Representing science-in-the-making in exhibitions

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This paper looks at three exhibitions to examine the changing roles of science exhibitions from places of “cold” science, where stable knowledge is communicated, to places that increasingly engage with “hot” science, controversial research, open debates and unfinished science.

The Open Research Laboratory

The first example is the Open Research Laboratory at the Deutsches Museum in Munich. Seen as a means to encourage the public understanding of research, this functional laboratory-in-the-museum has been set up in space accessible to the museum visitors.

The open research laboratory carries out and shows “live” research in nanotechnology. The aim of this laboratory is to display, explain, and discuss nanotechnology and, at the same time, to carry out research activities. At first sight, the open research laboratory looks like an ordinary laboratory. We see scientific equipment on benches, such as a scanning tunneling microscope; there are computers, researchers, chairs, and desks; experiments are being carried out. Yet, putting research and researchers on display inside a museum means rethinking and reorganising the laboratory’s material and social architecture. So monitors have been duplicated to enable visitors to see what the researchers see on their computer screens. Other elements that were added include: a 1.2-metre glass wall to separate the laboratory and the visitor, large video screens, demonstration objects, information boards, posters, leaflets and flyers.

Clearly, the laboratory-in-the-museum has to deal with a new, “extended” object-world. The laboratory is populated by objects that perform work (like a microscope), objects that display and explain work (like models used for demonstrations), and objects that focus and frame attention on the performance and explanation of work (posters and information boards, signs).

There are several challenges for the researchers who work in the open research laboratory: they have to be “on display”; they have to cope with a certain level of noise; they have to work within museum opening hours; they are not working inside their university for a certain period. Challenges also lie in communication between the researchers and the visitors. In a museum, researchers not only interact with peers but with a diverse audience, which means that they have to explain their research to lay people and limit their use of scientific jargon. What’s more, they have to initiate discussions with visitors and encourage them to ask questions. For researchers, the laboratory-in-the-museum redraws the lines between essentially private and public spaces, between scientific research and science communication, and between experiment and experience.

The majority of the visitors like very much the discussions they had and they comment positively on the comprehensiveness of the explanations given. Yet, most visitors do not
seem to experience their visit to the open research laboratory as a real “dialogue”. Most schoolchildren feel it to be a “situation at school” rather than a “discussion” or a “round of research between friends”. The museum’s experience also shows that instilling a pro-active attitude in visitors and getting them to ask questions is anything but easy. Some visitors reportedly do not “dare to disturb” the researchers.

The Gallery of Research

My second example is the Gallery of Research, a gallery that was due to open in 2006 in Vienna. Here is how the gallery was described on promotional material to advertise the first pilot event in the (unfinished) gallery: “The Gallery brings together scientists and artists (…), and engages them in a reflection on alternative ways of communicating scientific results to a larger public of non-experts. The public debate on GM food is only an occasion to talk about new forms of science communication. A purpose-built installation will confront the visitor with the complex ethical, social and political dilemmas of the food controversies”.

The Gallery’s purpose was “to tackle not only successful scientific findings, but also challenges, unpredictable turns, pitfalls, failures and aberrations in research”. The project experimented with a new architecture of display, drawing on art installation and science, in order to create a forum in which various groups could debate, and where art and science could be brought together. The exhibition included, amongst other things, a video installation showing an anti-GM demonstration, an art installation with empty tins with labels of GM crops, a wall with keywords (in different size and colour, depending on their significance in the controversy), a timeline of the GM history. The exhibition was described as a “blend of art installation, original scientific research and live performance aimed at positioning the visitor in a simulated public space” (Yaneva et al. 2009). According to the gallery director, the whole installation provided a “setting that is reminiscent to the atmosphere created by the controversy. (…) the tensions in the debate were also reproduced by the irregular geometry of the installation” (personal interview).

However, one of the problems was that the invited scientists were not at ease with their new, more performative roles. Also, the public was “not yet comfortable enough to explore new methods of science communication, based on art installation techniques, simulation and fair, i.e. to stroll, to ask questions to the presenters, to engage in communication, to question (…) to look behind the scenes” (Yaneva et al. 2009).

The gallery was to open in October 2006, but eventually never did. The displays shown during the first pilot event caused some agitation: the press found the event “strange” and “elitist”; the Austrian Academy of Science wanted the concept to be rethought and did not approve of a reworked version; and, after two years of work, the director of the gallery eventually quit her job.

The wahr/falsch inc.

A final example is the “wahr/falsch inc.” exhibition (true/wrong inc.). The exhibition took place in summer 2006 and presented 11 “hot spots”, that is, controversial topics (such as doping, the end of oil, life on Mars, or allergies). These topics were exhibited as 11 modules in 11 different locations in the city of Vienna, along the pathway of U-Bahn number 1. The exhibition was advertised as follows:
“Eleven small exhibitions [...] deal with sensitive issues on the relationship between science and society. What is true and what is wrong? “Die wahr/falsch inc.” raises questions in the form of images, installations, radio plays and discussions, that put science into question. [...] In doing so, “die wahr/falsch inc.” does not deliver answers, because science – like art – only ever asks new questions. [...] Essential is the role of the visitors who, with their knowledge and their questions, become part of the “wahr/falsch inc”.

The curators used an “expanded mix of methods” for the displays and wanted to make sure that “during the exhibition, things can happen”, i.e. that visitors did not encounter an already finished exhibition (personal interview).

The exhibition revealed some of the characteristics of controversy from the perspective of sociology of science: the multiplicity of voices and arguments; the attempt for symmetry between positions, such as right and wrong; the uncertainty and ambiguity of any scientific project. Yet it also points to one of the inherent challenges when exhibiting controversy: to try to reveal the messiness and complexity of science without confusing visitors too much. The weekly Austrian newspaper Falter wrote that the exhibition was “partly more a research project than an exhibition: clever and creative on the level of content, deficient in terms of communication” and they judged some elements of the exhibition “impressive” and an “eye-opener”, but “too demanding” overall.

The texture of controversy

The examples discussed in this paper brought together a range of different actors, stressed the uncertain nature of science, and had to deal with some difficulties to communicate their message. While revealing the unfinished character of research and the multiplicity of positions in controversies, these exhibitions operate two kinds of shifts: from a display that answers to a display that questions and from an exhibition that represents existing matters to an exhibition that performs, creates, and experiments with new ones. Not only did the exhibitions represent “hot research”, they also, to a certain degree, became “hot” themselves, for they stressed the uncertain character of science and experimented with the very essence of exhibitions: communication with the public.

A controversy moves the single object from being the primary focus in an exhibition and concentrates instead on positions and relationships between actors and objects. The move from cold science to hot research means that a process, rather than a product, is on display. While the “cold” way to exhibit science is through stabilised objects, the “hot” way works through highlighting the multiple relationships between visitors and objects and between the positions of the various contenders in a controversy. Hence, symmetry and tension come in different guises: between art and science; between right and wrong; between various voices, views, interests. The museum object is thereby opened up in several ways: to be flexibly interpreted, to be engaged with, to be questioned, to be challenged and misunderstood.

A “hot” exhibition about controversy is about movement: the bringing together of a various methods, actors, views, materials, arguments. How can a museum - an institution that stabilises, orders, classifies, frames, freezes - display and contain “hot” topics, that is, topics that radiate in so many directions? Are there some topics that are “too hot to handle”? Exhibition makers have to negotiate a position between a politics of moderation and a politics of controversy.
Further reading

