Jacques TOCATLIAN

Bibliotheca Alexandrina
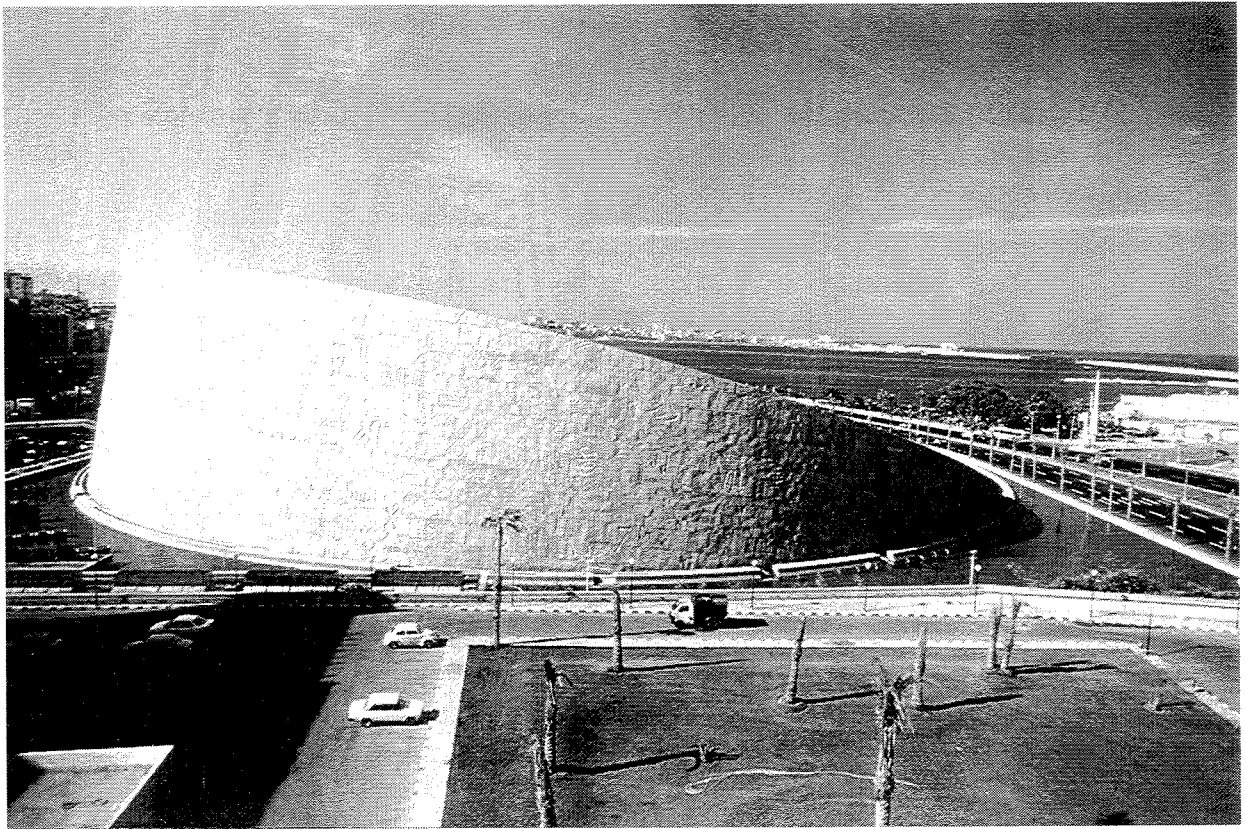
Reborn from the ashes of history

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Bibliotheca Alexandrina

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The Revival of an Idea

On October 16th 2002, Mr. Hosny Mubarak, President of the Republic of Egypt, inaugurated the new Bibliotheca Alexandrina, reborn from the ashes of history. Rather than a monument to the past, the new Library is a testimony to the perennial vitality of the idea of the ancient one. It proclaims that one of humanity's most precious achievements is the preservation of the thoughts, findings, insights and ideas of the great minds of the past, inspiring others to contribute to the collective knowledge of mankind.

Unesco was intimately associated with the mission of turning the dream into reality. For this International Organization, which exists to promote education, culture and the sharing of knowledge, the Bibliotheca Alexandrina is, in many ways, the epitome of its mission.

Some forty years ago, the greatest archaeological campaign of all times was initiated when Unesco launched an appeal to the international community to save the treasures of Nubia. After twenty years, the campaign had been successfully completed, following a spectacular engineering operation that saved dozens of temples and lifted Abu Simbel and Philae beyond the reaches of the rising waters of the Aswan High Dam.

The same land, the same river valley that cradled and nurtured one of the world's greatest civilizations gave rise, in the third century before our era, to one of the most splendid and lasting achievements in the history of human thought : the twin institutions of the Great Library of Alexandria and the Museion, endowing humanity with a collective memory and a new concept of knowledge. Once again, Unesco was called upon to address an appeal to the international community for the revival of the Bibliotheca Alexandrina and to assist in launching this ambitious project. I was most fortunate to be entrusted by the Director General of Unesco with the orchestration of this task at its initial steps. Now that the dream has become reality, I am proud to recall the milestones of these exciting years.

The First Universal Library

As known, the Bibliotheca Alexandrina of ancient times gathered within its walls the largest collection of scrolls ever assembled at the time and attracted scientists, philosophers, mathematicians, historians, critics and poets from the Hellenistic world. The Bibliotheca Alexandrina not only provided access to every writing that had been recorded, but it also created a school of thought that pioneered the concept of research as a collaborative effort and developed a tradition of weighing the evidence and testing theory by means of observation and experiment.

The result was a unique flowering of learning over some six centuries. Within its walls was calculated with astonishing accuracy the circumference of the earth; the brain was identified as the locus of intelligence and the function of the heart was isolated; the rules of syntax were elaborated; geometry was systematized; and the continents were mapped. There, Heron devised the first steam engine and Archimedes displayed his genius in a whole series of mechanical inventions. A good summary of the ancient library was presented by Attila Jakab *(La Bibliothèque d'Alexandrie ou l'universalité du savoir. AAHA Cahier N 23).*
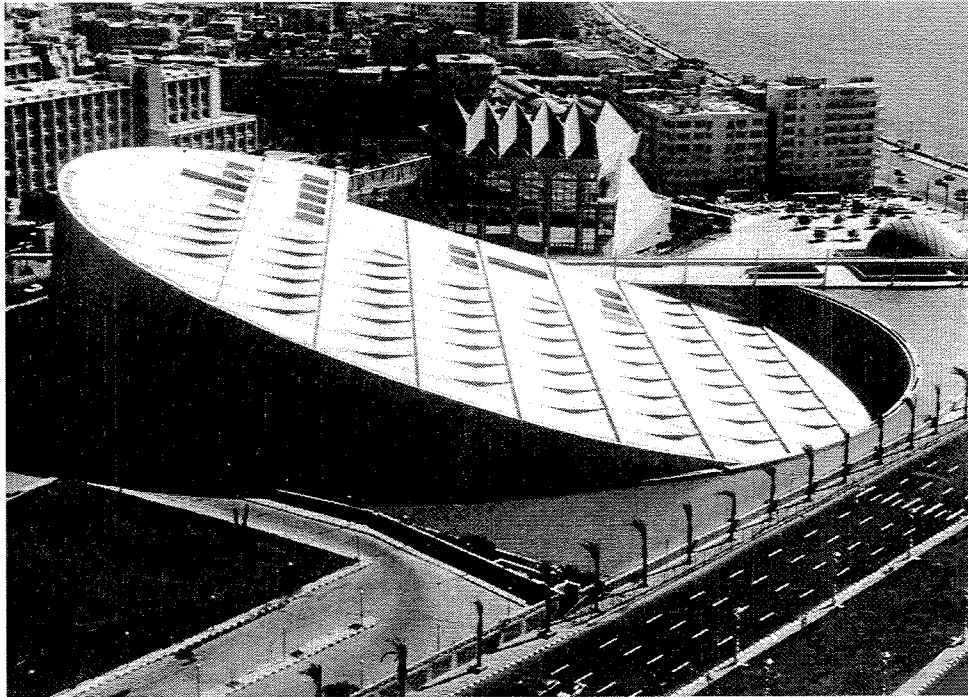
No one knows with certainty what the great institution looked like, but the Greek geographer Strabo (63 B.C. - A.D. 25) described it as part of a richly decorated complex of buildings and gardens. The whole complex was a centre for learning and research, organized into faculties, whose salaried scholars were paid from the royal purse.

The library stood for several centuries after its foundation, but strangely there are a few facts and many theories about the causes of its destruction and disappearance, and no certainty even about the century in which its demise took place. Some historians believe that it was partly lost to fire and partly destroyed by earthquakes; others blame Julius Caesar, fanatical Christians, Zenobia, queen of Palmyra, or ultra religious Arabs. A comprehensive and well documented history of the library, including its destruction, can be read in Mostafa El-Abbadi's book *'The Life and Fate of the Ancient Library of Alexandria,'* published by Unesco in 1990.

At any rate, Alexander the Great, founder of the city of Alexandria, Ptolemy Soter who compiled the first collection, and Demetrius of Phaleron and Callimachus who organized the Library and made it into a lighthouse of knowledge, would be proud today to see the revived Bibliotheca Alexandrina.

The Purpose of the New Library

The revival of the Library is not the construction of a building resembling what the ancient one may have looked like, nor is it the reconstitution of the ancient collections so as to create a museum *in replica*. The revival is an attempt to transpose the ancient idea into modern terms and play an educational, cultural and scientific role throughout the region. The new Bibliotheca Alexandrina is a public research library integrated within a complex of specialized libraries, museums, exhibition areas, educational centres, and an International School of Information Studies. A planetarium and an International Conference Centre can also be found on the main site. According to Mrs. Suzanne Mubarak, who has energetically championed the cause of the Bibliotheca Alexandrina and has charted the course of its development, the new Library is to be :

- The window of the world onto Egypt;

- The window of Egypt onto the world;

- An instrument to rise to the digital challenge; and

- A centre for dialogue between peoples and civilizations.

First Steps

When The University of Alexandria was inaugurated in October 1942 - at a time when the battle of El-Alamein was being fought betweens the Germans and the Allies during World War II - no special building was designated for a library. The idea of designing a large library in Alexandria that would fill the cultural abyss left by the destruction of the ancient one was discussed for the first time around 1972-74.

In response to a request from Egypt in 1986, Unesco agreed to assist in the Revival of the Ancient Library of Alexandria. As the Director of the Programme dealing with information libraries and archives in Unesco at the time, I was very fortunate to be put in charge of the Project. I carried out the first phase of the Feasibility Study with Professor Jean-Pierre Clavel, Head Librarian of the University of Lausanne, Switzerland, in early 1987. The report dealt with alternative approaches, organization of the Library, types of studies needed, staff training, need for an architectural contest, and outline of the architectural brief. The Director General of Unesco, Mr. Makhtar M'Bow, launched an international appeal for support. Shortly thereafter, a series of technical studies were carried out by Unesco international experts (manpower needs, plan for automation, collection development). Unesco then commissioned the preparation of the Architectural Brief by J.P. Clavel, J. Meissner, with the assistance of F. Lombard. The Brief was finalized at an international symposium in Alexandria in March 1988.

In Egypt, the Revival of the Ancient Library of Alexandria was then launched as a project of national interest under the auspices of President Hosny Mubarak. The General Organization of the Alexandria Library (GOAL) was established in 1988 by decree under the chairmanship of Mr. Ahmed Sorour, Minister of Education. The University of Alexandria donated a site of 45000 square meters

for the future Library, on the Corniche waterfront near the old *Magnus Portus* - a location believed to be close to the probable site of the Ancient Library, within the walls of the Ancient Royal Palace. The symbolic laying of the foundation stone of the new Bibliotheca Alexandrina on 26 June 1988, by President Hosny Mubarak and the new Director General of Unesco, Mr. Federico Mayor, brought further international attention to the project. The project had moved fast and it was clear by then that it had the support of the Government and had caught the imagination of the international community. A large number of articles began to appear in the international press, officials from various countries approached Unesco to express their interest, institutions offered their assistance and Unesco Member States endorsed the Organization's further involvement. An international movement in support of the idea was born.

An International Architectural Competition

Unesco then organized an international architectural competion, in co-operation with the International Union of Architects and the financial support of the United Nations Development Program (UNDP). Over 1300 architects from 77 countries registered; 524 entries were received and submitted to the International Jury, created by Unesco, that met to make he final selection in Alexandria in September 1989. The Jury was composed of nine members : seven architects and two librarians. The Italian member of the Jury, the Architect Franco Zagari, later issued, on the occasion of the exhibition organized in Unesco in November 1990, a catalogue of all the projects considered by the Jury (*Bibliotheca Alexandrina. International Architectural Competition, by Franco Zagari, Unesco / UNDP / Edizioni Carte Segrete, 1990*).

There was one design that consistently commanded the attention of the International Jury and won the competition : the Norwegian project presented by Snohetta S/A. The composition of the team that had worked on the design is a further indication of the international character of the Project. In fact, the ten-member team that had worked on the entry originated from six countries: five architects (Craig Dykers, USA; Per Morten Josefson, Norway; Christof Kapeller, Austria; Oyvind Mo, Norway; and Kjetil Thorsen, Norway) and five consultants (Ihab El Habbak, Architect, Egypt; Cordula Mohr, Historian, Germany; Elaine Molinar, Architect, USA; Jorunn Sannes, Artist, Norway; and Adrianna Baillie, Argentina.)

It is interesting to recall how the Snohetta team worked on the Project. They recognized that a great sensitivity was needed to successfully complete the project. Research and discussion became the first priority. A high degree of group interaction was maintained. Craig Dyckers, one of the architects said, "Half of our time was spent reading from the many sources available about Alexandria and in turn deliberating many hours before the project assumed dimension... Various members of the office had been visiting Egypt since 1986 and early in 1989 a special trip was made to Alexandria to investigate the atmosphere of this undertaking before beginning the actual design of the competition entry." I was told by the architects that part of the actual design was done in a rented office in California, away from the hustle of the busy Oslo headquarters, allowing the architects to take several trips to the Nevada desert for continued inspiration.
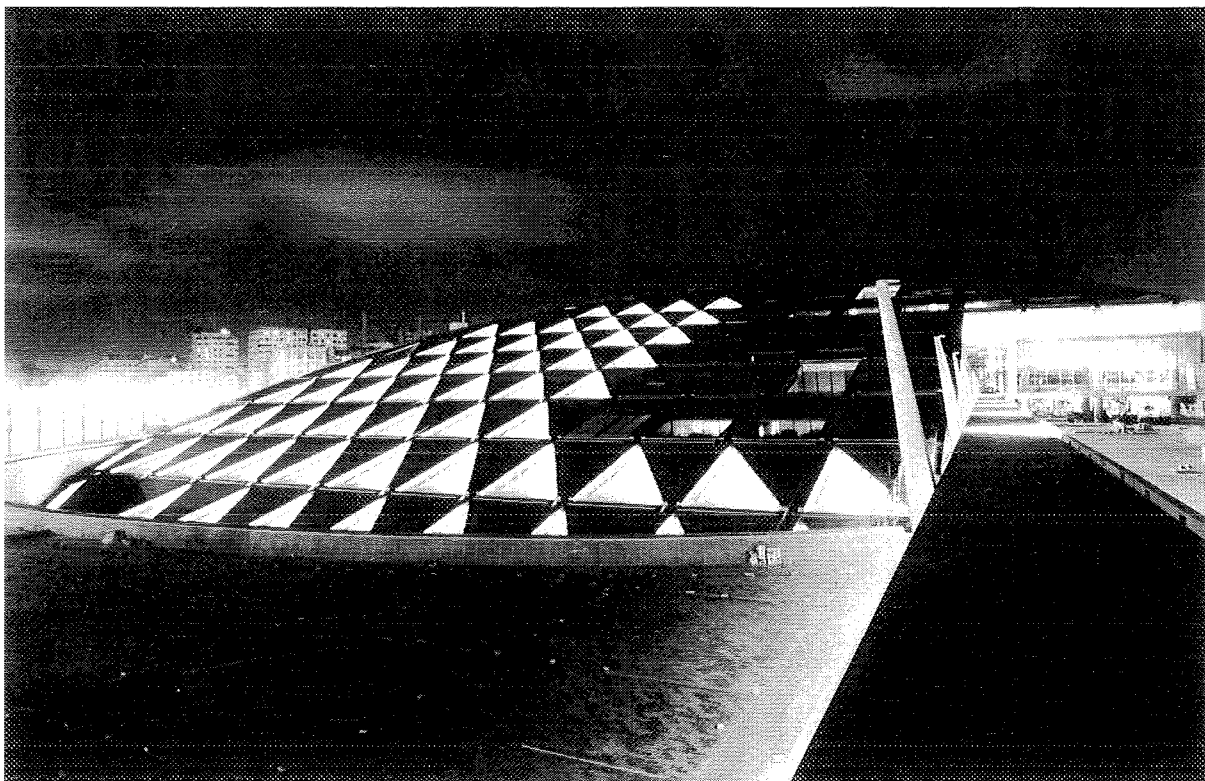
The Chairman of the Jury, Mr. John Carl Warnecke, USA, wrote, " The design of the Library is in the form of a circle, which becomes its predominant symbol... it expresses a basic continuity to man's existence. The sun is a circle. The moon is often an emerging circle. The site of the Library looks out on the ancient harbour of Alexandria, which is in the form of a circle. The circular plan of the Library thus relates to all these elements. The circle is a symbol of unity and continuity that embraces the past, present and future... The cylindrical masonry form emerges from the earth like the rebirth of an earlier form."

Indeed, many have since described the circular building inclined towards the sea, partly submerged under the ground, as the image of the ancient Egyptian sun that, in contemporary terms will illuminate the world with knowledge and culture.

In evaluating the designs submitted, the Jury was looking for solutions that not only met the project requirements but that also embodied a philosophy of design that captured the special spirit of the project. Numerous designs received were excellent solutions to the problem as well as highly original and thought provoking.

A second prize was given to Manfredi Nicoletti, Italy, for a beautiful design that combined two concerns of the Jury : image and site organization. The third prize was won by a Brazilian team, composed of José Ferolla, Fernando Ramos, and Carlos Brandao.

Many submissions were accompanied by texts that were equally original and provocative. Let me quote from a text written by US architects Shirdel & Zago, who won an honourable mention: "As a part of the Museion, or Temple of the Muses, the ancient Library was more than just a repository for articrafts. It was a living and vigorous institution that evoked the Muses through research, discourse and debate. The new building must create an environment that fosters that growth and allows the individual to embark on the personal exploration of the riches within the Library. It must not just shelter information but create a hunger for knowledge - a hunger that expresses itself in the passion for research and creativity that pushes the human condition forward." The winning Snohetta design responded, *inter alia*, to that requirement.

Turning the Dream into Reality

Now, with a beautiful and internationally-acclaimed design at hand, the dream had come closer to be turned into reality. This bold and yet simple design had to be translated into a stone, steel and glass structure. Substantial funds were needed.

The Assistant-Director General of Unesco, Mr. Thomas Keller, to whom I reported, took a special interest in the Project. Together we undertook several missions, notably to Norway and Egypt. With financial assistance from the UNDP and the Government of Norway, Unesco set up, in cooperation with Egypt, an International Commission for the Bibliotheca Alexandrina in which Chiefs of States and high level personalities participated. The meeting took place in Aswan under the chairmanship of Mrs. Suzanne Mubarak from 11-12 February 1990. The distinguished Members of the Commission who included, *inter alias*, Queen Noor Al-Hussein of Jordan; Sheikh Zaied, President of the United Arab Emirates; Prince Turki Ibn Abdel-Aziz of Saudi Arabia; Daniel Boorstin, Librarian of Congress, USA; Princess Caroline of Monaco; Susanne Agnelli, Senator and Under-Scretary of State, Foreign Affairs, Italy; Melina Mercouri, Member of Parliament, Greece; François Mitterand, President of France; Queen Sofia of Spain, constituted an impressively prestigious group. The meeting was a great success from every point of view. The 18 members of the Commission signed the Aswan Declaration that called for the international community to cooperate in the completion of the Library. The response to the appeal was immediate. At the end of the meeting, President Mubarak, who had honoured the meeting with his presence, was promised US $64,000,000.

At this point, it was recognized that Unesco had succeeded in launching the Project and the Egyptian authorities were fully committed to bringing it to completion. In October 1990, a project agreement was signed by the Government of Egypt and Unesco setting up the institutional framework and the organs of the Project. Shortly after I retired from Unesco, my colleague, Giovanni Romerio, was appointed Project Manager in February 1992, charged with overseeing the building construction in Alexandria. The budget was estimated then at $172 millions. The final cost was to be in the order of $220 millions.

When it became clear that the idea of the Bibliotheca Alexandrina was not a vague dream fit for international discussion, but a concrete project with a strong national commitment, a number of Egyptian intellectuals and journalists began to question the need for such a library, raising objections relative to its cost, its design, and its purpose. Were there not more urgent priorities and needs in Egypt ? Could the building be safely realized from an engineering point of view ? Could not the Egyptians build a simpler and less expensive structure ? Asma el-Bakri, Egyptian film producer, tried to argue that the funds should be utilized to improve and restore what already existed. The 'Commission of Architectures of the Supreme Council of Egyptian Culture' said that the project was simply technically 'unrealisable.' In addition, its undue sophistication would prevent Egyptian firms from participating in its construction. Unesco and the Snohetta architects organized a largely attended meeting in Alexandria and succeeded in clearing doubts and dispelling objections.

In Egypt a unique legislative structure was later created, based on Law No. 1 for 2001 which made the Library an autonomous juridical entity tied directly to the President of the Republic. The law gives the President vast latitude in determining the manner in which the Library shall be governed. All the relevant regulations for the Library's financial and administrative affairs were specified in the Decree No. 76 for the year 2001. The organizational structure is composed of The Council of Patrons, chaired by the President; The Board of Trustees, composed of Egyptian and foreign personalities and chaired by Mrs. Mubarak; and the Director General of the Bibliotheca Alexandrina who assumes the executive responsibility of the library. Dr Ismail Serageldine who is the first to hold the position of Director General is a Harvard graduate, consultant to the World Bank, visiting Professor of a number of American universities, and perfectly fluent in Arabic, English and French. His profile and experience, his many international connections, his intellect and vision makes him a perfect Director General to head the Bibliotheca Alexandrina.
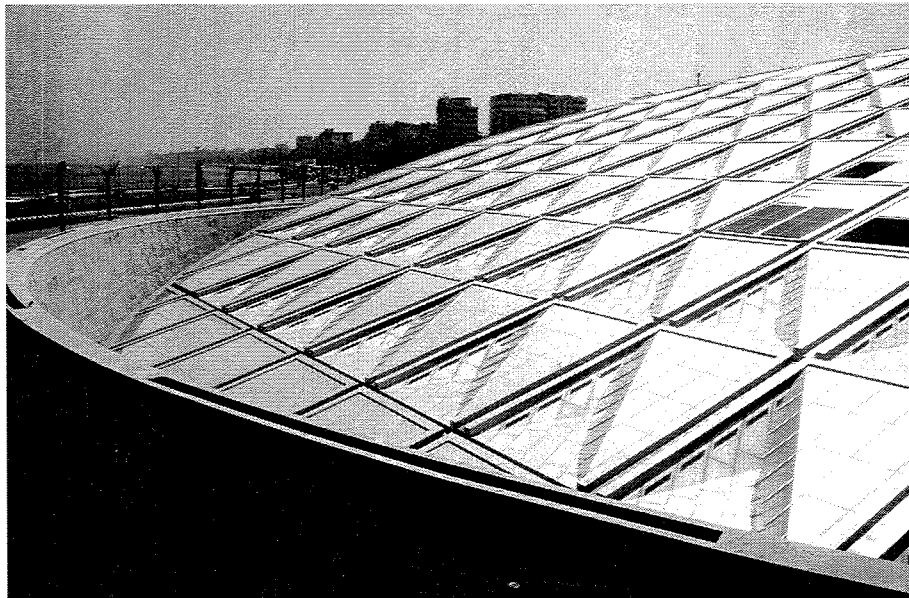

The Rise of the Building

Archaeological excavations were to precede the construction work in 1992. For some reason they were delayed. When they eventually started, they were expeditiously performed and became the subject of controversy. It was reported in the Press, notably by *'Le Monde'* , that 75% of the site had been cleared by the bulldozers without thorough exploratory probing. Unesco strongly recommended serious archaeological excavations which were subsequently performed on the remaining 25% of the site. Ruins of Roman villas and beautiful mosaics were found. These archaeological excavations on the Library site delayed the tender action concerning the first phase of construction (the foundations and ground engineering works), which was eventually launched in 1994. Nine companies had pre-qualified from among 34 groups. On 15 May of that year the contractor selected, Rodio/Trevi (Italy) - Arab Contractor (Egypt) Joint Venture, officially began Phase I.

One thousand workers toiled day and night. Three hundred and fourteen thousand cubic yards of dirt was excavated. The construction work involved the most advanced technology available. A waterproof wall, reinforced by an anti-earthquake system, was erected. It represented the largest circular continually reinforced diaphragm wall in the world, 160 m. in diameter. Six hundred and two bell bottom pillars were sunk 40 m. into the ground to support the weight of the building. The proximity of the sea meant that particular precautions had to be taken to prevent any water infiltration. Phase I was completed on 31 December 1995, at a cost of $59 million.

Phase II (structure, services, fit-out and external works) which followed was carried out by Balfour Beatty (UK) - Arab Contractors (Egypt) Joint Venture, at a cost of about $117 million.

Snohetta (Norway) - Hamza Associates (Egypt) Consortium acted as the Architects/Engineers Consultants to the Bibliotheca Alexandrina throughout the project. From December 1993 to August 1995 they had completed the design phase of the building, before phase I could start. Snohetta also designed the furniture that was donated by the government of Norway. The Library is now open to the public. A "Soft Opening" was held on 1 October 2001 and the formal opening took place on 16 October 2002.
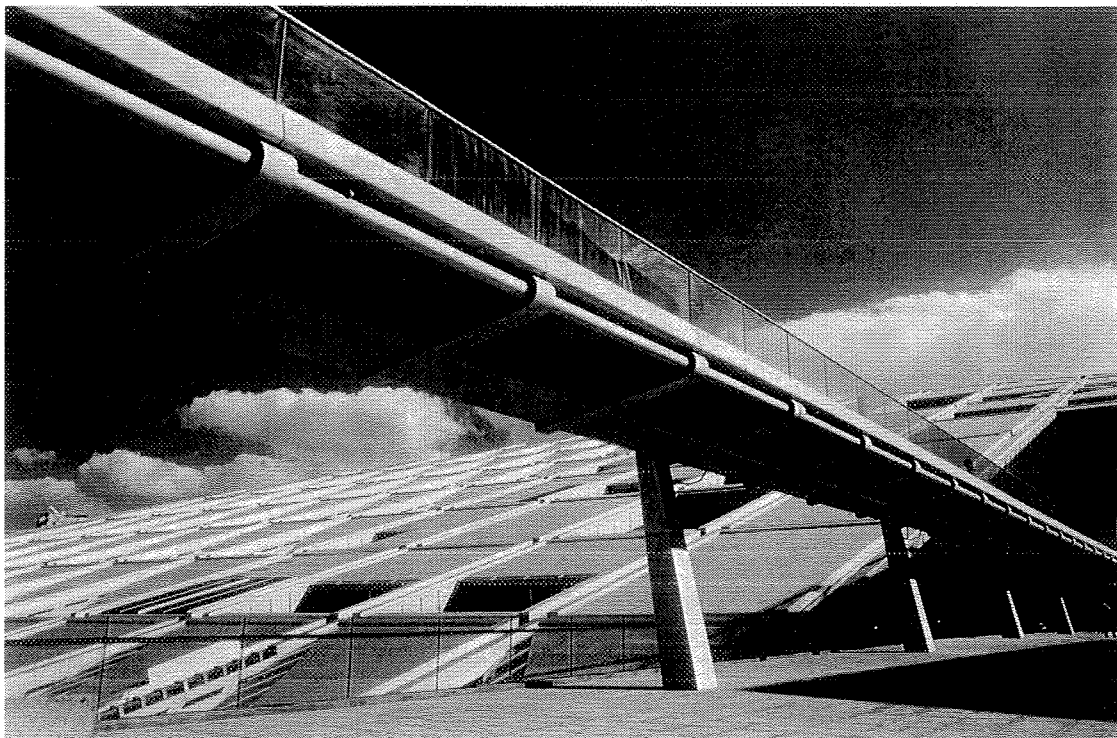
A grand Scheme - Beautiful and Functional

As one looks at this architectural jewel one sees a cylindrical building, inclined towards the sea and partially submerged in a reflective pool of water. The highest point of its tilting roof is 32 meters above ground, and the building descends to 12 meters below ground level. Burying part of the building counteracts the high humidity of the area and helps to provide secure and controlled storage for

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precious manuscripts. It also provides unparalleled insulation against noise. In symbolic terms, the half-buried cylinder can also evoke the past, rooted in the geology of the earth, and the future rising toward the weightlessness of space. Another symbolic interpretation suggested by the architects is that the tilting of the roof opens out to the Mediterranean, Europe and the West, a gesture intended to enhance the relationship among the cultures of the region.
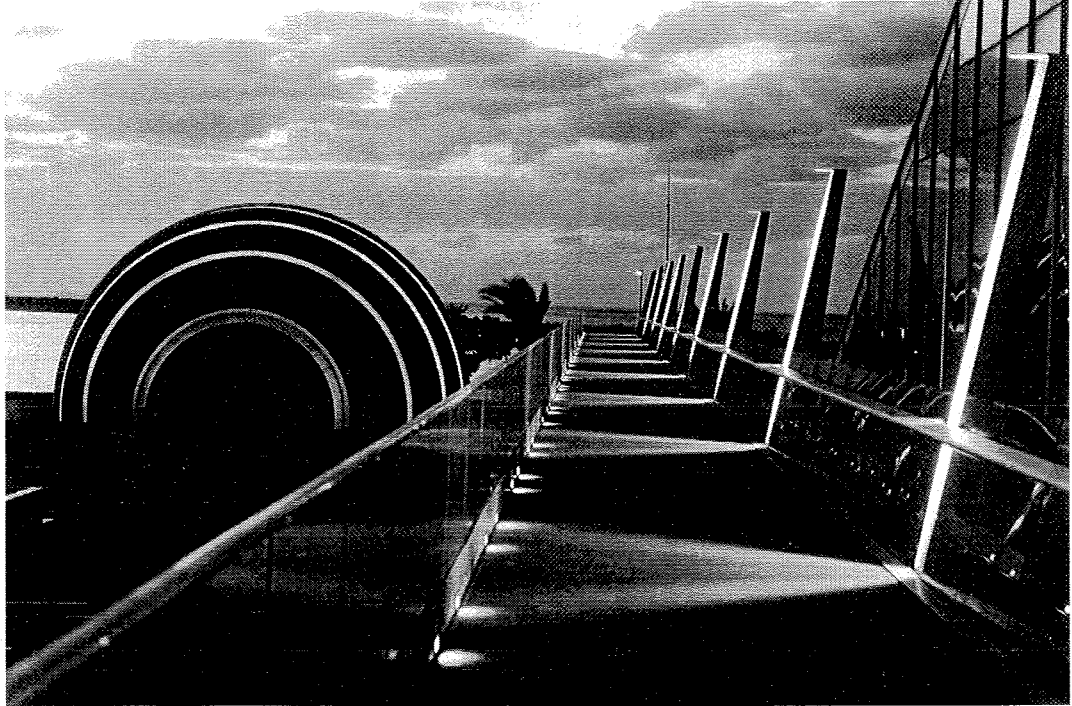
On a more practical level, the sloping roof allows indirect daylight to enter the reading rooms and shows off the exquisite view of the sea. Designed as an arrow, an elevated passageway links the university next door to the peninsula, traversing the cylinder, while an Aswan granite wall, wrapped around the cylinder, protects it from the desert sand and winds. It is engraved with calligraphy, inscriptions and symbols from both past and present civilisations. In the words of the architects, "it instils within our mind the pursuit we are about to encounter." Within the plaza, a large sphere rests in the ground; it houses a science museum and a planetarium. After passing the broad entry doors, one enters a spacious hall which extends over three levels where one can see exhibitions, a book shop, and the children's library. One can then move into the heart of the Library : a vast panorama of light and texture. A space 160 m. wide and 80 m. deep fulfils our expectations of this grand adventure. The floor of this space terraces along 7 primary and 14 secondary levels which create a flowing space of cascading books. The book stacks extend behind each terrace, away from light - the enemy of books. Accessing each level is an external spine which allows independent entry to the terraces. Each terrace has viewing platforms to allow unobstructed visibility to any destination.

In the three lowest terraces within the Hall, one finds the more delicate manuscripts. These spaces receive diffused light. Here also in a more secluded

area, music, audiovisual and electronic media departments are acoustically separated from the main Hall.

The Bibliotheca Alexandrina consists of :

The Main Library which is a universal library designed to serve the public and researchers.

The Taha Hussein Library, designed to serve the blind and visually impaired.

The Young People's Library, especially conceived to orient 12-to-18 years old to all the services and facilities in the Main Library.

The Children's Library, geared towards children aged 6 to 12, promotes readings and research abilities.

The Audiovisual, Multimedia and Music Library offers a selective collection of CD/DVD, audiocassettes, video tapes, records, slides and photos.

The Microfilm Reading Room contains a manuscript collection in Arabic, Turkish and Persian.

The Rare Books Reading Room contains rare books, facsimile prints, limited collections and dedicated books.
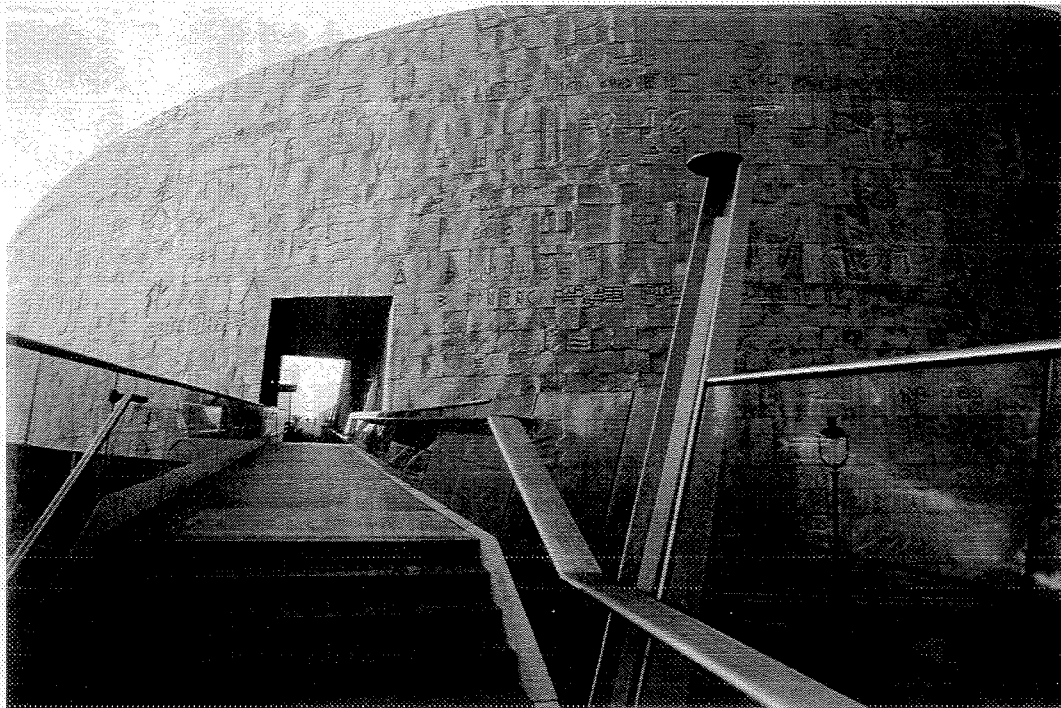
In addition, the Bibliotheca Alexandrina includes the Science Museum, the Calligraphy Museum, the Alexandrina Museum, the Archeological Museum, the International School of Information Studies, a multipurpose room, an exhibition area and the Conservation and Restoration Laboratory. On the same site are the Planetarium and the International Conference Centre that can accommodate 3000 seats. In that sense the new Bibliotheca Alexandrina is not a simple library, but indeed the true revival of the ancient one.

The Library is wholly automated. A computerized catalogue, accessible in the Library and to University Departments, will gradually be expanded to others. The Library Information System was designed and installed by a French firm with the financial support of the French Government. The different departments are developing databases for the main disciplines covered. In the framework of a Funds-in-Trust project with the Italian Government, the program of the International School of Information Studies was developed, the Restoration Laboratory to preserve rare books and manuscripts was established, and the Library staff was trained. Unesco is also involved in training staff to operate the new library. Library Staff are sent to the great libraries in France, Germany, Britain and the US to be trained in the latest software and library management software.
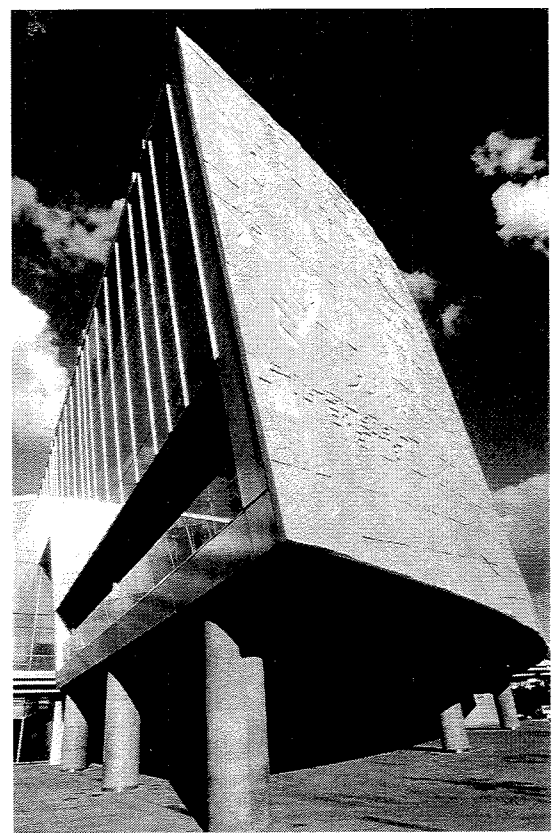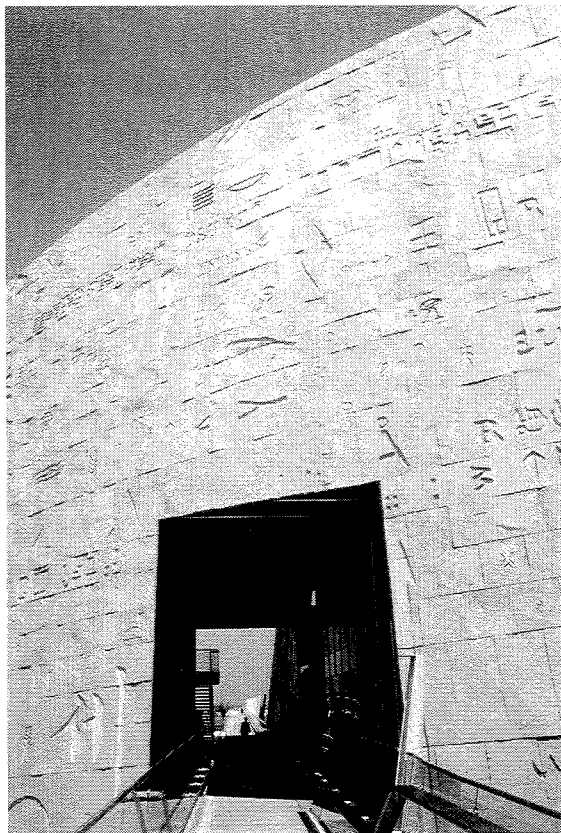
The Library Collection and the Future

The number of books in the Library at the present time is still small. So far it has collected about 400,000 books, some 6700 rare manuscripts, and 200,000 micro-filmed documents and CDs. It is designed to contain a maximum of 8 million books, compared with the national Library of France's 12 million and the US Library of Congress's 18 million. Among the precious possessions one can cite, for example, a hand-written manuscript of the historian Al-Makrizi, copies of the Holy Koran written in Ottoman-style calligraphy, a copy of the first edition of the New Testament printed by Johan Gutenberg in 1456, 'La Description de l'Egypte' organized by Napoleon during the French expedition in Egypt, and a manuscript

of Sahid Muslim's Anthology of prophet Muhammad's Hadith. The Library also hosts important documents, maps, and microfilms relevant to the Suez Canal as well as an electronic record comprised of 300 rare historical photographs featuring the phases of the Suez Canal construction. The Library also has a collection of rare coins and a gallery of historical paintings featuring the history of Alexandria. It has signed an agreement with the Egyptian Television that will provide to the Library a selection of its cultural and educational programs to gradually construct an important audio-visual archive collection (4000 hours/year).

In building the collection, the geographical priorities are Alexandria, Egypt, the Mediterranean Basin, the Arab World and Africa. The thematic priorities are :

- The natural sciences, with emphasis on historical and ethical aspects;

- The human sciences, emphasizing the historical studies;

- The arts and culture, and more particularly the inter-cultural dialogue;

- Development, with emphasis on the problems of populations and water.

The strategies applied by the Director Serageldin for building up and enriching the collections include negotiations with specialized and private libraries in Egypt; contacts with monasteries and mosques concerning originals or copies of manuscripts; negotiations with museums around the world to obtain texts and reports of the Pharaoh period; negotiations with specialized libraries in other countries to obtain Greek classical texts translated into Arabic and rare historical documents; preparation of agreements with foreign countries to establish exchange mechanisms; and establishing a collection of administrative, legal and cultural archives covering the history of Egypt and, in particular that of Alexandria. According to the International Herald Tribune of July 25, 2001, the previous director "was criticized for his willingness to accept any donated tome that came through the door. His policy, detractors warned, threatened to create an 8 million volume attic of cast-offs, not 'the lighthouse foot thought' invoked by Egypt's first lady, Suzanne Mubarak..."

Mr. Serageldin, however, is known to be realistic and pragmatic. He began with a strategy that impressed many observers : obtaining an exemption from civil service and from purchasing rules so that the library can hire and fire at will, pay competitive salaries and buy what it needs without interference from customs.

Many of those who were, a few years ago, sceptical about the project, do admit that the Bibliotheca Alexandrina is a jewel and - together with the Opera House of Sydney, l'Arche de la Defense in Paris, and the Guggenheim Museum in Bilbao - is among the outstanding architectural designs of modern time. A few still persist to think that, in view of the economic situation in Egypt, a more modest project would have sufficed. Others fear that prevailing censorship in Egypt and the pressure of the Islamic Fundamentalists could constitute a serious obstacle to the development of the new Bibliotheca Alexandrina to meet its original objectives.

The fact is that the involvement of Unesco and the support of its Member States has given the Library a truly international scope and dimension, preserving the

spirit of the old library. The legal structure given to the Bibliotheca Alexandrina, linking it directly to the Presidency augurs well in this respect. Mr. Serageldin is answerable directly to President Hosni Mubarak - not to Egypt's bureaucracy or Parliament. Mr. Serageldin is reported to have said that he hoped to give maximum freedom to the Library to allow it to become a centre of excellence and an interlocutor with the world's great academic and research institutions, adding that he had an uphill fight for the next five to ten years.

In conclusion one may say that the personal commitment of President Mubarak; the enthusiasm, energy and vision of Mrs. Mubarak; the intelligent leadership of Ismail Serageldin, in addition to the international interest and support foretell the best and promise every success.
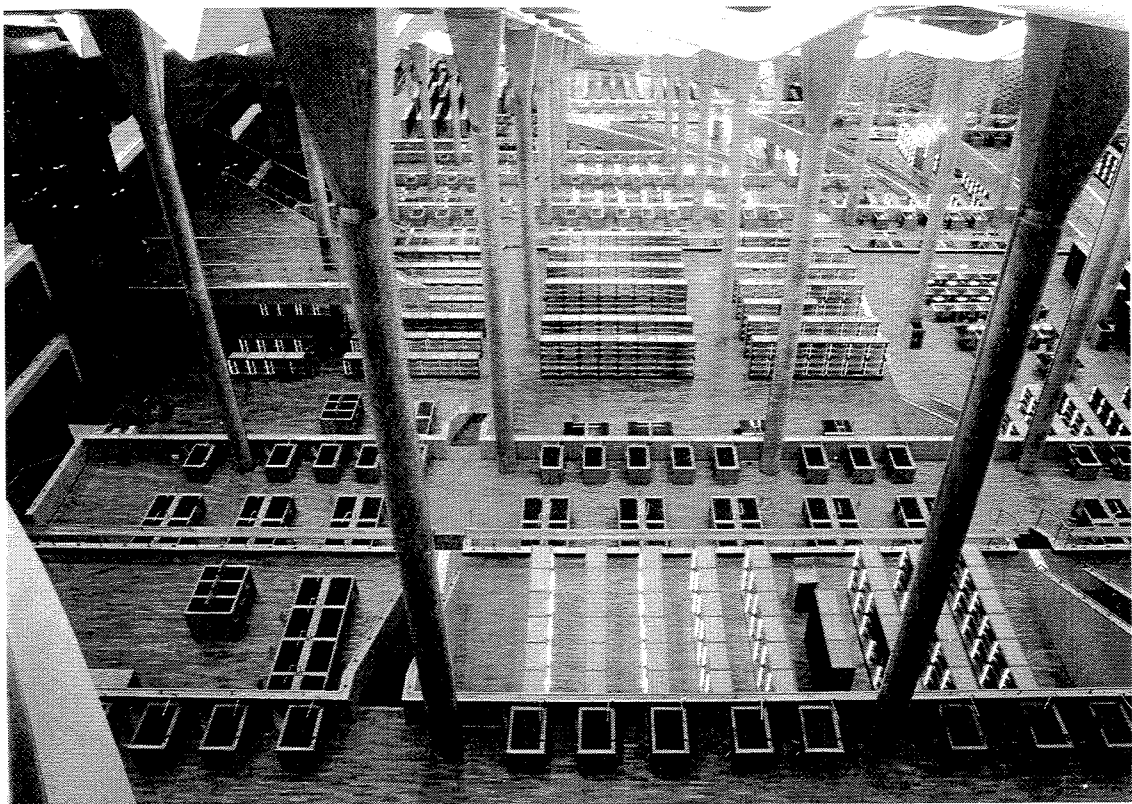
Jacques TOCATLIAN

Jacques TOCATLIAN was born in Alexandria of a family of Armenian and Italian ancestry. He studied Industrial Chemistry in Alexandria, Textile Technology in Milano, Organic Chemistry in Utah and Library and Information Science in Philadelphia.

After serving science research in the US chemical and pharmaceutical industries, he joined Unesco in 1969 where he worked in programs of international co-operation and assistance to the developing countries in the fields of information, library and archives services. In his last years at Unesco, he was responsible for the project of the Revival of the Ancient Library of Alexandria.