

International Conference and PhD-Workshop, 5-9 March 2018:

'Plastics in Modern Movement Interiors. Conservation and (Re-)Design of Plastic Finishes, Furniture and Products'

Organization: University of Antwerp, Campus Mutsaard

A collaboration between University of Antwerp, ISC Docomomo Interior Design, Docomomo Belgium

Partners: KU Leuven Belgium, Free University of Brussels (VUB), Technical University of Delft Netherlands (TU Delft), Technology Arts Sciences Cologne (TH Köln), Institute of Advanced Architecture Catalunya (IAAC), Flemish Architecture Institute (VAI)

<https://www.uantwerpen.be/nl/faculteiten/ontwerpwetenschappen/in-de-kijker/plastics-in-interiors/>

Discussion between researchers and practitioners on the history, conservation and (re-) design of plastic finishes and products.

University of Antwerp, 5 March 2018

The 20th century and its built environment has been widely influenced by the use of plastic – in particular the interiors and our daily consumer products. Today in Europe, the building industry is the second biggest demander of plastics after the packaging industry. The seminar, the first of its kind in Belgium, aimed to raise the sensibility of young researchers and designers as well as of restoration and heritage professionals towards the use, conservation and recycling of plastic finishes and products in the context of circular economy approaches. The program of the 1-day seminar provided a theoretical, historical and practical input in an interdisciplinary context, and took place on March 5th 2018, at the Faculty of Design Sciences at the University of Antwerp, Belgium.

The event was organized in collaboration between the DOCOMOMO International Specialist Committee on Interior Design (ISC/ID), DOCOMOMO Belgium and the Henry van der Velde Research Group at the University of Antwerp, and brought together material scientists and chemists, art conservators, architectural historians, heritage specialists, designers, consultants and students. **Nathalie Vallet**, Vice-Dean of the Faculty of Design Sciences, welcomed participants from eight different countries, in particular the attending experts in conservation, circular economy and industry, emphasizing the interdisciplinary character of the event. In her introduction, **Uta Pottgiesser**, spokesperson of the Henry van der Velde Research Group and Chair of the DOCOMOMO International Specialist Committee on Technology (ISC/T) referred to the past seminars and publications related to research and practical applications in the context of the Modern Movement.

The morning session on 'History' was moderated by **Zsuzsanna Böröcz** (UAntwerp, KU Leuven), Chair of the DOCOMOMO International Specialist Committee on Interior Design (DOCOMOMO ISC/ID), who also presented the plans of the new committee. DOCOMOMO ISC/ID was established in 2016 in order to deepen the knowledge of Interior Design, an issue of major relevance for the Modern Movement and for modern life, as it provides necessary spatial,

ideological and aesthetic information for fully understanding and experiencing Modernity. One aspect of this was the development of a new aesthetics in response to emerging technologies, of which the plastics were a prime example. She stated: 'The Modern Interiors' identity is characterized by a strong and coherent style across many disciplines. The unity which results from this makes the conservation of modern interiors a formidable challenge.' Next step for Docomomo ISC/ID is to broaden its network starting with the Architecture Faculties at Belgian Universities, which are flying high with academic research on interior design, both from a heritage conservation perspective as well as from a technical and design viewpoint.



More than 80 participants were attending the seminar featuring four different sessions on the history, heritage, design and future of plastic interiors. Photo: Marieke Jaenen.

Architect **Wessel de Jonge**, TU Delft Chair of Heritage & Design, kicked off with an overview of '*Synthetic Building Components*' since the early 20th Century, referring to Anthony Walker's seminal research of the 1990s. He explained how early thermoset and thermoplastic building materials were primarily fit for interior use. In order to promote the use of plastics several producers developed prototypes of single family houses, such as the Monsanto 'House of the Future' in 1957. The examples were presented with a great array of illustrations which allowed the audience to be transported back in time.

In his talk on '*The Plasticarium: Collecting Design History*' **Arnaud Bozzini**, Director of the ADAM in Brussels showed this remarkable acquisition. The 'Plasticarium' is the only one of its kind and was launched during the late 1980's, comprising around 2.000 art and design items: everyday objects, design pieces and artwork. He explained how ADAM started from a private collector's enlightened taste, which became the seed for an entire design museum. This lecture featured the story behind the collected design items, their value and the new museum's project, with details on its exhibition policy and the presentation of the permanent collection.

The history of '*Plastic Goods in Belgium*' was presented by **Nina Serulus** (VAI Antwerp, KU Leuven). Serulus's lecture was a fascinating introduction to the history of plastic until the 1970's. She started with the period immediately after WWII, when plastic furniture first reached Belgium through international companies. She explained that only in the 1960's the Belgian production of plastics slowly developed. The very first steps were – remarkably enough – not taken by the furniture industry or designers but by the petro-chemical industry, which was in search of new markets. The very first Belgian furniture company which ventured into the large-scale production of plastics was Meurop. Their colourful chairs were produced and sold in huge quantities, while

the design process was often led by trial and error. Meurop's plastic dream finally came to an end with the oil crisis of 1973.

The second session on 'Heritage' was chaired by **Marieke Jaenen** (UAntwerp, ICOMOS Belgium), with a focus on research and conservation approaches.

Griet Kockelkoren (KIK-IRPA) gave an overview of the challenges of '*Conservation Approaches of Plastics in Interiors*' and referred to the importance of a precise understanding of the production process and components. Together with **Friederike Wöntig** (TH Cologne) she is working on larger objects.

Nick Serneels (UAntwerp) is investigating '*Plastic finishes (in Flamish) Interiors*' in his master thesis and explains the difficulties in finding precise information about the objects and in particular their materiality.



Griet Kockelkoren (KIK-IRPA) gives an overview of the challenges of plastic conservation in the heritage session moderated by Marieke Jaenen. Photo: Marc Dubois. The final reception was used for networking between speakers, practitioners and academia. Photo: Ashal Tyurkay.

The afternoon opened with a session on 'Design' chaired by **Wessel de Jonge** (TU Delft), showing how designers can and have to take responsibility for a sustainable use and re-use of materials in interiors and buildings.

Karine Van Doorselaer, industrial engineer (UAntwerp) gave an overview over the '*Design with Plastics in a Circular Economy*' and showed the potentials and limits of certain materials.

Michael Ghyoot (ROTOR Brussels), presented different approaches for the '*Recycling- Upcycling- Re-use: Melaminated Panels*' (<http://rotordb.org> and <http://rotordc.com>) that are a prominent interior element. Often used in kitchens and bathrooms and as partition walls in public buildings, they are not degradable and challenge the designer to develop new ideas for re-use.

In his talk on '*Advanced Architectural Approaches with Plastic*' **Alexandre Dubor** (IAAC), Barcelona advocated the exploration and implementation of new digital and robotic technologies in design and construction. He showed how materials should be seen as a design tool to contribute to affordable, fast, sustainable and personalized constructions (<https://iaac.net/>).

The final session on 'The future of plastics' was dedicated to industry approaches.

Niklas Meine from Covestro (Leverkusen/Antwerp) presented the companies' approach towards the '*Next Generation Polymers*' by '*Innovating within the framework of sustainability*' and the first results of this ongoing research. On the material side the amount of oil in PU-Foam could be reduced by 20% today and it is the aim to further compensate petroleum by CO₂ or other biomass components.

The final talk by **Steven Schuitema** from FKUR Polymers GmbH in Wittlich (Germany) gave an overview of the '*Customized Solutions for Bioplastics*', explaining the differences between biodegradable and bio-based plastics and showing the changes in policy and strategy towards more bioplastics.

After moderating the last session **Uta Pottgiesser** (UAntwerp) concluded: 'The conference raised the awareness about the presence, abundance and particularities of plastics in our interiors. It also clarifies the need for more knowledge and new approaches in the design disciplines towards the principles of a circular economy'. At the end of the day the roles and responsibilities of individuals, politics and industry as stakeholders in this process were discussed. It was good to see how intensively designers, researchers and students exchanged knowledge and experiences on the topic. The companies Covestro, Vink and Biopla contributed with exhibits and material samples.

Excursion to Brussels, 6 March 2018

The excursion day started with a bus trip to the Brussels Atomium. On the Heysel site we visited the **Brussels Design Museum ADAM**. **Arnaud Bozzini**, the director gave us a guided tour of the collection. We also had the opportunity to visit the impressive depot holding a wide array of national and international plastic objects. Furthermore we checked out the current temporary exhibition on 'Sovjet design. Red wealth'.



The visit to ADAM illustrated the challenges of conservation of plastic objects. Photo: Michel Corthaut.

The next stop was in the European district of Brussels. There we visited the first Belgian building with a reinforced polyester façade, namely the headquarter of the **CDH Centre Démocrate Humaniste**. This modernist building was designed by the architects René Aerts and Paul Ramon and constructed between 1964-66. On site, **Zsuzsanna Böröcz** and **Uta Pottgiesser** gave an historical and technical explanation on the construction of the building. The third visit was at **ROTOR** in Anderlecht. This visit showed how construction elements can be dismantled from buildings under demolition and how these elements can be sorted, stored and re-used in new constructions.



The north and south façade show how different weathering affects the material. Doors at the ROTOR shop and view of one of the storage sites. Photos: Michel Corthaut / Uta Pottgiesser

Workshop on upcycling and the practical challenges of conservation and re-use of plastics in interiors. University of Antwerp, 7-9 March 2018

On Wednesday the workshop started with an intense theoretical course on the properties of different plastics by **Karin Van Doorslaer** (UA, Product Development). In the afternoon the students of the master interior architecture and heritage studies started to work with different materials and plastic objects. The workshop using HPL-panels was conducted by **Victor Meesters** (ROTOR, Brussels) and the workshop using PU-Foams was conducted by **Evy Puelinckx** (upcycling consultancy, Antwerp). The two made clear the differences between designing and constructing with smooth and hard materials.

The Friday afternoon workshop focused on the recognition of different plastic characteristics. The students had the opportunity to work in the laboratories at the heritage department. Under the supervision of **Marieke Verboven** (UA, Conservation and Restoration) they were able to experiment individually with chemicals and learn more about the properties of damage to plastic objects.



Experimenting with different smooth materials and objects (foams) and melaminated panels. Finally some experiments in the laboratory of conservation & restoration. Photo: Marieke Jaenen.

The results of the workshop were shown at the Open Campus Day, University of Antwerp, March 10th, 2018.

Further output following the conference

One or more publications on the theme are being prepared in collaboration with TU Delft.