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Planning the National Science Museum of Korea—Experiences in Mutual Understanding

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In April 1981 the governments of the Republic of Korea and the Federal Republic of Germany signed an agreement to build a so-called “short-term-experts-pool”(STEP). According to that treaty the Korean Ministry of science and Technology (MOST) filed an application in order to get advice in developing the master plan for a new such museum or science center respectively. At that time working at the Deutsches Museum in Munich I was chosen as consultant by the “Gesellschaft für Technische Zusammenarbeit”(GTZ), the German agency handling that project on behalf of the Ministry for Economic Cooperation(BMZ). During the years 1983 to 1987 a number of stays in Korea followed until the project was finished as far as GTZ and I were concerned. In this paper I would like to give a short account about my experiences in working with the planning team of the National Science Museum.

The evaluation-phase

I used to work as a historian of science, especially chemistry at the Deutsches Museum and I had done some exhibition design connected to the chemistry department of the Munich museum. Upon my arrival in Korea I was facing rather different working conditions at the NSM, not to mention differences in cultural background and (at least at first) certain language problems.

The NSM was consisting mainly of two parts, the museum itself and the so-called Industry and Technology Hall. The exhibitions of the museum were designed basically similar to the ones I knew from Germany or other museums, with push-button experiments for the visitors and showcases containing exhibition items while the Industry and Technology Hall was more liken an expo with niches designed and equipped by different Korean companies. Planning a new museum right from scratch means at first, to get an idea of what could be the goals of your partners and what means they do use. For that reason and also because I considered the already existing museum to be a valuable training field for design proposals as well as for the feasibility of certain changes in the organizational structure of the new museum, a number of papers was worked out and discussed in meetings with the top officials of NSM. From start on we had to answer one key question: Should the new museum be basically a museum or a science center? Eventually we agreed that the new NSM

(we called it “Integrated Science Museum”, ISM, then) should in all departments show historical developments, especially as far as Korean history of science and technology would be concerned, without becoming a history museum in first place.

In reports and statements I repeatedly stressed the fact that the new museum should get some legal status independent from MOST. There were two reasons for that—one was, that the director-general of NSM changed every few years following his career as a high ranking ministry official, thus having not enough time to attain special knowledge as head of a museum and to make use of that expertise respectively. The other was, that an independent institution could be able to raise money from private donors, perhaps organized in a kind of “Society of Friends of NSM”, including industrial companies as well as private persons. Furthermore, the museum would be able to attract better craftsmen by offering higher wages than the strict regulations of MOST allowed.

The design of a master plan for NSM

In this stage of the work, after, evaluating the general needs and goals for the new institution, we could start with the development of a master plan, setting a frame for future detail work. Also the master plan should determine the architectural demands—the building should be designed according to a certain intellectual structure of the new museum, not vice versa. The idea that NSM should become a historically orientated museum gradually gained ground. Connected with that was the necessity of collecting original items for the exhibitions and the ability to restore them as well as to build replicas and models. This again made the establishment of workshops and depositories indispensable.

Of course also the intended construction site played an important role. Daeduk Science Town was considered a very suitable choice for the new museum, providing an intellectual atmosphere in which the NSM was bound to prosper. The old museum in Seoul was more or less a science center for younger pupils. (Its name in Korean reads not as its English name—it means National Science Hall.) The new NSM should become a museum of international standard and reputation, therefore attracting adults as well.

Taking into account all these aspects, the master plan, called “Basic Outlines of Planning”, described a museum which could meet the following tasks:

- collecting, keeping and restoring of old and contemporary objects connected to the natural sciences, technology and natural history
- exhibition and explanation of those objects in respect of their inherent physical, chemical, technical or geological principles as well as in respect of their impact on the development of science and technology at the time of their creation
- investigation and research of the objects as sources for the history of science and technology.
- design and construction of high-quality replicas, models and demonstration-devices whenever the use of original items would be impossible
- design and construction of automatically run experiments, to be started by the visitors (“push-button-experiments”)

— planning, organizing and carrying out educational programmes for youths of different ages as well as adults

As a further task we stated the establishment of a scientific library, but it was abandoned later on.

According to these “Basic Outlines of Planning” some structural pattern of order was developed, linking all the knowledge offered by the museum to its visitors—the “Department Plan”. This does not mean an architectural arrangement, instead it is a pattern that represents the “inner”, intellectual relations of that knowledge, some scheme reflecting the way man tries to distinguish the surrounding reality into several distinct areas of perception. Three general departments, Science, Technology and Natural History, should bear 17 departments, 66 sub-departments and 110 sections.

Of course we didn’t expect the NSM to contain all of that during the foreseeable future. This concept should provide guidelines for a longer period of working because a museum is never finished, it will always develop itself by reflecting the developments of society. And it was a necessary precondition to achieve a systematical arrangement of exhibits right from start.

The actual arrangement of departments was sketched in a so-called “Arrangement Scheme”. In order to allow arrangements that reflect as much of the above cited pattern of inner order as possible, this scheme was based on an interaction diagramme, showing structural relations of different fields of knowledge. Now the frame for architectural design was set. The planning of the buildings was done by the architects of the “Space Group of Korea” with Prof. Kim Hyung Man as chief adviser. The solution they eventually proposed fitted very well into our own demands and—equally important—into surrounding landscape.

Solutions—the NSM-Planning

Up to this point the planning procedure until the end of 1984 was described. Then, unfortunately, the further cooperation with NSM was interrupted during the next two years. It seems to me that perhaps some political or bureaucratic irritations hampered a smooth cooperation between the German and Korean ministries in charge with the project. The exact difficulties never became known to me, I only can acknowledge that no one of my Korean colleagues had anything to do with this interruption. The break came during a very sensible period of the whole project. The master plan was finished and also a more or less comprehensive scheme for the further planning procedure existed, but not any actual design for a certain section of the new house. The convincing architectural solution which Space Group had found allowed a wide range of different exhibition arrangements. At this stage it would have been of crucial importance to proceed together in order to translate the theoretical concept of the Department plan as well as the Arrangement Scheme into practically useful engineering plans. The disappointing interruption made this impossible.

After a short fact finding mission in autumn of 1986 I returned to Korea for a working stay in April/June 1987, this time accompanied by a colleague from Germany, Mrs. Anita Kuisle, who was also working at the Deutsches Museum.

Since the last working term considerable changes had taken place. A so-called "Scholar's Committee" had been established, which together with NSM, Space Group and also with certain assistance from other counties had developed a somewhat different department scheme. The original concept was based on the assumption that the visitor should have a kind of "real-life-impression" while walking through the exhibitions—the mining department should look like a real mine, a machinery department like a real factory, the chemistry department like some laboratory etc. we tried to avoid any impression of giving only three-dimensional schoolbook-information. Such "scenario-like" exhibitions of course are pretty expensive, rather complex and need a lot of planning-and construction-time. Furthermore the historical information should be given mainly at the respective departments—history of chemistry in the chemistry department, history of watch-making in the department for time measurement and so on. Instead there were now five departments :

- universe and man
- the Korean peninsula and its nature
- Korean history of science and technology
- sciences
- technology

No one involved in the planning of NSM can be blamed for these change of matters which came rather surprising to me. One can clearly imagine that a two year interruption must have destructive consequences for every planning project whatsoever. The colleagues at NSM—in charge of the establishment of the new museum—had to go on with or without assistance from Germany. The realization of the widely theoretical plans which were developed and agreed on during 1983/84 could not become implemented without further cooperation with us. The whole project was only feasible with a relatively continuous mutual consultation during four to five years with at least several months stay in Korea each year.

After all I would't say—of course—that the concept which was adopted in 1985/86 is generally less valuable or less acceptable than the other. It is always a matter of one's own point of view, resulting from a variety of different aspects, which solution one favours.

In close cooperation with NSM the experts at Space Group already had worked out detailed construction plans for most of the exhibits of the first three departments. The planning of the science department was well under way but not yet finished. Yet to be designed were the technology department, the Central Exhibition Hall and the outdoor areas. We started with a comprehensive review of all the existing plans. Because all written information was given in Korean only it took pretty much time and the kind help from NSM and Space Group. Because both really tried to help us getting back into the planning again, we were able to collect knowledge of the actual state of planning within a few weeks. Together with that also the old spirit of pursuing a common goal again evolved that has been prevailing during my former stays in Korea.

It would be ridiculous and selfish, now to specify what exactly we proposed and what exactly was

changed within the existing plans or was adopted in areas not yet designed. It may be enough to say that it was a challenge to cope with the new planning situation after a two-year-break and that I believe we managed to meet that challenge.

After that term in Korea we were ready to go on with detailed plans for the technology departments and the outdoor areas. Now again the continuation of our work in Korea was hampered—this time because of some important personal changes at the top of NSM's administration which made an already scheduled working term impossible. The news came just two days prior to our departure from Germany. This marked the end of this German-Korean venture in planning a science and technology museum together.

In my view, one can learn from the experiences sketched here, that cooperation of people with different cultural background can work very well if there is the will on either side to make such a cooperation a success or, in other words, if everybody is willing to sacrifice long cherished convictions for the sake of reaching common understanding. I want to stress the fact that working conditions and personal understanding all the time were extraordinary. I left Korea with the conviction that mutual understanding will lead to tangible results regardless of any differences in general and personal background.

Before getting involved in any new such kind of common work—which I would indeed be very happy to perform—there should be given some guaranty which ensures continuous work for the whole time of the expected duration of the work. In our case each new term had to be negotiated separately.

Let me finish this very personal retrospective of the planning and establishing of NSM with cordial and deeply felt expressions of gratitude to all Korean colleagues for their patience with me, the foreigner, unable to speak their native tongue, and for their willingness to discuss differing views in order to reach common ground. It is impossible here to address everybody personally, but nevertheless I would like to name—quasi pars pro toto—the former directors general Shin Man Kyo and Yoon Yeong Hoon on behalf of NSM and professor Kim Hyung Man and Mr. Shin Eon Hark (now TOW Architectures) on behalf of Space Group. Special thanks go to NSM's former assistant director Song Woo Geun who did more for the project and for me personally than anybody could have expected him to do.

It was as surprising as it was honorable for me that Dr. Hoagy Kim, now director-general of the NSM, found means and ways to enable my attendance at the opening of NSM and this international symposium. I want to thank Dr. Kim very much for his generosity.

May this new National Science Museum become what it was intended to be right from start : An institution for the education of young and adult people from Korea and elsewhere in the world, where the propagation and increase of scientific and technological knowledge is achieved via mutual respect and understanding—thus making this museum Korea's contribution to the group of internationally acknowledged science and technology museums.