New views on Nature?. Renewal of Natural History Museums by the Berlin example

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NATURAL HISTORY MUSEUMS: PAST, PRESENT, FUTURE

The first Natural History Collection on display is believed to be the one of famous Swiss naturalist Conrad Gessner (1516 – 1565). Gessner is best known for his *Historiae animalum*, which is considered the beginning of modern zoology. Although his collection was lost after his death, it can be assumed that its display resembled the status of his scientific work: due to the lack of understanding of modern systematics putting them in alphabetical order. This of course is somewhat logic, since mankind just started to classify nature scientifically.

However, the Muséum National d'Histoire Naturelle in Paris is said to be the first Natural History Museum by modern definition. It was established in 1635 as the Royal Medical Plant Garden and by 1718 lost the medical function to focus completely on natural history. During the French Revolution it was reorganized and named Muséum national d'Histoire Naturelle with aims to instruct public, put together collections and conduct scientific research. A museum definition that resembles the internationally accepted latest version of ICOM: "*A museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment.*"

In the following centuries various Natural History Museums were established all over the world or opened in new, own buildings, for example in Hungary (1802), Philadelphia (1813), London (1881), New York (1869), Pittsburg (1886), Berlin and Vienna (1889), Barcelona (1882) or Washington (1910). All of these Museums were based on scientific collections – thus presenting precisely that. Due to the nature of their research - dealing mainly with classification – museum concepts dealt with systematics and the approach to create a 3D encyclopedia of nature or at least the animal kingdom. The philosophy, to own and present one male and one female of every species alive is manifested in "Dublettenkatalog" that were used to exchange between other institutions. It is important to note that back in these times, science and collection almost equaled each other, thus gläserne Sammlung und halbgläserne Wissenschaft...

Collections early offered only limited access. When for example the Humboldt University in Berlin opened nine halls in 1814 only researchers were not restricted. Students were allowed to visit Wednesdays 16:00 to 18:00 in summer and 14:00 to 16:00 in winter. The general public could enter Tuesdays and Fridays from 12:00 to 14:00 and tickets had to be purchased one day before – but were only sold to residents of Berlin on written demand in which the number of accompanying strangers had to be stated. It seems ridiculous, but still visitor numbers were high and kept rising. However there were also other examples early on and the first natural history museum to grant access to a general public was the Ashmolean Museum in Oxford that opened in 1683.

Towards the end of the 19th Century museum concepts changed. The new museum idea proposed to

rather explain than only to open the scientific collections. It also focused on scenography and the esthetics of selected objects and the Natural History Museum in London was considered one of the best examples. As a result of this new trend exhibition and collection started to separate from each other.

When due to growing collections the Humboldt University in Berlin had to expand somewhere around 1889, the concept of the new museum building was heavily debated: should the whole collection be accessible to the public or will scientific collection and exhibition be separated from each other. Even if the international museum by that time clearly preferred the separation Berlin stood in the beginning with the idea of general accessible collections. But before the new museum even opened, Directors changed and when finally Zoology, Mineralogy and Paleontology moved in, the ground floor hosted the exhibition but cellar and the upper floors where restricted to collection and research. The concept failed on several levels: the halls on second and third floor were built with high ceilings and space was lost for storing the ever growing collections. Twenty years after the new museum was opened it was already too small and a new wing had to be added - now with lower ceilings and built especially for collection use. The situation for the exhibition was even worse. Displays were filled heavy contents and esthetical objects that would attract visitor attention were used almost only accidentally. During the opening ceremony the German Emperor was so horrified, that he immediately offered to send out hunters to shoot deer, elks and lions for the exhibition. Visitor numbers were only around 20.000 a year in the beginning – a complete disaster. However, the director – Karl August Möbius – had later great influence with his museum ideas towards more didactical explanations.

In the following decades natural history exhibitions separated in general even further from research and collections. The pedagogical focus shifted from Bildungsbürger and a general public towards school classes resulting in the aim of creating three dimensional textbooks. With again new ideas or philosophies of lifelong learning, PUSH and PUR we are slowly reaching the present age. Museums that are presenting in a new modern style renovated in recent years, for example Paris, Berlin, Brussels and Barcelona. Others are about to change their exhibitions or planning new museum buildings like Copenhagen, Bergen or Basel. All of these museums shifted the focus back on objects and esthetics but connect information in multiple layers – plus they are trying to relate their exhibitions again stronger with scientific collections and their research.

Why is this important? There is a lot to learn from past concepts. Were there limitations, how were changes introduced and how did Museums in the past deal with the same problems we are facing? It might not be necessary, but sometimes it helps to know where we come from in order to develop for the future.

RENEWAL OF THE MUSEUM FÜR NATURKUNDE IN BERLIN

Of course there have been multiple changes in the exhibitions of the Berlin natural history museum from 1889 until today. However, since the end of the second world war until the early 2000nds, the museum received no sufficient funding to undergo baldy needed renovations. When in 2004 finally a renewal project was granted it was the first major overwork for decades that covered also new exhibitions. The renewal Project ended in July 2007 with the reopening of four permanent exhibition halls and one space of 350 m² for temporary shows. The new concepts were an immediate success. From Friday noon until Sunday, 19:00 over 40.000 visitors stormed the museum at the first weekend. In the wake of the new public reputation, more funding was granted, and by 2010 the east wing, one of the last war ruins of berlin, was restored and ready to host one of the world's most modern wet collections. Still, the Museum für Naturkunde has about 80 % of

its building still in need of refurbishment. This causes a further renewal project which started in November 2013 and overall, the museum plans to be under construction until 2025. Besides renovating the building, this means plenty of room for new collection, research and exhibition concepts. How will they relate to each other and how did and will Berlin handle the workload?

FIRST STEP: RENEWAL PROJECT FROM 2004 TO 2007

Contrary to some of the currently most interesting projects in the natural history museum scene like Copenhagen and Basel where concepts are based on brand new buildings, Berlin had and has to renew within the limitations of its historic edifice. Mainly funded through EFRE and Lotto, 18 Million Euros did cover for renovating five exhibition halls and a staircase as well as putting up exhibitions in four of them. From the beginning the project aimed on regaining international reputation as one of the important natural history museums in the world. To achieve this goal an analysis was run to recognize the weaknesses of the Museum in the past decades. As a result, several premises were formed that would help during the process of fine tuning preliminary conceptual ideas. First of all, the exhibitions should shift their function from education towards raising interest. This might be regarded as a minor change but is essential for the success so far since it enables the team to focus on the most interesting facts and stories rather than trying to explain biological processes or complex systems. The general idea was to generate a space were visitors feel comfortable during their roughly two hour stay and make them curious about natural history topics. It was our believe that this would rather be achieved through emotions than through intellectual challenges. Therefore concepts focused on the esthetics of objects, scenography and display of the exhibits and a sensitivity not to overload with heavy contents. Objects should come from our own collection, original items should be preferred rather than using casts, models or reconstructions and contents should be focused on the research of the museums scientists. Information would be placed in four different hierarchies: headline, basic overview, main story and details. The different levels should be easy to distinguish from each other, and there should be no competition between objects and information on the visual level. Additionally, digital media was mandatory to get a balance between the historic building and expectations of visitors towards a "modern" museum. However, the use of media should help understand objects and related stories but shouldn't compete with the exhibits.

Regarding target groups the museum aimed on adult visitors. Not to be mistaken: school classes, children and families are important to the natural history museum in Berlin, but they already visited the exhibitions. The group with the biggest growth potential was so called "single adults" that rather would go to art museums. Since Berlin is a tourist city, there was plenty of room to improve in that section as well. For the concepts that meant to reduce "school like" didactics and to playful interactives, to put emphasis on scenography and to present understandable texts for a general public contrary to creating them for children. We assumed that families and school classes still would come for the dinosaurs or taxidermic specimens. The results so far reassure this process: visitor numbers increased from around 200.000 to almost 500.000 per year.

Content wise the new exhibitions circle around evolution. From dinosaurs of the upper Jurassic through System earth and Solar system to Evolution in Action the four connecting halls are all about the development of live and our planet through time but highlighting those stories that are connected to research topics of the museum.

After putting up such clear premises and agreeing on the general topics it was quite easy to find exhibits and related stories. The real challenge was to build up a line of suspense, since the building dictated that the most attractive items – the Dinosaurs – had to be presented in the first hall and visitors would see them from the entrance.

Overall, more than 40 scientists contributed to the new permanent exhibitions and thousands of items from our scientific collection are on display. This makes it far easier to create additional programs like guided tours or workshops that focus on communicating science and the use of our collections. Basically, it is going back to the roots: making people curious about science and natural history. With all its programs, the museum is still a place of education but different communication channels like public lectures, guided tours, webpages and exhibitions don't have to do it all and can work to their strength.

SECOND STEP: RECONSTRUCTION OF THE EAST WING FROM 2008 TO 2010

The new exhibitions were an immediate success. Next to increasing visitor numbers, the project got international press coverage over a period of several months. The discrepancy of the refurbished halls and the insanitary parts of the museum building that even included a war ruin mounted some public pressure. As a result only a couple of weeks after reopening money was granted to restore the destroyed east wing.

Since the first part of renewing the museum did focus on exhibitions, the second step had to serve the collection and research. The biggest needs were in the collection, especially the wet collections that were spread all over the building under unsatisfying conditions – even being an harassment with large amounts of alcohol stored in spaces where temperatures easily could rise over 40° C in summer.

Within three years the new building was finished winning several architectural prizes for the idea to keep the historic outside walls like a shell for a complete new building on the inside that fitted modern collection needs with lower ceilings and the separation of storage and workplaces.

While the planning considered collection requirements like climate control and safety precautions that would lead for example to limited access for collection managers and scientists only, there was the risk of losing the possibility to give behind the scenes tours to visitors during selected events. This was an important part of the discussions due to the museums new communication strategies and the aim of bringing collection and research closer to the general public. In the process it was tried to provide the opportunity to make the ground floor somehow accessible for the public. The solution was to create a building with glass walls inside the building. Technically, visitors are not able to enter the collection but pass a hallway around it and can have a look at the inside. Didactically this is important to note. The new space is not an exhibition. It is an active collection that is built for scientists and collection managers. Labels are pointing to the inside; there are no explanations or texts for visitors. Objects are not orchestrated but put up for scientific use. The shelves in the upper floors do look generally the same.

This concept got international recognition; it even was published in Nature. Visitors show initially emotional reactions when entering the hall. But even better, first evaluations show that they change their behavior, especially when they come in small groups. When visitors in the regular exhibition halls see something of interest they quickly start reading the information panels, communicating to the other group members that "the museum" says this and that. Mutual discussions will center on emotions connected to the visual experience and only rarely on the contents of what "the museum" says. In the wet collection the same group of visitors will start discussions on what they see, supporting their "hypothesis" by comparing the objects to each other ("Come on, this is not a shark. The sharks are over there: look") pointing with fingers and pulling each other to the specimens that support their theory the most. This comes unexpectedly and was not a part of the concept, but it leads average citizens to act scientifically.

FURTHER STEPS: FROM 2013 TO 2025

The renewal of the Berlin museum got plenty of recognition so far. But for the whole institution and its building it is only the beginning, since about 80% is still to do. However, concepts are going to ad to what worked so far. Strategy, mission and vision of the natural history museum propose a scientific place that takes part in finding answers for the big challenges of the future and that encourages the dialogue between science and public. This requires new and innovative communication formats. With scientific collections on display Berlin joins projects like the Darwin Center (NHM London), Musée du quai Branly (Paris) or the new Natural History Museum in Basel. But this is just the beginning: in the next couple of years, Berlin is going to experiment with transparent science aiming to develop concepts like the Darwin Centre in London or the Naturalis in Leiden further. Visitors should be able to have a closer look to the collections and to communicate with scientists. New media and web 2.0 will be important tools, but still the center of all, collection, research and exhibition will be three dimensional objects. One could consider ideas like that modern or innovative – but pointing back to the beginning of this article it could also be considered a renaissance of former concepts with accessible scientific collections and the communication of current science.