



**JOINT INTERIM MEETING OF FIVE ICOM-CC WORKING GROUPS:**

Leather and Related materials  
Murals, Stone and Rock Art  
Sculpture, Polychromy, and Architectural Decoration  
**Textile**  
Wood, Furniture, and Lacquer

## United Nations – uniting professions? Restoring the U.N. Building

*Margareta Bergstrand*

*Conservator*

*Swedish National Heritage Board, Department for Conservation, Visby, Sweden*

### **Abstract**

*Abstract text In the next couple of years the U.N. building in New York, built in 1952, will undergo a massive and much needed renovation. Conservators from the Swedish National Heritage Board and the Moderna Museet have evaluated the condition of the Swedish donations to the building. Those donations form a landmark in Swedish modernistic design. The Economic and Social Council Chamber, designed by Sven Markelius, was furnished with an artwork by Marianne Richter. This very large woven curtain was destroyed by a combination of flame retardant treatment, sunlight and humid conditions. The Swedish National Public Art Council and the Ministry for Foreign Affairs are planning a donation of a contemporary work of art for the United Nations to replace the curtain. Conservators will have the opportunity to take part in the planning and act as guarantors for historical and artistic values as well as long-term stability.*

### **Keywords**

Keywords text Modernist architecture and design, flame-proofing, fire retardant textile, Sven Markelius, Marianne Richter

## **The U.N. Building and the Swedish Contributions**

The United Nations Building complex in New York was meant to be “the most beautiful and most efficient group of buildings in the world” according to the first Secretary-General Trygve Lie’s vision. [Betsky 2005] The architect and director of planning, Wallace K. Harrison, told the U. N. delegates that “the world hopes for a symbol of peace; we have given them a workshop for peace”. [Dudley 1994] In the years 2008 to 2013, this building, or rather group of buildings, will undergo the first thorough renovation since its opening in 1952. The organisation planning and implementing this gigantic project is called the Capital Master Plan (CMP).

According to former Secretary-General Kofi Annan the designing of the United Nations complex was “a resolutely modern collegial architecture project” [Betsy 2005] that began in 1947 when architects from twelve countries gathered in New York under the leadership of Wallace K. Harrison. Among the architects who took part in designing the future were Le Corbusier and Oscar Niemeyer, as well as Sven Markelius who mostly is remembered as the foremost architect of the Swedish welfare state and as a city planner. When the time came to design the interiors of the building, the first Secretary-General Trygve Lie who was from Norway suggested that the Scandinavian countries decorate the council chambers for the Security Council, the Trusteeship Council and the Economic and Social Council. [Dudley 1994] Sven Markelius was chosen to design the Economic and Social Council chamber, referred to internally as “ECOSOC” for short. The design and interior decoration were presented as a national gift from Sweden to the United Nations.

Among the other Swedish contributions to the U.N. building, it is worth mentioning that the Secretary-General Dag Hammarskjöld initiated the expansion of the meditation room. He took an active part in planning it as well as in commissioning a mural painting by the Swedish painter Bo Beskow. The Dag Hammarskjöld Library, built in 1961, was furnished with furniture and carpets from Sweden. The penthouse was originally Hammarskjöld’s private apartment and includes a mural by Bo Beskow. All in all, the Swedish gifts to the U.N. building, form a landmark in Sweden’s art and design history albeit one unknown to a larger public.

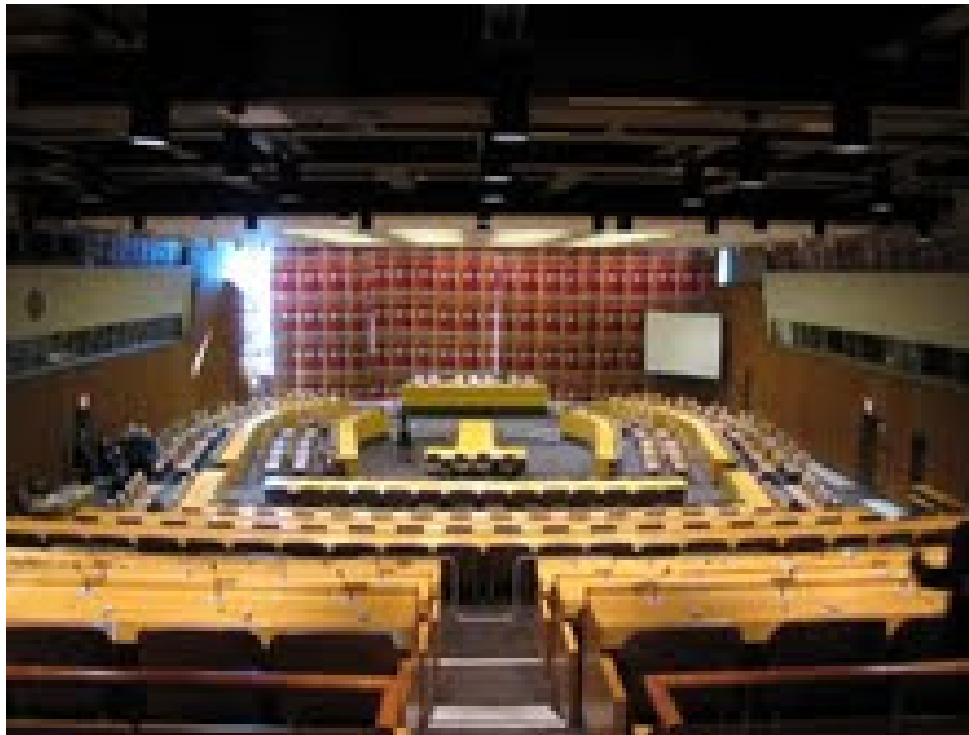
The 1952 building is now badly worn and in urgent need of renovation. So are many of the works of art that have been presented as gifts to the United Nations by its member states during the last sixty years. These states have been asked to take care of renovation and conservation of their gifts. In November 2008, a small team of conservators from the Moderna Museet, (The Museum for Modern Art in Stockholm) and the Swedish National Heritage Board went to New York at the request of the Swedish Foreign Ministry to investigate and evaluate the state of the Swedish donations to the building.

The conservation of single artworks will prove easiest to accomplish as some of them are in a relatively good condition. The conservation treatment was planned by conservators from the Moderna Museet but some of it will be carried out in situ.

The real challenge though is to keep a holistic view of rooms and interiors that are in use. This paper will focus on the ECOSOC and issues concerning the heritage of the 20th century and modernist architecture and design—specifically how can we keep the original intended atmosphere of the room while at the same time making necessary renovation and observing new safety and security issues.

## **The Interior of the Economic and Social Council Chamber**

While the Security Council Chamber with its permanent number of member seats is the most unchanged of the three council chambers, the ECOSOC has undergone several alterations over the years. The seating has been changed drastically. The first change came in 1974 when the number of Council members almost doubled. New delegate chairs were made in Italy to resemble the original ones designed by Elias Svedberg and manufactured by the Swedish firm NK-bo. Over the years the chairs have been mended and re-upholstered so that one now can find at least five variations of the chairs with vinyl covers of slightly different beige nuances. The vinyl is a poly-vinyl chloride coated textile which has been used on almost all seating in the U.N. building. The seating area for the chairpersons was raised up above the floor level by the building of a podium and the horse shoe shape of the table was changed. In 1995, Sweden financed the renovation of the floor, tables and lighting, minor repairs of cracks in the paint on the walls and ceiling, as well as cleaning of the carpet.



*Fig. 1: The Economic and Social Council Chamber. Interior in October 2009, shortly before renovation.*

“The ceiling which in the delegates’ area is suspended and highly stylized, is purposely dark and unfinished in the public gallery area to symbolize that the work of the Council is ongoing”. [Betsky 2005] This is only one of the stories that can be told of the ECOSOC. Both Sven Markelius and one of his assisting architects, Bengt Lindroos deny this story, but in his memoirs Lindroos admits that it is indeed both touching and appropriate. The real reason for the unfinished ceiling was that the low ceiling in the listeners section that made Markelius devise a solution that would enable him to give the audience section a height of almost 5 meters instead of 2.3 meters. The window wall is 7 meters high by 22 meters wide. According to other stories, it was a great shock to several prominent people to see the ducts and electrical chases exposed in the ceiling of the public area. Markelius solved the visual problem by painting the ceiling in a kind of cubistic camouflage in dark green, black and white. The strained United Nations budget made this solution welcome and acceptable. It is also true that this rendering of the ceiling would soon enough be “the thing to do”, and today is part of modern architecture. [Markelius 1953, Rudberg 1989, Lindroos 2008].

The view of the Swedish National Heritage Board is that the ECOSOC chamber is changing and must continue to do so in order to serve its purpose and the intentions of the United Nations. Keeping that in mind, there are a few things worthy of preservation - one of them is the inner ceiling.

The plan of the CMP renovation architects largely coincides with this view. Their intention is that the renovation result in a better and more environmentally friendly climate and comfort and better security and safety for the delegates and staff, but not otherwise be noticeable. The walls will be painted the original color, the pine slatted cladding will be cleaned, and new lighting will be installed along with new and modernized audiovisual equipment. The CMP will finance the renovation of the fixed interiors, which include the fixed chairs and the carpet but not the delegate chairs and the curtain.



*Fig. 2: The ceiling of the delegates' area. October 2009*



*Fig. 3.: The Economic and Social Council Chamber. A rare view of the East river with the curtain pulled away from the window wall. October 2009*

## The draperies

According to Sven Markelius, it was the curtain designed by Marianne Richter that ultimately gave the room its character. It was woven in Båstad at Märta Måås-Fjetterström AB, a well known still existing workshop. Once one of the largest and most expensive textiles ever made in Sweden, it took ten weavers two years to complete. The drapery was huge, around 220 meters square. It was intended to cover the 22 by 7 meter window wall facing the East River only at night, and a “day curtain”, designed by Astrid Sampe would be used as protection against the glaring sunlight during the day. It is probable that this intention was not followed as the drapery was too heavy to pull and served better as a background for the chair persons than the view of the East River. In later years, security demanded that the Richter curtain cover the window all the time so that no one could look into the chamber from the outside.

Already by the early 1960’s the draperies showed signs of degradation. In 1965 it was sent back to Sweden where it was treated and washed by one of Marianne Richter’s former students who also did some support sewing. After treatment it was sent back to New York and rehung in the ECOSOC. In accordance with the laws of the city of New York, the curtain had been treated with a flame proofing agent probably before it was installed in 1952. It is not known today if this treatment was repeated after the wet cleaning took place in 1965. What is known is that its condition rapidly got worse and new



*Fig. 4: A closer view of the ‘Pythagoras’ curtain, one of the delegate’s chairs and fixed chairs. November 2008*

treatments were considered. It is suspected, but not confirmed, that a chemical dry cleaning was performed. In the early 1980’s, the condition was so bad that the curtain was taken down. At the artist’s request some smaller pieces were sent back to Sweden and to the Märta Måås-Fjetterström workshop. One piece remains in the Minneapolis Institute of the Arts. It is one of the lost great works of art of Swedish modernism.

One would hypothesize that the curtain was affected by a combination of the flame retardant treatment, sunlight, humid climate conditions, and bad handling. However, since the quality of material and technique was of such a high level, the catalyst for the unusually quick deterioration probably was the flame proofing agent. In 1969, Karen Finch wrote in a short note in *Studies in Conservation*: “knowing the high standard of craftsmanship of this workshop and the quality of the materials used, there seemed at first no reason for so sudden a deterioration in a textile composed of a linen warp and a woollen weft”. [Finch 1969] The main component of the flame proofing agent was ammonium sulphate. After a closer examination Karen Finch stated that a combination of the chemical used in the flame retardant, the strong incoming light, and the humid atmosphere in New York had contributed to chemical reactions that produced strong acidic products.

In 1986 the curtain finally was taken down and replaced with a geometrically printed pattern velvet curtain designed by Sven Markelius. The printed pattern, “Pythagoras”, was designed at about the same time that Markelius was working with the ECOSOC, but was intended for entirely different buildings:

Folkets Hus in Linköping and the Royal Institute of Technology assembly hall in Stockholm. “Pythagoras” is a Swedish design classic and is still in print.

Today, this curtain too is badly soiled and the white parts of the pattern have yellowed, possibly due to the fact that smoking was allowed in the chamber until early 2000. Furthermore, it now shows signs of damage from fire retardants as well as from bad handling. It was fire proofed in Sweden using Pyrovatex ®CP [1] at the time of manufacture. An informal spot test performed at the site in 2008 indicated that cleaning of the curtain would not be entirely successful. Earlier attempts to wet clean fire proofed textiles have often proven unsuccessful and even disastrous [2].



Fig. 5: Pieces of the lost curtain and one of the many sketches for it, designed by Marianne Richter.

### *Intentions and ethical considerations*

Consequently, the conservators faced the question of whether to reconstruct the first original curtain or conserve the second one. The option of conserving the velvet curtain was soon ruled out – the cost of wet cleaning would by far exceed the cost of making a new curtain from a similar material. The factory that reprinted the pattern in the 1980’s still stocks the print but in a material other than the original cotton velvet. Today, the pattern is printed on velvet made from synthetic fibres that contain flame proofing agents which might meet the requirements of the New York City Fire Code.

As early as the 1980’s, a reconstruction of the original curtain was considered but proved too costly. The Märta Måås-Fjetterström workshop is still in operation but its main occupation has been, and still is, high quality carpets. Would contemporary weavers be able to repeat their predecessors’ effort of weaving this gigantic fabric – and at what cost? Would there be other ways to reconstruct the curtain; for example, by digital printing?

Another option that the Swedish National Public Art Council and the Ministry for Foreign Affairs contemplated was the donation of a contemporary work of art for the ECOSOC chamber in the 21st century.

After thorough consideration, a reconstruction of the original curtain was ruled out. It would be too costly and it would also be impossible to return the ECOSOC chamber to its original 1952 state. As mentioned above, conservation of the printed curtain was considered to be too costly and not worthwhile since a new one could be had at a lower price. The fact that the printed curtain had been a compromise during the 1988 renovation was also a factor to be accounted for. Would even Sven Markelius have intended "Pythagoras" for the ECOSOC chamber?

In the spring of 2009 it was finally announced that the choice of the Swedish Foreign Ministry would be the donation to the United Nations of a contemporary artwork that would symbolize the Swedish dedication to the United Nations and convey the special character of Swedish contemporary art. This choice coincided with the view of the Swedish National Heritage Board that the ECOSOC is a room for ongoing change and a "workshop for peace" and that it was in need of an artwork that supported this purpose. The role of the Swedish National Heritage Board will be to ensure the long term quality and survival of the new artwork. Four contemporary artists have been chosen for a closed competition. At present the artists are still preparing their entries.



*Fig. 6: Discussions with the CMP in the ECOSOC, October 2009*

## Fire retardants for textiles

The issue of fireproofing still remains. While there has been much research done on the elimination of the environmental and health hazards of flame proofing textiles and other materials, little has been done to

develop flame retardants that do not cause long term damage to textiles. On the other hand, building codes and regulations are becoming more and more demanding as more and more flammable material is added to public buildings. At this moment the National Heritage Board is starting an investigation into existing flame proofing agents in order to support textile artists and find out what has caused deterioration in several known textiles like the curtain designed by Marianne Richter. Sadly none of the flame retardants in use today seem much better or different than the ones that were used in the U. N. More fire safe materials will also be studied. For example, it is well known that natural wool is fairly fire safe and that the poly-vinyl chloride (as used in the vinyl upholstery material) is the most fire safe plastic. In this case, the fire regulations of New York City must be followed. According to CMP, sprinklers will be installed, the windows made UV resistant, the climate will be somewhat ameliorated, and a sunlight blocking curtain will be installed.

Our hope is that all these measures will help to preserve the new curtain. Some of the damage we have seen certainly could have been avoided if a plan for the housekeeping of the U.N. building had existed and had been followed. Accordingly, a plan for the continuing care and housekeeping of the Swedish donations was suggested by the National Heritage Board.

## Conclusion

Representatives from the Moderna Museet and the Swedish National Heritage Board are now taking part in the planning, in order to secure the significant historical, architectural and artistic values of the ECOSOC while taking into account new technology and the requirements for high security. This is a unique opportunity for collaboration between conservators, curators, conservation scientists, security and fire experts, as well as artists and researchers into new materials. This holistic approach of uniting professions is vital for the long term sustainability of the artworks and the artistic intention. What place could be better for uniting professions than the United Nations?

## Endnotes:

[1] Pyrovatex ® CP is a fibre-reactive organic phosphate compound. It is not certain that the chemical properties are the same today as in 1988.

[2] One wall hanging was treated at the Swedish National Heritage Board in 1983 but the documentation is by no means complete. Remarkably few written documents on conservation of flame proofed textiles are found. It is the intention of the Department for Conservation to study the material from the ECOSOC in order to gain more experience on the subject.

## Acknowledgments:

The author would like to thank Bo Markelius, Helena Hernmarck, Marianne Richter and the CMP for their valuable help.

## References:

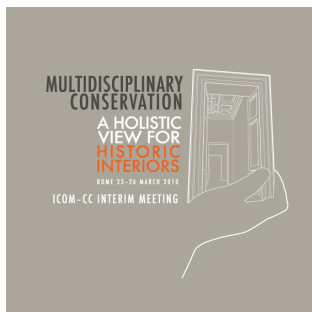
- Finch, K. 1969. Note on the damaging effect of flameproofing on a tapestry hanging. *Studies in Conservation*, 14 (3), p.132
- Betsky, A., Murphy, B. 2005. *The U.N. Building*. Thames & Hudson, London and New York
- Dudley, G.A. 1994. *A Workshop for Peace. Designing the United Nation Headquarters* The MIT Press, Cambridge, Massachusetts and London, England



Lindroos, B. 2008. *Att vara arkitekt kan vara att...* Arkitektur förlag Stockholm  
 Markelius S. 1953. ECOSOC:s rådssal I FN.s nybyggnad i New York. *Byggmästaren*  
 Rudberg, E.1989. *Sven Markelius, arkitekt*. Arkitektur förlag Stockholm

*All photographs are courtesy of Margareta Bergstrand.*

**Margareta Bergstrand** graduated from the University College of Arts, Crafts and Design, Stockholm, the Department for Textiles and has been active as an artist and designer. Gained a BA in history of art at Uppsala University. Studied textile conservation at Göteborg University Institute for Conservation. Now employed as a conservator at the Swedish National Heritage Board in Visby where a new department for Conservation Science is developing. (Swedish National Heritage Board, Department for Conservation, Box 1114, SE-621-22 Visby, [Margareta.bergstrand@raa.se](mailto:Margareta.bergstrand@raa.se))



#### Disclaimer

These papers are published and distributed by the International Council of Museums – Committee for Conservation (ICOM-CC), with authorization from the copyright holders. The views expressed do not necessarily reflect the policies, practices, or opinions of ICOM-CC. Reference to methods, materials, products or companies, does not imply endorsement by ICOM-CC.

