

The museum forum: debating the environment

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Abstract

The Rio de Janeiro Botanical Garden is a scientific institution whose ultimate goal is to research and preserve Brazilian flora. This goal was expanded, in 2008, to include the study of mankind's relationship with the environment, which in turn led to the creation of the Museum of the Environment. One of this Museum's main activities, the Environmental Forum, offers the opportunity for individuals not only to participate in but to feel part of the debate over the real environmental issues that affect our quality of life. The Forum's debates on the environmental issues that affect different people provide information and direction to public opinion that are distinct and qualified. Based on these prerogatives, we would like to present the Environmental Forum of Biodiversity, which has been developed around the case of the "*perereca*", a species of small frog that is under threat of extinction and is endemic to the marshes of the Mário Xavier National Forest, in Seropédica, which now lies in the path of the construction of the Rio de Janeiro Metropolitan Arc, a new ring-road project being built around the city.

Introduction

The Rio de Janeiro Botanical Garden is a scientific institution whose prime goal is to study and preserve the flora. At present, this goal also includes a debate over the environment. With this in mind, in 2012, the Museum of the Environment's scientific dissemination programme created a permanent Forum for debating environmental issues. Its purpose was, and continues to be the promotion and encouragement of society's involvement in the debate over socio-environmental questions, by means of critical reflection and a joint effort to build the foundations of knowledge, so as to ultimately create a public opinion that is fully qualified and aware of existing environmental problems. By involving society, the aim is also to encourage a critical perception among individuals in relation to the public administration of environmental resources and services, so as to ensure the preservation of our environmental heritage for future generations.

The idea of museum-related initiatives aimed at promoting a critical perception was first introduced by Yves Girault and Cecile Fortin-Debart (2001), through their concept of a "parliament" (at an exhibition put on by Belgium's Royal Institute of Natural Sciences), the creation of debate cafés (at the National Museum of Natural History in Paris and at the Ethnographic Museum of Neuchâtel) and the holding of "islands of expression" (at the Sciences Centre in Montreal), all of which offer novel ways of encouraging people to debate controversial issues.

The Environmental Forum Programme, from a communicational dimension aspect, contributes to the process of public deliberation by providing the intricate questions of the environment with exposure, through a process that places different arguments and views of the world from different communicative contexts directly face to face. This visibility ensures that the problematic rendering of certain themes transforms them into questions of public interest, which is only possible through such mediations, both in terms of the paths and angles that need to be explored, but also in terms of the composition of the arguments made with the cultural repertoire that backs them, such as information, material culture and past experience.

The communicational goals of comprehension and mutual understanding of the forums help determine both the insertion of the discussions as well as the representations

used in the debating processes. The issues are not an end in themselves, but rather a process that begins within the scope of the museum environment and then unfolds as a result of the participation of a variety of different agents, all committed to its reconfiguration, so that they can ultimately improve their understanding of the issues in question and thereby propose alternative paths and solutions.

Methodology

Based on the premises described above, the Forum was designed on the basis of environmental themes that were already circulating within the public domain. Four courses were adopted in building an environmental case: knowledge, achieved by using science and technology; social representations, made up of the hybridism of the discourses of the many different social players within the public domain; policy, the main protagonist in the decision making process; and the media, made up of the treatment given by journalists to environmental controversies (DAVALLON; GRANDMONT; SCHIELLE, 1992, p.131/132).

The themes developed for the Forum had, as their target audience, those with a secondary or university education, aged between 12 and 25, who visited the Museum in tour or school groups during the week, and families and spontaneous visitors visiting the Botanical Garden, especially on weekends. The Museum presently offers five themes on the environment, which are: biodiversity, landscape, solid waste, water and sustainability.

These themes and environmental questions are developed by the Forum team using environmental information that considers their materiality and their non-materiality. This involves both that which has objective and measurable strategic content, as well as that which is appropriate and adapted to the games and language of social practices. In this sense, by reconfiguring the mathematical language of information one can place it more appropriately within a socio-cultural context, such as, for example, substituting a text that talks about an area that will occupy 1.3 million square meters with an aerial photo graphically altered to show twelve *Maracana* football stadiums superimposed over the area in question. The Forum therefore offers its participants a range of illustrations, images, photographs and drawings that help exemplify and characterize the themes and issues under discussion.

A graphic interface is used to present a particular problem or issue and this is backed by an IT platform that exhibits sequential screen pages with information on the question under discussion, using animation, graphics, images, text or video. This presentation is subdivided into blocks that are organized according to the increasing level of complexity of the problem in question, and at the end of each one of these blocks, a question is asked that requires the individual to choose from a set of multiple choice answers. On average, alternatives for debate followed by multiple choice questions appear after every three screen pages. The results are shown in graphic tables. A mediator encourages those present to participate in the voting or in checking the result of their votes, through comments, questions or statements that direct the participants to the debate. In justifying their positions, participants interact with others by offering their personal views on a given theme and by seeking to ensure that the best argument prevails.

The votes are recorded in the Museum of the Environment's databank and thereby constitute an excellent source of research and evaluation for the Museum's researchers. The mediators are made up of professionals with educational degree backgrounds in the fields of Biology, Geography, Environmental Sciences, and the Modern Arts among others. In addition, the material produced for the Forum by the Museum's team is studied by the mediators and they undergo a training programme for each Forum that is run.

After several Forums have been held, the mediator sends around a questionnaire whose purpose is to help him get to know the people participating and their views on the subjects being discussed. The mediators stimulate and provoke debate. They encourage a degree of interaction and questioning in relation to the scientific and technological knowledge contained in the testimonials of scientists, the journalistic work of the media and evidenced in the presentation, the political speeches of the governing authorities and management specialists, as well as the manifestations of those communities affected by the problem in question, whether through testimonials or through images. In this context, the search for the best argument may generate positions that had not previously been considered during the last vote of the Forum, which in turn allows the mediator to insert new answers into the system, thereby offering new alternative voting options in subsequent Forums.

In this sense, in terms of a methodology that could be used for developing future forums, we sought to work with the multiplicity of levels of reality and logic that govern the issues we face in the world today. We used a multi-referential and multidimensional approach, which values contextualization in time and space, and involves both the scientific process of building knowledge, as well as the substratum of social reality that between them constitute the conditions for its germination.

Results

The pilot project described here in more detail deals with the theme of Biodiversity, whose Forum discusses the survival of certain species of fauna threatened by extinction in the National Forest of Seropédica. This potential problem is the result of the construction of a ring road, the *Arco Metropolitano*, to aid in the transport of production out of the city of Rio de Janeiro. The key figure in this drama is a small frog endemic to this protected area that is threatened with extinction. The problem has become especially complex because of the inter-relations between environmental processes (threatened species), socio-economic processes (urbanization and the development of towns on either side of the road), cultural processes (the route of the new road threatens archaeological sites) and infrastructure processes (link between ports to facilitate the transport of production).

An analysis of the data initially obtained is not representative of society as a whole in methodological quantitative terms, but it does offer us certain qualitative data on the specific groups that took part in the activity. The questions that were debated provided three views for analysis: 1) a view with a developmental angle, expressed as “to build the *Arco Metropolitano* and thus promote the development of this region and optimize the transport of production out of the city of Rio de Janeiro, regardless of any environmental issues there might be”; 2) a view with an ecological and utilitarian angle, expressed as “to stop the works and study the intrinsic potential of this species of frog, as well as its probable medicinal properties, regardless of the economic and social development of this one area”; or 3) a view with a consensual participatory angle, expressed as “to reconcile the development of the area in question without ignoring the environmental potential uncovered as a result of the endeavour”.

The results obtained thus far, after the holding of 40 forums involving a diversified range of 1,121 people in all, were as follows: The participation of the general public begins with an outline of its profile. In this first year, the majority of those taking part were school children, at 41.1% and university students, at 27.8%; families represented 20.2% and spontaneous visitors the remaining 10.9%. The majority of those taking part, that is, 57.7% of the total, were aged between 11 and 21, with the second largest percentage, 26.8% representing those aged between 22 and 32. The percentage of other age groups, those between 33 and 55 or more, was not significant. Another figure that was worthy of mention was the proportion of women that were present, 66.1%, compared to men at 33.1%, while 0.08% did not specify their gender.

The first question posed by the Forum made reference to the sounds made by animals. The public were asked to choose their favourites from five drawings of different animals. The frog, our main character, came in third, with 18.2% of the votes. The bird was in first, with 27.7% and the other three were the tapir, with 25.4%, the monkey with 17.8% and the cricket with 10.8% of the votes.

The second question dealt with the main theme of the forum in a direct and simplified manner: "This little frog lives in the path of the ring-road. What can we do about it?" Of those who answered, 44.5% considered that, since we are dealing with a protected area that has its own endemic species, the frog should be preserved; 23.9% believed that the social and urban benefits of building the road justify losing this species; and 31.5% believed that the frog should be saved because of the possibility of using it for medicinal purposes.

The last question posed was "How can one reconcile the social benefits resulting from both the biological diversity of the region and the construction of the Arco ring-road?" The majority of respondents, 56.4% were in favour of stopping the building work and carrying out further studies in order to get a better insight into the area and thus minimize any potential damage. The second largest group, 23.3% of the votes, suggested that the development should respect the boundaries of nature and that, therefore, the building work should be stopped. The last group, with 20.3% of the votes, suggested that work should continue, arguing that any construction project of this size always involves a certain loss of diversity.

Discussion and Conclusion

The analysis of the first forums involved a number of visual assessments, which included observing the behaviour of the people attending, their reactions and their positioning. The mediators were instructed not to express their own individual opinions so as not to influence the perceptions of the group. Instead, they were encouraged to gradually present new information to the group, which in turn introduced increasing amounts of complexity to the socio-environmental questions under discussion and helped problematize and stimulate debate within the group. Thus, when a participant was on the verge of choosing his answer, the mediator would raise a new question that would bring new information to light, thereby forcing the participant to rethink his answer and so encouraging debate among the participants. This was aimed at showing how difficult it is to take a certain position for those whose job it is to make decisions relating to controversial matters.

The presence of a large percentage of students, especially teenagers, can be explained by this group's agenda being focused on the Museum's Education Programme. At the same time, it suggests that the marketing of this activity needs to be increased in terms of family groups and spontaneous visitors, especially those in the 22 to 55 and over age group. The first question, dealing with animal sounds, showed that the participants were unable to relate sounds to animals, and ended up voting for those animals that were most familiar to them and/or most appreciated by them.

In the case of the second question, one could note that the general public was sensitive to the fact that the Mário Xavier National Forest is a protected area and that it has a species that is endemic to it. These motives were sufficient, in their eyes to ensure the preservation of the area and the species. The respondents proved to have no sympathy with regard to the possible social and urban benefits of the new road system. One might infer that the place where the Forum was held, namely inside the Museum of the Environment, may have exercised some level of influence on the audience as, during the debates, certain important arguments were raised in relation to the development of the region that might come about with the building of the road, consequently leading to an improvement in the quality of life of local residents. As for the potential medicinal benefits that maintaining the habitat of the frog might bring, there was certainly a high

level of interest among the respondents in preserving the animal, however, now, less so for its intrinsic value and more so for its value as a resource that could be directly used by mankind.

In the case of the last question, despite its complexity, we noted that the voters tended to defend environmental issues in a broad sense, often minimizing the importance of development and, therefore, of the building of this ring road, which would ultimately improve the quality of life of people in its vicinity as well as improving traffic in the city and transport of production out of it. One can see from the voting choices that, once individuals are armed with information that puts a certain question into context and relates it to different dimensions of reality, they are able to expand their powers of reasoning. They are able to participate more actively in the debate because they have now established more concrete relations with their own role in the world in which they live, a fact that often develops into pre-established “zones of exchange”. During the forums it is easy to identify the public’s participation, in how the debates unfold, in the changes of opinion and in the defences provided for each affirmative. One can clearly see the satisfaction and the sense of belonging that develop within people when they are called upon to participate. In the majority of cases, one can also note a certain desire for information, for the appreciation of the individual and for the possibility of providing society with space where it can make its opinions known on the development of projects that are directly linked to its quality and style of life.

One can therefore consider these Forums as an excellent opportunity to anchor communication within society without, however, excluding facts and scientific theories relating to environmental questions from public debate. The Environmental Forum on biodiversity has proved to be an important experiment and one that provides evidence of society’s eagerness to be aware of its urban problems, as well as to have the option of participating directly in the discussions that form an essential part of the decision making process.

References

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