein Stuttgart (Germany). The e-mail correspondence of the curator with the artist, assembly plans, technical documents, records of the cash budget, insurance lists and manifests, the photographic documentation as well as instructions for the supervisory staff were inspected and analysed for this purpose. In addition to that several involved persons, e.g. the curator Hans D. Christ and Stan Douglas, were questioned to record all documentable aspects of the artwork.This documentation is surely a novelty, because it was – as the title of the poster already reveals – created retrospectively, i.e. without the existing, physical components of the artwork. A 3D-documentation was also generated to examine the spatial context of the installation. The poster should additionally initiate a discussion on the terminology 'artist's proof' and 'edition'.

THE CONSERVATION-RESTORATION OF PAINTINGS BY RICARDO DA CRUZ-FILIPE: DIFFERENT APPROACHES TO A SINGLE PROBLEM

MARTA PALMEIRA, JOANA CORREIA, RAQUEL FERREIRA, MARIANA BASTO, ANA BRITO, FILIPE DUARTE 20|21 – Conservação e restauro de arte contemporânea, Lda, Porto, Portugal and LUÍS PINHO

This article compares three parallel decision processes involving paintings by Ricardo da Cruz-Filipe, carried out by different Portuguese conservation-restoration studios. Ricardo da Cruz-Filipe is a Portuguese contemporary artist who, in a period of his career, painted with acrylic media on monochromatic printed canvases adhered to rigid k-line foam boards, usually called 'marouflage'. The three paintings involved shared similar conservation states, with the lack of adhesion between the canvas and the k-line board support causing the deformation of the surface. However, as the operations were carried out by different restorers and at different times, the solutions that came up were also different. Each canvas was, at least, partially separated from its respective board and adhered with a new system. EVA (film and gel) and starch were some of the adhesives that were used. The original k-line boards were, in two of the interventions, replaced by honeycomb cardboard or fibreglass and polyester resin panels. This work constitutes the starting point for further collaboration and investigation on this type of canvases, mainly mechanical evaluation and regular assessment of conservation state.

uPLAY

Enhancement & multi-platform expansion of REWIND video archive

SNAP-SHOT DAY 1 WEDNESDAY, JUNE 9, 14:00 - 15:00

PARTRIDGE, O'NEILL, SHAF and LOCKHART Duncan of Jordanstone College of Art & Design, The University of Dundee, United Kingdom

REWIND is a research team dedicated to the histories, theories, works and narratives of early video art practice, largely in Europe. Accessing websites and resources is no longer confined to just pcs. In recent years there has been a proliferation of different platforms able to connect to the internet, ranging from phones, music players to games consoles. We therefore propose to research and develop ways of implementing a portfolio of applications (uPLAY) to deliver the REWIND experience on leading mobile platforms.

RECOVERY OF THE MATTER, IMAGE AND CONCEPT OF CONTEMPORARY ART WORKS. EXPERIENCES IN THE IVC+R

CARMEN PÉREZ, JUAN PÉREZ, Mª TERESA PASTOR, ANA PELLICER, DAVID JUANES, PASCUAL MERCÉ, PABLO D'ANTONI and GEMMA BARREDA Institut Valencià de Conservació i Restauració de Béns Culturals IVC+R, Spain

Contemporary art presents numerous problems regarding conservation. This is on account of such factors as incompatibility of materials used, and sometimes due to the artist's will to give his work an ephimeral character. Treatments can modify their aesthetic and conceptual aspect. These terms should be respected during intervention process. The present article lays out the results derived from the study by the Institut Valencià de Conservació i Restauració de Béns Culturals IVC+R, as a result of the treatment of a group of contemporary works: *Ropa tendida* by Manolo Castañón (sculpture/installation), *El mágic tanca un cercle* by Enric Solbes (painting), *Altar de un pueblo español* by Alfredo Alcaín (installation/mural painting) and *Estos fueron sus poderes* by Francisco Cruz de Castro ("obect-paint"). The present article gathers reflections, criteria, artist interviews, global & punctual analyses, paralell to the treatment of the works and the raised solutions regarding matter, image and concept. As a conclusion:
1. The correct criteria to follow regarding intervention, recovery of the image and the concept-matter duality should be established with the help of the artist.
2. The institutions must imply themselves and their staff members on the importance of proper preventive conservation measures so that restoration is the last step to take.

KEEPING KINETIC ART IN MOTION: THE 'PALM TREES' OF RENÉ BERTHOLO

ANA PEREIRA Universidade Nova de Lisboa, REQUIMTE, CQFB Universidade Nova de Lisboa, Lisbon, Portugal ISABEL CORTE-REAL Culturgest-Fundação Caixa Geral de Depósitos, Portugal MARIA JOÃO MELO Universidade Nova de Lisbo, REQUIMTE, CQFB Universidade Nova de Lisboa, Lisbon, Portugal SARA FRAGOSO Universidade Nova de Lisboa, Lisbon, Portugal and STEPHAN SCHÄFER Universidade Nova de Lisboa, Lisbon, Portugal

René Bertholo (1935-2005), a Portuguese artist, was fascinated by kinetic works where mechanics, science and art are put together. The kinetic artwork *Palm trees* (1974) consist of 9 trees constructed by balsa trunks and sheets of paper painted with acrylic phthalocyanine green. Suggesting natural random phenomena, the leaves move with the air current produced by nine fans connected to an anemometer (that picks up the wind outdoors) which is controlled by an electronic circuit. The palms are bolted to a plate of aluminum and the all set is covered with an acrylic glass box.
This mixed-media artwork suffered severe damage caused by a flood. The conservation treatment required specific skills and a multidisciplinary, innovative approach to develop

solutions for uncommon problems, which involved conservators from several areas of expertise, curators, electronic engineers and the artist's collaborator. The problems faced included technical fragilities of the system and older reparations and replacement of elements. Organic materials were affected due to microbiological attack and metals were corroded. The documentation left by the artist is being used to help establish the original sequence and velocity of the movement. In this poster, the diagnostic of the conservation state of all the elements as well as the restoration procedures selected will be presented.

'UNTITLED' BY FRANZ WEST

What happens when different materials do not get along with each other

REBECCA PLOEGER, OSCAR CHIANTORE University of Torino, Italy and ROBERTA VERTERAMO

Untitled by Franz West (2003) in the collection of the Gallery of Modern Art (GAM) of Torino, Italy, shows significant conservation problems, both chemical and physical, as well as accidental damage. Listed as 'oil on canvas' in the gallery's catalogue, using FTIR-ATR and py-GC/MS it was discovered that it is a mixed media collage including (bottom to top) canvas, polyvinyl acetate (PVAc) adhesive, photographic paper in the centre (coated with polypropylene (PP)) and uncoated paper on either side and alkyd and acrylic paints.
The chemical and mechanical conservation issues observed for this relatively young piece are wrinkling, warping, efflorescence, stiffening of the paint, loss of adhesion, cracking and loss of material. For example, the brown alkyd paint is much stiffer than the PP coated paper below and stresses between the layers has created a mechanical incompatibility, resulting in peeling, cracking and loss of paint. Whereas, losses of the white acrylic paint are more likely due to a chemical incompatibility between the paint and the non-polar PP surface causing unfavourable adhesion.
In case of a conservation treatment the difficulty is raised not only by the mixed-media nature of this work but also by the fact that it is unknown which of the existing structural patterns were intentionally created by the artist.

MOVING THE CEILING IN ART – THE LUCIO FONTANA CEILING INSTALLATION AT THE MUSEO DEL NOVECENTO IN MILAN

MARINA PUGLIESE Museo del Novecento, Milan, Italy and BARBARA FERRIANI Barbara Ferriani srl – studio di restauro, Milan, Italy

In 2000, the ceiling installation realised by Lucio Fontana in 1956 for the Hotel del Golfo on the Island of Elba risked destruction in the refurbishment of the building. It is one of the few remaining works of this kind created by Fontana between 1950 and 1960, but unfortunately it was classified as being too recent to fall under the protection of Cultural Heritage legislation. Thanks to an intervention by the Fondazione Fontana warranted by the

absence of legislation which would prevent the destruction of the work, the Department of Architecture and Contemporary Art for the Ministry of Cultural Heritage purchased the work. Following a complex restoration project, the work – which measures 150 square metres and consists of incisions, cuts and materials applied to the fresh plaster of the ceiling – was removed from its original location in the hotel's dining room. It was then transported to a temporary laboratory in the Headquarters of the Ministry of Cultural Heritage in Milan where it was restored and prepared to be moved to the final location. In the spring of 2010, thanks to an agreement between the Ministry of Cultural Heritage and the Magistrate of Milan, the work has been installed in a great hall dedicated entirely to the body of art of Lucio Fontana at the Museo del Novecento. The restoration of this unique piece, that will finish within November 2010, is documented in a video which follows the works of restorers and includes interviews with all relative parties.

THE RECOVERY OF A DIVIDED WORK: 'ANTILUNA' BY PINOT GALLIZIO

ANTONIO RAVA, TOMMASO POLI University of Torino, Italy OSCAR CHIANTORE LAURA DEGANI, THIERRY RADELET, SANDRA VAZQUEZ and SARA ABRAM Centro per la Conservazione e il Restauro dei Beni Culturali 'La Venaria Reale', Turin, Italy

During the restoration of the painting by Pinot Gallizio *Antiluna* 1957, mixed medium on canvas, it was possible to join temporarily the two parts in which the work was divided. From the historic point of view the work belongs to the first phase of the production of industrial paints by the artist Gallizio in the years 1957-59, but differently from the works which were supposed to be cut and sold by meter, this work must be intended as unique, with a specific iconographic program and not to be splitted. The two parts reassembled gave a fortuitous occasion of studying the whole work and unravel the artist's intention. Interdisciplinary approach was used to study the work in all his aspects, from historic-artistic to conservative and technical during the course of contemporary art conservation at the Conservation Centre in Venaria. Multispectral analysis and subsequent diagnostic investigations brought to the understanding of the executive technique and allowed to identify the constitutive materials, giving novel information about a preparatory sketch and the complex paint stratigraphy. Sharing all findings and results a better knowledge of the working method of the artist was obtained, particularly referring to the important period of his 'industrial' production, and the choices of restoration, oriented to minimum intervention, were conveniently directed

CONDITION ISSUES IN ABSTRACT EXPRESSIONIST GROUND LAYERS

DAWN ROGALA University of Delaware, USA DR. SUSAN LAKE Hirshhorn Museum and Sculpture Garden, Smithsonian Institution, USA DR. CHRISTOPHER MAINES National Gallery of Art, USA and DR. MARION MECKLENBURG Museum Conservation Institute, Smithsonian Institution, USA

In the mid-20th century, experimentation in house paint formulation coincided with the experimentation of artists with house paint. A brittle white house paint was being marketed during a period when certain Abstract Expressionist artists were using house paint as a ground layer material. Paintings created during this brief period have the potential for hidden problems. This research examines a group of paintings from the collection of the Hirshhorn Museum and Sculpture Garden, Smithsonian Institution, and highlights a relationship between zinc oxide oil grounds and condition problems observed in these paintings. The study group includes paintings by New York artists Hans Hofmann, Franz Kline, and Jackson Pollock, as well as contemporaneous works by European artists Karel Appel and Antonio Saura. Artists were chosen based on similarities in technique and palette, and the potential for shared information regarding materials. Individual paintings were chosen for the study group based on similarities in condition issues. Analyses were performed on samples from the study group paintings, as well as comparative paint samples from the mechanics study collection at the Museum Conservation Institute, Smithsonian Institution. Analytical techniques included in situ XRF analysis, microscopy and SEM-EDS, Py-GC-MS, and mechanics testing.

EPHEMERAL OR NOT EPHEMERAL? WHAT REMAINS OF MIXED MEDIA INSTALLATIONS?

The Munich Artist Group 'Kollektiv Herzogstrasse' and the preservation of the temporary installation *Walk-in Painting*, Lothringer Street, Munich 1980

URSULA SCHÄDLER-SAUB HAWK University of Applied Sciences and Art Hildesheim, Germany

The installation *Walk-in Painting* is aimed at actively involving visitors in the creative process of painting, enabling one to move between the paint layers and experience the complexities of colour and shape from a multitude of perspectives, with the feeling of being 'in the belly of painting'. This 'open art work' at heart consisted of 'cheap' materials such as painted folios, bars, planks and cords combined with elements from previous installations: paintings on canvas and three-dimensional painted assemblages. These elements metamorphosed together in the process of the installation. Due to unfavourable storage conditions no material document of the installation has been preserved and only a part of the records was archived.

Ephemeral installations such the *Walk-in Painting* generally don't fit the concept of

musealization and re-installation or reconstruction. The artists themselves emphasize the singularity and irreproducibility of such a time and space bound event. But it is essential to preserve the memory of the specific installation. Here artists urgently need support by conservators, mainly for professional documentation and archiving of these records. There is also a certain desire for this kind of installation: with elements made by the artists involving the concept of re-use and the development into another context. The necessity of professional storage, also of bulky elements, requires the support of conservators. In the end, professional storage is also the only way to preserve some of the original elements as historic documents.

PRIMARY AND SECONDARY EMISSIONS FROM POLYMERS USED AS ART MATERIALS

PATRICIA SCHOSSLER, TUNGA SALTHAMMER and MÜFIT BAHADIR Institute of Ecological Chemistry and Waste Analysis, Technische Universität Braunschweig, Germany

Polymeric materials present in collections are a source of volatile and semi volatile organic compounds (VOCs/SVOCs). Characteristic primary emissions are solvents used in the industrial or restoration process. Recent studies discuss the origin of VOCs as products from the polymer degradation (deterioration markers). Emissions of SVOCs (plasticizers, flame retardants) also contribute to the polymer degradation. These emissions can adversely affect objects in the vicinity and/or are related to adverse health effects. Samples of PVC, PMMA, Polystyrene, Polypropylene and PUR provided by artists were analyzed using a Microchamber/thermal Extractor. The TENAX TA adsorbent tubes were thermally desorbed into a GC/MS. The focal point was on analyzing VOCs/SVOCs to point out dominating emissions, reactive compounds and degradation products. The sum concentration of VOCs/SVOCs varied between 9 µg/m3 (PMMA) and 3624 µg/m3 (soft PVC). Relevant emissions were alcohols, acetates, aromatic and aliphatic hydrocarbons and organic acids. Substances suspected to cause adverse health effects were detected: phenol, 1,4-dioxane, di-iso-butyl-phthalate, 1,2-dichloropropane, 1,4-dichlorobenzene and styrene. Acetic acid, whose hazardous potential in the museum environment is well documented, was identified as a 2-ethyl-hexyl acetate hydrolysis product. In further works attention will be given to changes in the polymer properties resulting from the long term emissions of SVOCs.

CONTEMPORARY CLEANING

SNAP-SHOT DAY 1 WEDNESDAY, JUNE 9, 14:00 - 15:00

KATHRINE SEGEL and YVONNE SHASHOUA The National Museum of Denmark, Copenhagen

Modern and contemporary art is characterized by the diversity of materials present. Although plastics were once thought to be an indestructible product of the 20th century, museum professionals are now challenged by their conservation. One pressing challenge is cleaning plastics´ vulnerable surfaces. While there have been detailed studies into the cleaning of acrylic paints, no structured research has focused on surface cleaning of three dimensional plastics. Currently scientists and conservators at the National Museum of Denmark collaborating with ICN in Amsterdam, the V&A in London and C2RMF in Paris are researching the risks associated with cleaning flexible and rigid plastics as part of the European 7th Framework research project POPART (Preservation of Plastic ARTefacts in museums). Mechanical cleaning tools including brushes, dusters, cloths and sponges are being evaluated both for their potential to damage plastic surfaces and I for their effectiveness at removing soil. A range of aqueous and non-aqueous based cleaning agents will also be evaluated. The long term effects of cleaning on the stability of plastics will be studied. A strategy to describe and quantify any changes induced in plastics by cleaning was developed. This included a simple technique to quantify damage caused by mechanical cleaning tools using photomicrographs.

IMMORTALITY VS MORTALITY? PRESERVATION OF THE LEGACY OF ALINA SZAPOCZNIKOW

IWONA SZMELTER AFA/UW Warsaw, Poland

Innovative approach to the complex care of Alina Szapocznikow's artworks presents her multidisciplinary modern art legacy demonstrates a wide range of artworks, techniques and technologies: from marble's sculpture, plaster, bronze, and sketches to enviroments and proto-installations made from deep-dyed polyesters, polyurethanes, inserts - ready-made, non-permanent organic ones, such as grass and newspaper. Many of the artist's works were in pieces, like jigsaw puzzles. The broad range of conservation issues in the project of the preservation of Alina Szapocznikow's artwork are based on care of the integrity of artwork. In this long-term project we experienced many problems with unconventional approach and practical know-how. To maintain a flexible approach and balance in decisions on how to preserve subject matter and lost idea we needed to do conservation-curatorial re-orientation in the traditional methodology. The ethical considerations related to reconstruction, such as authenticity versus emulation, duplication problems and replacement of 'ready-mades' in art has brought us back to the very circle of Aristotelian classification of art, with an evident precedence of an idea over its reflection in the object, i.e. in matter. Much attention has been paid to the legal consequences, the so-called 'right to integrity' and artist's copyright.

ALTERATIONS OF POLYESTERS AND METHACRYLATES

Arman *Le Rêve Passe* 1963

LUCIANA TOZZI National Gallery of Modern and Contemporary Art, Rome, Italy

Arman Fernandez (Nice 1928 - New York 2005) artwork *Le Rêve Passe*, 1963 in bronze, resin, metacrylate and wood (55x75x8 cm) is part of a series which Arman produced 1960-1963, of objects sliced and arranging sequencely in space. Arman here used a bronze statuette of about 40 cm. The parts are included in transparent resin (polyester) inside a Plexiglas (metacrylate) box fixed on painted wood. The layer of resin, from the moment of creation, has a crack running through it from bottom left to top right, circa 50 cm long. The peculiarity of this work stems from its vision through the transparent resin and Plexiglas that however undergo change over time. The polyester resin had turned yellow and opaque which made it no longer clearly visible. Conservation was therefore absolute necessary to return the artwork as close as possible to its original stage to bring it to full fruition. It was essential to perform a series of diagnostic tests in order to determine the chemical and physical nature of the material and its constituents, the degradation mechanisms and related products of the alteration. The restoration primarily aimed at restoring the transparency of the layer of polyester and metacrylate.

BETWEEN IMAGE AND MEANING: CESARE BRANDI'S THEORY OF RESTORATION AND SEMIOTIC THEORIES OF CONSERVATION

SNAP-SHOT DAY 1 WEDNESDAY, JUNE 9, 14:00 - 15:00

FRANCESCA VALENTINI Galleria Nazionale d'Arte Moderna Roma, Italy

Regarding care of modern and contemporary art, Cesare Brandi's Theory of restoration (1963) is a topic in Italy and in the whole world. A part of the Italian and international debate on the Theory subjects its principles – thus abstracting them from history - to the test of the most recent forms of art up to the new media art. Another part of the debate, among which the present study, sets the text in its historical context and views it as a historical and methodological source to relate to from a present perspective. Coming from an idealistic formation, later developed through phenomenology and structuralism, Brandi defines the 'art work' as a material object which re-elaborate reality and is distinct from life. Withal, he rejects any semiotic reading of art work. Conceptual art and ephemeral installations are instead met by semiotic theories, as the INCCA 'Theories of meaning'. As a case-study, I present *Our divergencies* (1971-2009), an installation of 200 little men in plasticine by Gianfranco Notargiacomo. The first installation, made in 1971, was totally lost, and the work has been re-made, in National Gallery of Modern Art, Rome: the living artist replays the idea, in new materials.

WHEN SOFT ROCK BECOMES HARD ROCK

Conservation of a natural rubber rock

ELISA VERWOEST-SCHÖNE University of Amsterdam, the Netherlands

Mein Treur Wanderstab is an artwork made in 1987 by the Dutch artist Evelyne Janssen. In the summer of 2009 the artwork was exhibited in the Rijksmuseum Twenthe. After a month an accident happened with the artwork, which caused deformation of the hollow rubber rock that is part of the artwork. A closer look at this rock showed it was badly degraded. The material on the backside of the rock was both sticky soft and hard brittle and the rock was completely collapsed. FTIR Analyses showed that the material of the rock is Natural Rubber (NR). Oxidation under influence of oxygen is the main cause of the degradation. Tests for the conservation where performed on fragments of a badly degraded NR bold head (an old theatre prop). Those tests indicated the NR cold be reformed with warm air (maximum of 60°C). Attaching Stabilitex to the backside of the NR using BEVA® gel could reinforce the material. The rock was successfully conserved this way. The rock is stored in an oxygen free environment, preventing further oxidation. In this case the profit of the treatment was higher than the risk for the artwork, however one should bear in mind that heat can speed up the degradation of rubber.

VIDEO DOCUMENTATION

Restoration of video documentation of Tadeusz Kantor's theatre plays

ELA WYSOCKA Centre for the Documentation of the Art of Tadeusz Kantor CRICOTEKA, Cracow, Poland

Poster deals with problems of a magnetic tape as an archival carrier, methods of extending longevity and restoration of valuable video recordings. The problem is exemplified by a case of initial phase of Restoration Project carried out at Cricoteca's Video Collection. CRICOTEKA's founder Tadeusz Kantor, famous Polish artist and experimental theatre director, perceived documenting as important as the process of creation itself. The Artist used those recordings as a 'memory carrier' and a sketch-book for his work. Collection contains rich VHS material of both, official plays and a semi-private recordings of rehelsals. In the process of restoration, three tapes were selected from the collection. The condition of tapes and image errors were analyzed and documented. For each of them two master copies were made: an analog and a digital. The second one was digitally restored. Main aim was to analyse digital imaging for restoration purposes and according to its principles. It was achieved by keeping quality of the image and respect for authenticity of the original as well as by looking for a safe encoding and storage methods. Experience resulting from the project will be used in the further work on the collection's preservation in Kantor's Museum (currently under construction).

POPART: STRATEGY FOR THE PRESERVATION OF PLASTIC ARTEFACTS IN MUSEUM COLLECTIONS

SNAP-SHOT DAY 1 WEDNESDAY, JUNE 9, 14:00 - 15:00

BERTRAND LAVÉDRINE Centre de recherche sur la conservation des collections Mnhn, France

There is an inherent lack of knowledge and agreement about the way we can store, exhibit or clean plastics artefacts in order to arrest or lower their deterioration rate. In 7th framework programme of the European Commission for research and technological development, an international project called POPART (Preservation Of Plastic ARTefacts in museum collections, grant agreement n°212218) aims to develop a European wide accepted strategy that improves preservation and maintenance of plastic objects in museum collections. It focuses on three dimensional museum objects as these frequently exhibit physical degradation, due to the inherent instability of the synthetic polymers. This project started in October 2008 and will finish March 2012. It gathers 12 partners from scientific research laboratories, museums, SME's and conservation laboratories and 8 countries from Europe and North America. At mid-term, preliminary results in the field of deterioration, characterization, degradation, cleaning are already promising and some of them will be presented during the conference by project partners. Nevertheless POPART will not answer to all the questions dealing with synthetic polymers in museums, but among the outcomes expected, one is to raise the general awareness and help to strengthen professional network to address these issues in the future.

COLOPHON

CONTEMPORARY ART: WHO CARES? is being organised by the Foundation for the Conservation of Contemporary Art (SBMK) and the Netherlands Institute for Cultural Heritage (ICN) in collaboration with the University of Amsterdam (UvA).

ORGANISATION

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POSTER COMMITTEE

The poster committee is made up of:
Lydia Beerkens, SBMK / SRAL
Agnes Brokerhof, Alberto de Tagle and Thea van Oosten, ICN
Tom Learner, Getty Conservation Insitute
Maartje Swinkels, Akina Art Projects (poster registration)
Angeniet Boeve, ICN (assistant to the commtttee)

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