

## INTEGRATIVE PARTICIPATORY CONSERVATION OF MUSEUM ARTEFACTS. THEORETICAL AND PRACTICAL ASPECTS

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### *Abstract*

*The concept of participatory conservation of museum artefacts involves the investigation of ways by which visitors and the wider public can be encouraged to take an active role in museum life. At the same time, it aims to explore the possibility of adapting the museum's activities to actual realities in an interactive way. This paper presents a series of forms of participation in the conservation of museum artefacts process as an important part of integrated scientific conservation management. For this purpose, we selected several relevant cases from the field in order to identify the participative role of visitors in the conservation of museum artefacts.*

**Keywords:** *Participatory conservation; Artefacts; Museum management; Cultural heritage, valorisation*

### **Introduction**

A modern concept of integrated conservation has a long history, outlined in 1964 by the Venice Charter and then further defined over time through a series of international documents and events [1]. Linking this concept with the current definition of *museum* adopted by ICOM, according to which a museum is an entity that evolved in accordance with the current needs of the society, respectively of its citizens, we come to the concept of participatory conservation of museum artefacts. In this way the museums reach a new stage in their evolution, becoming more open to the public than ever and making the intercultural dialog accessible to anyone interested [2-4].

The mere transmission to the general public of information (scientific and bibliographical data, publications and conferences, specialized shows on radio and television, temporary exhibitions) about museum artefacts is no longer considered sufficient, thus, the development and promotion of activities that require the active involvement of public, best describes the democratic framework that museums should adopt it [5].

The active participation of the visitors and general public in the museum activities represents a democratization process that determines the museums to be focused more on the

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dialogue directed to different categories of public according to their age, interests, professional training, social and cultural origin [5-7].

This is why with the possibility to incorporate the latest smart technology, tools and software into multimedia guides (augmented reality, virtual reality, mobile devices, smart glasses, etc.), this essential educational space of museums extends widely and performs an intercultural dialogue in an interactive manner [5-8].

Four different types of public participation were identified: by contribution, by collaboration, by co-creation, and, respectively, by hosting [9-11]. In some of these cases, the role of the museum is higher, while in other cases the role of the museum decreases and leaves more control among the public [10-16].

The paper presents a way of applying the concept of integrative-participative conservation within the Poni-Cernatescu Museum, a branch of the Stefan Procopiu Museum of Science and Techniques, from the National Museum Complex of Moldova in Iasi.

### **Developing the concept of integrative-participatory scientific conservation**

In what concerns the heritage of a community, the *active participation* of its members must be integrated into the policies to conserve the cultural heritage, and this participation must rest foremost on access to knowledge, a mandatory condition in decision making. Informing the public is, accordingly, an important element of integrated conservation [5, 10, 17–20]. Each activity of heritage conservation (as part of cultural traditions) is, by its nature, an act of communication that aims to broadcast to the public (by means of dissemination, popularization, presentation, and interpretation), as an essential part of the wide conservation process. In this regard, it should be stated that openness towards the public is an important aspect of cultural heritage management, and that facilitating access to its goods is in direct relationship with their state of conservation, age and recognition (value). Activities of scientific investigation, presentation, restoration, and display are warranted by them guaranteeing access to cultural resources, both in the present and future [5, 10, 21–27], foremost when the public can be involved in carrying out these activities.

Current policies concerning Conservation Science put forward *active participation* of its citizens, respectively *cultural volunteering*, which must be integrated with respect to the participants, by highlighting the essential role of each actor [2, 5, 28]. At the same time, voluntary activity hinges on access to knowledge, rendering public informing a very important element in the management of integrated conservation of cultural heritage goods.

Establishing an *interactive rapport with citizens* (specialist increasingly include in their work teams artists, craftsmen and members of the communities of areas harbouring valuable tangible heritage) falls in line with European laws and directives for public access and participation in cultural life, both fundamental in the management of the cultural heritage [5, 10, 29, 30].

Being an integrated part of cultural heritage conservation policies, the *active participation* of the public is essential foremost in the case of the heritage of an autochthonous community. It must rest on access to knowledge, a mandatory condition for any decision [5]. Tightly connected with the active participation of community members is the development of *cultural tourism*.

Public access plays an important role in cultural heritage management, and facilitating the increase of the rate of access to the cultural heritage objectives is directly proportional with the state of conservation (shape, characteristics and functions), valorisation and recognition [2, 5, 10]. Thus, all activities specific to the subdomains of Conservation Science are *justified as means of guaranteeing* the right to access cultural resources, both presently and in the future.

In attempting to identify new ways to attract and actively involve the public (visitors, community members, etc.) in the life of museums, novel approaches have been developed [5,

31, 32] by institutions that have not only made their collections available online (by digitalizing them), but have also adapted their physical spaces and managerial strategies to current trends by replacing the traditional dioramas, artistic-photographic installations (consisting of background images, drawings, photographs, paintings, etc.), and audio guides with multimedia guides that incorporate the latest digital technology (360°, 3D, augmented reality, virtual reality, light works, sound, etc.), mobile devices and smart glasses.

For example, the European Science Museum from Greece developed a partnership addressed to museum visitors of different ages, museum educators, teachers involved in adult education, adult-school students, disadvantaged and vulnerable groups, the general public. It aims to promote innovative didactic procedures for informal forms of science education, through the proper use of the artefacts on display in the participatory European science museums, to the use of teaching procedures employing new technologies as teaching tools, to the forming of a cultural network of collaboration, and to the creation of life-long learning tools, so as to further promote the cultural dimension of scientific knowledge [5, 10, 11, 20-27].

### **Public participation by contribution. The educational game**

In the following we present a series of examples concerning the integrative-participative scientific conservation in the Poni-Cernatescu Museum of Iasi, which for the last years has been developing educational projects involving secondary and tertiary students from the city of Iasi. The Museum is housed by the building in which two great Romanian scientists lived: Petru Poni and Radu Cernatescu.

It is known that museums, no matter their type, alongside galleries and their collections, are values with a wide local, regional, national or universal significance, part of the cultural wealth of mankind, with the state taking on the responsibilities to protect, ensure access, maintain, operate, and develop them. From their origins until today, museums were meant to educate, present, promote and receive concrete values from a certain field of manifestation (painting, sculpture, literature, science, technology, etc.). The accompanying educational system is interactive, with a continuous feedback signal. Furthermore, a museum is a place of cultural memorisation, of presenting and transmitting certain cultural experiences, as to extend their reach over man and across time. The museum, like school, are both ancient cultural institutions. What is peculiar is that only nowadays has conjoining them for education purposes been proposed (explicitly).

Besides the objects belonging to the two great professors of the “Alexandru Ioan Cuza” University of Iasi from the turn of the 20<sup>th</sup> century, the Poni-Cernatescu Museum houses their libraries, mineral collections, instruments, machines and laboratory installations, among others.

Thus, students of grades 5–7, 9–12 and groups of volunteer students from the academic city of Iasi carried out between March and May of 2017 the project: *Modern systems for displaying, preserving and protecting the artefacts of the Museum*. The project was meant to establish an interactive rapport with members of the local community, who were trained as communicators for the conservation of the monument (the building and its dependencies) and of its collections. This project was run as an educational game aiming at drawing the attention of youths of various backgrounds towards the complex activities of displaying, preserving and protecting the collections’ artefacts. A series of brochures was published by the managing team of the museum and distributed to all participants. The brochure contained worksheets for different age levels (primary, secondary and, respectively, tertiary). Groups formed of maximum 15 persons were tasked with visiting the ground-floor of the Museum (Fig. 1), read the instructions in the brochure and answer the questions in the worksheets. The answers were recorded and novel ideas drawn from them. Technically, the worksheets provide a series of information on the youth, their ability to assess the attributes of a museum, their relation with the museum, and also allow identifying viable solutions for the museum, collection or artefact

provided by them. As demonstrated in the field of inventics, the *brainstorming method* applied in colloquial settings often furnishes novel solutions.

5	4	3
6	1	2

**Fig. 1.** The plan of the Museum's ground floor:

1. Entrance hallway; 2. Visitors salon of the Poni mansion; 3. Study room of Petru Poni;
4. Salon for soirees of the lady of the house; 5. the Radu Cernatescu room; 6. Chemistry laboratory

Following is an approach found in a worksheet for primary students. A series of questionnaires was developed together with the pupils, concerning, among other topics, the following:

- Presentation of the museum, with the location of the artefacts in the rooms from the ground level;
- Explanations for terms or phrases used in museology (acquisition, donation, itinerary, owner or donator, inventory, collection, record file, conservation file, restoration file, custodian, guide, curator, restorer, supervisor, etc.);
- Identifying in the exhibition rooms the artefacts, manner of display, lighting system, protection equipment, to environmental and anthropic hazards;
- Modern display systems, very attractive, and involvement in laboratory work.

In regards to this undertaking, a museum should have the functions assigned by the community and take upon itself a role and responsibility that go beyond those of collecting, maintain (consolidate, clean, restore, prophylactic preservation), display and protect works of art. Museums must become essential spaces in the educational process, a heritage system that stimulates intercultural dialogue and in which participants observe and interact in order to better understand individual and collective history [5, 10, 33, 34].

### Public participation by collaboration

Currently, museum have become efficient means of a school, an “annex”, for collaborating and co-participation in the educational process of factors, which are traditionally induced and act separately or asynchronously. Thus, it opens the door for successfully organizing a series of collaborative projects between schools and museums, on a middle or long term (an academic year or cycle), in which each partner can discover new roles, complementary competences, mutual involvements or challenges. A museum can also be the stage for other activities, implicitly or explicitly educational, such as hosting thematic conferences, founding research laboratories or centers, publishing journals.

Another example of a project on this topic was a series of temporary exhibitions held by the Poni-Cernatescu Museum, which sought to capitalize the collection of optical machines and instruments of the “Ștefan Procopiu” Museum of Science and Technology. The target group, consisting of students and professors, analysed and compared the particularities of the old optical instruments with the new ones. The exhibition was used as a benchmark for analysing the main instruments employed in laboratory experiments (particularly the microscope).

These practical activities provided a clear image of laboratory use of microscopes and how samples for reflection and transmission microscopy are produced, basic competencies in identifying surface microstructures and in cross-section of micro-organism and how to carry out colourings in histological and histochemical analyses, and so on.

On the basis of these interactive expounding, publically operator–instrument/device/machine, as an operant system on material samples, an educational project was developed, in which hands-on workshops were organized on chemistry/metallography, microbiology/histology, geology/petrography, museography/modern display systems, museum pedagogy/organization of temporary exhibitions on attractive topics. This project aimed to popularize science among youths of four educational levels: primary, lower secondary, upper

secondary, and, tertiary (undergraduate), respectively. The workshops had small groups of up to five persons working under the supervision of museographers and assisted by their teachers and professors, which practiced various aspects of the topics at hand and also provided brief histories for each of the scientific experiment carried out. The results were presented at the end of each laboratory activity. This was followed by open discussions on how to understand the phenomenon experienced, on the age of the equipment, and on any personal insight the participants had.

Following the practical chemistry, physics, geology, microbiology, ecology, etc. workshops, the target groups involved in the experiment acquired abilities in developing scientific projects, consolidated their general knowledge in the respective fields, but also in museology as a science with multiple implications in personal growth. Principles of work organization were likewise imparted during the workshops, as was the pleasure of carrying out experiments.

### **Public participation by co-creation**

Visiting a collection accompanied by a guide constitutes an educational activity, with an old history in museums, today going through a period of development from the educational point of view, being much requested by schools. Currently, the concept of integrative-lucrative scientific conservation is increasingly used, in the sense of a conjoint development of the museums and collections with the visitors, local administration, NGOs, professional associations from other fields, commercial enterprises, educational establishments, etc. Thus, there have existed for several years now new forms of collaboration with schools, which advance and develop new work methodologies, both for professors and museum educators. These present-day experiences lay the groundwork for thorough reflections and contribute to establishing guiding standards. The situation is still open and flexible, fortunately presenting the opportunity to carry out much more quality collaborative work by museums and schools.

For this aspect, the museum applied for a project financed by the Communitarian Foundation from Iasi, entitled *Micro World* and carried out in February–May 2017. It sought to organize and promote workshops on laboratory work attended by students of different grades and coordinating professors from institutions of Iasi. The students were involved in conducting petrographic, histochemical, histological, metallographic, etc. workshops, using theoretic and practical knowledge from the fields of: geology, chemistry, biology, and physical metallurgy. The project promoted these sciences in which the two reputed scientists worked, focused on the students' need to understand and assimilate the concepts imparted in class in a pleasant, recreational manner, thus more easily understand in depth complex concepts by finding them attractive and interesting.

The workshops consisted in preparing the permanent preparations for microscopy, using the microscope for identifying microstructures sampled from various artefacts, from the grey stocks (used in experiments and as archaeometric reference systems) or personal objects, water, atmosphere, soil, etc. The workshops were accompanied by debates on the practical implications in connected fields of the experimental data, such as: authentication of old artefacts, assessing their state of conservation, heritage assessment, elaborating intervention protocols in restoration-preservation, selecting compatible systems of display. The project concluded with a quiz and presentations by the participants of the work conducted in the workshops. The project contributed to improving scientific acumen of students by involving them in engaging and creative non-formal activities supported by extensive educational and entertainment resources.

### **Public participation by hosting**

The relationship between a museum and its public is entirely special. Those crossing the threshold of the museum for visiting or other activities enter another universe, in which they have the possibility to pursue personal development, engage in leisure activities entirely

different from the mundane. At moments of direct interaction, their states are changed by the museum experiences.

In its turn, a museum depends on the public. The museum has the role of developing, conserve, study and present the heritage it stores, for the benefit of the public, community, society. Without the public, the museum would be a lifeless entity.

Another project, concerning the crystal-flower and mineral collection of the Museum, was *Flowers Rocks*, which was likewise financed by the Iasi Community Foundation between February and May 2018, which represented a good example of *public participation by hosting*.

The scope of the project was to draw as many youths as possible into the cultural-educational activities specific to a museum dedicated to reputed chemists and geologists. The main objective of the project was to carry out interdisciplinary educational activities targeted foremost to pupils of grades 8–10, in the form of geology, chemistry and plant-physiology workshops. The overall goal was to attract youths towards museums and to stimulate team work, to actively involve the pupils in solving tasks, to habituate them to practical and analytic thinking by recording and discerning the results obtained by the work groups.

The pupils identified minerals and rocks, they “grew” crystals using chemical substances and specific glassware. They were coordinated by volunteers (teachers, undergraduate and postgraduate students from the faculties of Chemistry, Biology and Geography-Geology of the “Alexandru Ioan Cuza” University of Iasi) and museographers. Thus, the pupils learned science by interacting with the volunteers and museographers, who allowed direct interactive access to presentations and practical demonstrations, learning the history behind each scientific experiment. The results of each laboratory were presented at their conclusion, accompanied by debates on the ability to comprehend the experienced phenomenon. This was meant to attract the youths towards the museum and to publicly disseminate the value of the museum’s artefacts and collections.

Following the practical workshops, the target group involved in the project acquired abilities in developing scientific projects and consolidated their general knowledge in the fields of chemistry, physics, biology, geology, and ecology. Furthermore, they learned to organise their work within the workshops and discovered the pleasure of carrying out experiments on collected samples and to identify their implications in the science of conservation.

## Conclusions

Even though there are numerous controversies and limits set on the concept of public participation to activities organised by museums, it is nevertheless also considered by many authors and practitioners as an option of cultural institutions to reconnect to the public, demonstrating its value and relevance. It is actually a vector for publicising the heritage component of a museum. Thus, the visitors’ participation and involvement are considered premises or adjuvants for carrying out other activities by museums (social, ethical, scientific-educational).

The participation of all categories of public in museum activities and programs include various techniques used by museums to involve the visitors (hands-on activities, virtual museums), promoting at the same time the institutional objectives (communicating information on the museum goods for educational and recreational purposes).

Culture, alongside economy, the social field, and environmental protection, is a factor in the durable development of communities, highlighting the importance of local and regional identity, which involves the need to protect the cultural heritage and to make it more comprehensive by the wider public. Comprehending the value of the cultural heritage must take place by developing educational projects and programs, with the participation of youths in activities of restoring, preserving, displaying, and protecting the museum artefacts.

These activities run by museums in the form of specific workshops must be presented to the younger public by any cultural institution tasked with publicising museal heritage. Thus, youths are to be informed about the necessity to continuously monitor the artefacts’ state of conservation in order to prevent and mitigate the damage and degradation processes by

controlling, recording and adjusting the environmental and anthropic factors, how to inspect and document the state of the artefacts, how to establish an integrated program for managing the sources of damage to the artefacts, how to adequately manipulate, store, display, maintain, pack, and transport heritage goods, as well as how to incorporate information and procedures concerning museum collections in emergency-situation or hazard (earthquakes, floods, fires) management plans.

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