The relocation and conservation project of Antero Ruotsalainen’s steel installation *Noli turbare circulos meos*, 1976

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**ABSTRACT** This paper concentrates on a project whose aim was to establish the original aesthetical appearance of an outdoor public art installation. The relocation of the artwork and the management of conservation projects confronted the need for evaluating values when considering relocation and the treatments required. The tools of project management are applied to this onsite project for a public art installation. The logistical and practical challenges of this artwork were solved with a group of experts, each with different perspectives on the problem.

Interpretative tools in logistics and conservation, such as decision-making and classification are typically oriented towards cognitive interpretation. Research and documentation are efforts to increase our knowledge. Methodological strategies can aid the interpretation and contextualisation of the artwork to approach a new understanding that adds (something to) our single original knowledge of the artwork.

**KEYWORDS** relocation of public art, contemporary art conservation, conservation theory, ethics, onsite conservation project management

**Introduction**

The three-part installation *Noli turbare circulos meos* by the Finnish sculptor Antero Ruotsalainen (1937– ) was commissioned by the Finnish State Art Collection for the premises of the University of Oulu for the opening of the new campus in 1976. The State Art Collection, founded in 1956, acquires art collections and cares for artworks situated in state-owned public buildings. The artwork was installed in one of the atrium-like yards near the Department of Mathematics. Ruotsalainen won the Finnish State Art Collection’s public sculpture competition held in 1974 for a work to be located inside a building planned as part of the mathematics department at the University of Oulu.

Antero Ruotsalainen uses various materials in his art such as bronze, steel or painted steel, reinforced concrete, stone and plastics. Techniques used to create the artworks include casting, welding, cutting, grinding, polishing, drawing and using graphics as well as painting. He has made an active career of public artworks as well as in medal art.

As in the scale model shown in figure 1, he chose to use colours, but with some essential changes in colouring for the final installation. In *Noli turbare circulos meos* he selected geometric forms to create an abstract unity for an installation, using three-dimensional shapes such as a pyramid, a cylinder and one with sweeping forms. The sculpture is made from steel and some of the parts of the surfaces are painted.

In the 1974 competition the preliminary plan was to locate the installation inside the building on the first floor, in the hall area. According to the artist, once the actual size of one of the smaller parts of the artwork was seen on location in the hall, changes were made to the installation plan. The installation was then placed outside and the elements were arranged in a circle when installed for the first time in 1976.

The relocation to the yard was made despite the fact that there were trees too close to the artwork. The landscape design of the atrium-like yard beside the Department of Mathematics was already complete in 1974. At first, the fir and pine trees were small and not intrusive. Although the atrium’s landscape was redesigned in 2001, there was no evaluation of the artwork at that time.

Decades later, when the conservation process was started in 2006, a later relocation was evident because the installation was spread over different parts of the yard. Two parts of the installation were moved in the 1990s. The pre-organisational work for the conservation process began with a condition report in the autumn of 2006. At that time it quickly became apparent that there was an urgent need for relocation and conservation.

There is a difference between the tones on the steel surfaces due to degradation of the surface layer. Steel surfaces are extremely fine, very difficult to maintain and are susceptible to damage. The work had suffered scratches due to people climbing on it and had flecks of rust and bird excrement. It
also had some lichen and airborne dirt on the surface due to its proximity to the nearby vegetation. The paint layers had deteriorated, faded and partly disappeared, especially the red colour. The highest part of the artwork was about to tip over due to the sinking of its foundations. The two other parts of the artwork had been moved away from the highest part of the sculpture during the 1990s, and remounted onto new foundations, which were fastened much too high on the main part of the sculpture relative to the original position of the parts.

When making decisions about an eventual relocation and conservation treatment, factors such as the original arrangement of the artwork and the artist’s intended material aesthetic appearance of the sculpture need to be taken into consideration. There are serious demands on contemporary art conservation to preserve the originality of the artwork. The artwork is strongly rooted to its location and its original mounting and exhibition. In this case it was first situated on the premises of the university in a circular or triangular layout in the yard.

When the project was started there was a preliminary discussion between the owner and the conservator about the artwork’s essential logistical challenges and its conservation problems. After this first discussion, the artist was contacted. It was extremely useful to be able to discuss the production process and the artwork with the artist as there was only fragmentary information and no written material about the sculpture.

The artist Antero Ruotsalainen

Antero Ruotsalainen studied at the School of Applied Arts in Helsinki in the 1960s and has practised as a teacher for decades. He was both an elementary school teacher and a specialist in the education of deaf people. He is a talented speaker who can easily speak out about art. He has been active as an artist for over 50 years. The inventive use of various materials
Antero Ruotsalainen worked on the installation *Noli turbare circulos meos* from 1974 to 1976 (fig. 2). It is one of a number of two- or three-part installations he has created during his career; some are situated abroad and some are in Finnish private and public collections. In the preliminary competition design the installation contained five different parts; he later reduced the number of elements to the final three. The story behind the title comes from the supposed words of Archimedes to a Roman soldier during the attack in Syracuse: ‘Do not disturb my circles! Don’t upset my calculations!’

The installation *Noli turbare circulos meos* was constructed by Haato Ltd., a machine workshop in Vantaa, from welded stainless steel parts, and its surfaces were painted with white primer and paint intended for interior use. The painting, in red, blue and black, was done by the artist himself.

**Organisation of the conservation project**

The conservation of the artwork was a gift from the State Art Collection for the 50th anniversary celebration of Oulu University in September 2008 (fig. 3). The project, which lasted from 2007 to 2008, was organised by a group of professionals based in Helsinki and in Oulu. A senior advisor from the Finnish State Art Collection acted as the official supervisor of the project. A freelance art conservator was appointed as the onsite project manager (the present author).

Although it is fairly common to organise art maintenance using a specialist conservator in other Nordic countries, this is not the case in Finland. In recent years, however, the situation has changed and there are projects sufficiently complicated to warrant professional monitoring, technical art expertise and specialist conservators in the field. The decision on the
choice of the conservator was, in this case, partly driven by economic reality. As the only person in the Oulu area with experience in project management for public art conservation projects, the present author took on the role of conservator and co-project leader.

Collection representative Mrs Hyryräläinen from the Finnish State Art Collection was responsible for the project. The conservator’s responsibility was to combine knowledge and expertise through contacts with a wide range of specialised professionals. The process of decision-making for the treatment proposals (for example SBMK and ICN 1997), ethical considerations, risk analysis, project management and other issues were challenged at every turn. The conservation and relocation project started in 2007 with careful planning and discussions about the targets of the project. Before any action was taken all the necessary steps were planned either by the conservator and the collection manager or at the meetings with all the professionals involved. The Finnish State Art Collection management ordered the services once the conservator had prepared detailed documents for the orders.

**Organising meetings**

The delegated leadership of the onsite project was not questioned due to agreement in the meetings during the process. The cooperation was structured through a series of planned meetings, project management and documentation, as well as reports to the owner of the artwork.

Meetings were organised with people who, for the most part, had not previously been involved with art conservation or art maintenance. Despite some doubts in the beginning, the lack of knowledge about public art and the involvement of diverse professions did not cause any real problems. The project organisation was suitable for the purpose, the project was carried out successfully and the goals for the project were achieved. All the steps of the project were monitored by the conservator to enable flow of information, mitigate risks to the artwork, and to ensure a successful completion of the project.

It was important that the project leader could clearly define the roles and tasks of the project team members, and ensure that there was a clear understanding of the goals for all of the actions carried out during the project, including those on the artwork itself.

**Project members included:**

- The project conservator, who represented the Finnish State Art Collections and also chaired the meetings (the present author).
- A representative from the Real Estate and Buildings Department from Senaatti Properties Ltd. The company financed dismantling, transport, foundation work and landscaping, and cooperated with ISS Repair and Property Maintenance. (Design of the foundation work was done by the engineering office of Reino Niemitalo.)
- The collection manager and the architect were assigned the tasks of reading memos and following up distant partners.
- A representative from Administration and Planning at the University of Oulu acted as secretary for the group.

**Preparatory phases of the project**

It became clear in the first discussions with the owner representative that the project had to be supervised by a person with experience in multifaceted projects such as this ethically and technically challenging project. There were many details that required research such as: metalwork, paintwork and considerations of the paint technology to be applied. The transport of the installation to the metal workshop and back to university also had to be planned. Each stage of the process brought new challenges and one had to be one or two steps ahead in order to maintain an overview of the project. Every phase of the project was documented.

The preparations for the project included documentation of the artwork. The artist’s knowledge was used in the process and he and the project group agreed that it was important to focus on the aesthetic appearance of the original artwork. In other words, it was decided that the visual appearance was valued above the sculpture’s historical or material authenticity (van de Vall 1999). Both the documentation of the artist’s workmanship and the process of conservation work contributed to valuable insight into the artwork. Report writing, contacting different experts including professionals in steel machine workshops, as well as visiting some machine workshops took several months. This was mainly carried out by the conservator. The preparatory phase also included meetings with a freelance architect and discussions with the owner’s representative and the collection manager, who provided a rich source of information for planning the project and setting targets.

Collecting information from and establishing contact with steel machine shops started in 2006. Information gathered from discussions between the conservator and directors and technical managers of the machine workshop studios was a clarifying part of the preparations. Contact with the workshops provided an insight into a whole new area of expertise that included material and technical studio practices, surface quality and finishing systems.

**Research on and documentation of the artwork**

The steel parts of the installation were made in 1975–1976 and welded. Based on contract documentation from 1975, the technical quality of the steel was rotor steel of 3 mm thickness, quality 18/8. Welded parts were ground to the same level as the steel surface. Separate cylinders were fastened together at the highest part of the sculpture. Parts of the installation are finished with a matte surface, the method used for which is no longer known, so a search began for the process used to recreate the original surface in the metal workshop in 1976.

The original processing of the steel was examined based on the tallest cylinder, which was still in its original state. Together with the researchers from the Tornio Research Center, Outokumpu Stainless Ltd., we discovered that the steel was first cold-rolled/milled. Several possible original finishing treatments were identified and discussed. The surfaces were probably textured by brushing (Euro Inox 2005).

A meeting with the artist onsite was required to study the technical condition of the artwork, its materials and to consider the targets for the project. Consultation with the artist...
in December 2007 included a discussion on the choice of the paint colours to be used in the conservation process, based on the conservator’s documentation of the colours originally used on the sculpture. Fading and yellowing of the colours was also discussed. The original colours were classified using the European colour coding system, ‘RAL’. 

It appeared from the artwork’s faded paint layers that the original primer had been brushed, while the coloured top layer was sprayed. The paints used originally were glossy acrylic or latex-based paint manufactured for interior use.

Dismantling, transport and remounting

The layout of the individual parts of the artwork was recorded by the architect and the conservator before it was dismantled and transported. The documentation included photographs taken from several angles, which related position to permanent references such as buildings and trees.

The foundations of the artwork were inspected by an engineer and by Repair and Maintenance for Property Management ISS Ltd. in 2007 before being dismantled. Unfortunately, there were no original foundation drawings. The two smaller parts were easily separated. The tallest part of the system was especially challenging because of the difficulty in separating it from its foundations.

An improved design for the fastening system used for the foundations was implemented during this project. Ground frost protection was also planned for all foundations by an engineering firm. All work related to the artwork’s foundations was financed by the university. The landscape around the artwork was also changed: trees were removed and new green areas were designed.

The conservator and a carpenter designed transportation supports for the various elements. The moving process began with the separation of the artwork from its foundations. The highest part was covered to protect its surface and a frame structure was built around it before its separation. A wooden frame supported the artwork during lifting. The other two installation parts were fairly easy to lift with a bobcat tractor. The 5 m tall cylinder was removed from the yard with a hoist, since the entrance to the yard was only 2.8 m high.

Conservation treatment

Transport and conservation phases were carried out from the beginning of March to the beginning of September 2008. This part of the project proved rather short, and included packing, dismantling, transportation, steelwork, painting, finishing, repacking, transportation and fastening the artwork to new foundations in the original places.

The installation was transported to the machine workshop of Mekahionta Ltd. in Alajärvi, 283 km away from Oulu, where all the steel surfaces were treated. Metalwork was carried out to the original machine workshop quality. To replicate the original effect of textured surfaces in the conservation process, the steel surfaces were first cleaned with water. Scratches were removed by grinding, which also removed the original paint layers. The surfaces underwent mechanical brushing using two types of machines to achieve the final finishing texture.

The quality of the surface after treatment was inspected by the conservator. Fastening pillars for attaching the elements of the artwork to the foundations were also checked, cleaned and given anti-rust treatment.

The paint laboratory of Teknos Ltd. advised on the paint technology to be used for repainting the sculpture. The technical demands for the paint required the choice of highly intense colour suitable for exterior use. It was decided to apply the paint using a sprayer. To copy the original painted design, areas of the surface were masked off by the conservator before paint was applied. This was a demanding task as it was carried out on the finished steel surface where all traces or signs of the original paint had been removed. The only reference was the documentation of the original painted areas.

All the paint layers were recreated using an exterior paint. The use of a two-component industrial-grade paint system was checked by paint manufacturer researchers. Steel surfaces beside painted areas were protected during paint application. Polyurethane paint was sprayed over an epoxy primer on the original areas after the surfaces had been ground and brushed. The surfaces were finally lacquered with an acrylic,
solvent-based compound lacquer with a UV filter intended for cars. The lacquer was chosen for its properties, quality and for practical reasons. Application of the paint and lacquer was carried out by car bodywork specialists.

Before the final move, all unpainted steel surfaces were wiped with metal finishing medium for protection. After further cleaning with water, within a few days the artwork was packed for transportation to Oulu. Upon its return to Oulu at the end of August 2008, the foundation fastenings were inspected for all parts of the installation. All parts of the artwork were installed onto new concrete foundations within three days by the same workmen who had dismantled them earlier in the spring (fig. 4). The sculpture had to be partly re-cleaned after it was remounted. The Finnish State Art Collection and its representatives inspected the reinstalled artwork in the modified landscape surroundings on 9 September 2008.

Discussion

Experiences from the project

Good project planning, onsite management and various decisions regarding implementing treatments and following agreements all contributed to the successful implementation of a complex chain of conservation treatments. Discussions with the owner representative, as well as reports after each step of the project created an active and positive atmosphere. Reports and discussions between the conservator and the senior advisor helped to broaden the administration's perspective on the task at hand so that suitable and sometimes less conventional conservation treatments could be included. Treatment decisions should be based upon the artwork's cultural, historical and aesthetic values and on conservation theory's ethics, not forgetting the artist's original intention for the artwork. How the technical situation of the artwork affects the values mentioned above must be taken into consideration in the treatment decision-making process.

In an interdisciplinary project such as this, science and conservation is equally important. An integration of scientific, contextual and aesthetic knowledge as well as manual skills are required to achieve a successful conservation result (Brooks and Fairbrass 1997). It was important in this project that the experience of the different professionals in industrial research and in the workshops could be brought together with the conservator's expertise. The invitation to tender documents were written and inspected by the conservator as was the daily management.

The artist's photographs from the early days and the perspectives on the history of art in context of the artwork from the 1970s, as well as information obtained directly from the artist on the artwork's properties and his intention, were all considered in the decision-making and methodological strategies (Wisse et al. 2005). Davies and Heuman (2004) reflect on the different approaches: it is necessary to understand the mixed interests in conservation before strategies can be brought into reality. The teamwork needed in the transportation process required cross-disciplinary cooperation. Good communication between the various professionals contributed towards a smooth operation.

Identity of the artwork, ethics and aesthetics of the relocation in 2007

As a physical object, the artwork appears purely as a structure in a given context. At first it seems unfamiliar, even strange and confusing, until it changes during and after interpretation (Stecker 2005; Stecker 2005 according to Currie 1989). The ability to perceive comes with time and experience.

Interpretation of an artwork involves the reconsideration of your self-relation to the world, which typically occurs in a cognitive process. New insights and new originalities are challenging, since they add new interpretations of the object that depend on the situation and the perceiver. By gaining new insights, more flexible and adjusted decisions can be made in light of new knowledge (Varto 2009; Wisse et al. 2005).

We will now look at the aesthetic and ethical questions regarding the location of the artwork installation. Are these three pieces of sculpture a separate artwork or an installation? The process of designing and processing this work unites the three elements into one installation. They were purchased in a group of three parts – and finally located – as an installation. Professional commentary on ethical interpretation is based on the fact that works of art in public spaces are protected by laws that safeguard artistic authorship. If the individual work of art is made especially for a building, space or landscape, its artistic intention will be weakened if parts of the installation are removed or relocated to another place.

Remounting and conservation treatment: the ethics of aesthetical originality

The steel material was treated with several techniques to reach a state as close as possible to the original artwork. The painted areas were carefully measured and the accurate position of the three-dimensional construction was documented. This work was carried out by a conservator.

It was not possible to find any conservation treatment that would aesthetically improve, or even preserve the damaged steel or painted surfaces in the long term. The steel surfaces under the paint layer had to be treated, which meant sacrificing the original paint layer. Even if these had been preserved, no form of restoration would have been able to recreate the original painted appearance. After considering the options, it was a fairly easy decision: not to preserve damaged original paint or scratched and damaged original steel surfaces, but rather to build up a new appearance with the original aesthetic appearance of the artwork in mind.

What is authenticity, authenticity of what? Classical conservation emphasises three types of integrity: physical, aesthetic and historical. Physical integrity refers to the material components of the object; aesthetic integrity describes the ability of the object to produce aesthetic sensations; and historical integrity describes the evidence that history has imprinted upon the object. The importance is to maintain the physical, historic and conceptual integrity of the objects (Muñoz-Viñas 2005 according to Clavir 2002; Clavir 1998).

Ethically, the decision to add material to an artwork at a later stage may be easier to accept and adopt if the artist is available to approve the work (Davies and Heuman 2004). However, as Muñoz-Viñas (2010) has pointed out, the process
of natural evolution of the materials employed and the decay of the artwork may be considered to be integral to the work by some artists. Chemical changes and irreversible processes pose theoretical challenges. In other words, in the case of contemporary art conservation, the custodians will inevitably have to make choices and compromises that may sacrifice certain values. In van de Vall’s text, ‘For instance, whether to preserve the historical or material authenticity of a painting, or its (presumably) original visual appearance,’ she mentions that such dilemmas seem to have increased with contemporary artistic developments (van de Vall 1999: 196).

The artist’s significance, for example the design of the painted areas in this artwork, would be best reproduced using the new technical solutions available, the main point being that the appearance of the newly painted areas should be as close as possible to the original aesthetic appearance. The ethical considerations need to be validated with experienced professionals, and particularly by specialist art conservators and representatives of the collection management such as a curator or museum director. Good ethical discussions and decisions may lead to more solid technical solutions. In Ruotsalainen’s installation for example, more durable paint, which is resistant to UV light for outdoor use, was used on the artwork (fig. 5).

The aesthetic and individual historical unity of the artist’s idea with the installation has been recreated in the conservation process. Information obtained directly from the artist has been invaluable in making the conservation decisions. The arguments for the decisions made have been recorded in reports and memos. Contemporary conservation theories, which are based on subjective, relative notions such as meaning and value rather than objective, absolute notions such as truth or authenticity, are much better able to deal with compromise and therefore to cope with these theoretical challenges (Muñoz Viñas 2010).

Stecker (2005) points out that artistic value based on pluralistic aspects represents art-historical and cognitive values which, strictly speaking, do not relate to ethical values as such. It is here that conservation theory can enable joint discussion on ethical questions.

Conclusions

Through cooperation by funding from the Finnish State Art Collection and the University of Oulu, the demanding task of conservation of the artwork was successfully concluded. The conservation turned out to be challenging due to the delicate work on the surface of steel and paint. The project of the relocation and conservation was a well-organised, cross-disciplinary cooperation, executed by representatives of the owner, conservator, artist, architect, engineer, different technicians and specially qualified painters.

The ICOM Code of Ethics (1986, revised 2004) recommends that for physical treatments all procedures should be as reversible as possible, and all alterations should be clearly distinguishable from the original object. This may cause contradictory situations for conservators and curators dealing with decisions regarding contemporary art conservation. The importance of documenting the arguments for the chosen treatments is crucial when decisions are in conflict with the Code. Documentation was a very important part of this project to elaborate on the ethical demands of the choices made in this project.
Onsite project management can be challenging in many cases. Conserving the authentic is evidently a task that conservators who work with art objects are often forced to deal with. These include dilemmas that in some cases resemble situations where one is forced to choose between two morally challenging courses of action (van de Val 1999; Brajer 2009).

Care of modern and contemporary art is an umbrella term that recognises the pluralism and relativism of today’s artistic expression and respects the diversity in their concepts, processes and manifestations (Schädler-Saub 2010). Interpretation of the ‘new original’ refers to the impression you may gain after careful research on the artist’s significances, thoughts and circumstances. There is evidently an increasing need to relate the interpretation of new originalities to an understanding of the essence of conservation practice. In that light, it could also be proposed that conservation should recognise its diversity within its own field.

Notes
2. Varto (2009) points to Martin Heidegger’s idea of interpretation, that the relation to the world is always and primarily oriented towards knowledge (interpretation). Wisse et al. (2005: 125) discuss flexible, adjusted decisions after receiving new information.

References

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