A Landmark Building
A LANDMARK BUILDING

Reflections on the Architecture of the Bibliotheca Alexandrina

Ismail Serageldin

BIBLIOTHECA ALEXANDRINA

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Contents

REFLECTIONS ON THE ARCHITECTURE OF THE BIBLIOTHECA ALEXANDRINA

Introduction 5
A critical approach 15
The building as a building 17
The building in its physical setting 23
The building in its cultural setting 25
The building in its international discourse 27
The building in the local/regional setting 29
Envoi: The building as intellectual statement 33

A VAST COMPLEX OF LIVELY INSTITUTIONS 35

ARCHITECTURAL PLANS 47
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Contractors
Radio Trevi, Italy; Arab Contractors, Egypt; Balfour Beatty, UK.
The Bibliotheca Alexandrina is a revival of a treasured part of the cultural and scientific heritage of humanity. Political ideologies can separate countries and economic interests can drive wedges between people, but cultures can bring them together.

The Bibliotheca Alexandrina aspires to promote culture and science, learning and knowledge. It is a place for meeting and dialogue, where together we can work to promote a better future for all.

**Suzanne Mubarak**  
Chair, Board of Trustees of the Bibliotheca Alexandrina
The Bibliotheca Alexandrina received the 2004 Aga Khan Award for Architecture
Reflections on the Architecture of the Bibliotheca Alexandrina
1- Main Library Building
2- Conference Center
3- Planetarium
4- Plaza
5- Plaza with olive trees
6- Pedestrian Bridge
Introduction

The new Library of Alexandria, the Bibliotheca Alexandrina, is a truly very beautiful building whose design at the architectural and structural levels merits our attention and would repay our study.

Located on a superb site on the historic eastern harbor of Alexandria, almost exactly where the old library and the royal palace of the Ptolemies once stood, the complex comprises three main elements: the pre-existing conference center, the planetarium and the new building. They are all connected underground below the plaza into one large functional complex.

The scheme lays out the main circular building in connection with the smaller sphere of the planetarium and allows the existing conference center to act as a counterpoint in the overall massing. The plaza that connects them all is open and inviting, with olive trees providing a powerful symbol of the Bibliotheca Alexandrina underlying premise of peace, openness to the other, dialogue, rationality and understanding. The building's curve is covered on the outside with a beautiful gray granite wall that displays letters (not words) from the alphabets of some 120 languages. The complex is trans-pierced by an arrow: a slim, elegant pedestrian bridge at the second floor level, crossing from the University campus in the southeast towards the sea on the northwest.

The complex is open and inviting. The plaza is open to the corniche and is planted with olive trees, symbolizing the outstretched hand of peace... The southern part of the main building (from the Port Said street side) is elevated to allow an unimpeded view of the planetarium and the sea right across the project. The planetarium is a floating sphere with blue ribbons of light at night to highlight the special character of this major component of the composition.
The Planetarium, a floating sphere with blue ribbons of light at night
From the plaza, there are three entrances to the complex. One for the Conference Center, which houses the great auditorium (1638 seats) and three smaller auditoriums below with a capacity of some 650 seats in different configurations, and two large exhibition areas, several cafeterias, and other ancillary meeting rooms and spaces. It is connected to the rest of the complex under the plaza. The conference center was an existing building and its architecture is very different from the new design, which enveloped it and integrated its functions into its interconnected space.

The second entrance is down to the planetarium—a floating ball connected to the main plaza by four connecting “tunnels” or bridges. Next to it is the entrance to the Alexploratorium for children and an exhibition area. Around at the second level below the plaza is the space devoted to the History of Science Museum.

The third entrance is to the Library proper, the main new building in the complex to which much of this essay is devoted. The plaza itself has works of art and statuary. A soaring statue of “Prometheus bearing fire” is standing amidst the olive trees, and the colossus of Ptolemy II stands tall at the entrance on the Port Said street side.

Inside the vast circular structure, one can read the building fairly easily. A spine separates the vast reading space and library functions on one side from the administrative and research functions on the other.

The scale of the building is impressive. It is about 160 m in circumference, and 11 stories high, except that by slicing it across the top in a slant and burying 4 floors underground, the mass of the building is largely unnoticed. It is deceptively small on the outside, and invitingly human in scale when you approach it.

The role of water is pervasive. Water surrounds the whole building and provides both a reflecting motif from various angles, and a reflecting and separating medium for the main complex, creating a unique separateness and a hint of “floating” the building out of reach of the surroundings, other than the plaza entrance side.
The unique roof structure reminiscent of the contemporary computer chip mirroring itself in the pool.
A critical approach

The dominant image of the Library is the elegant slanted disc. The symbolism of the rising sun is an apt choice. The sun disc has many echoes in Ancient Egyptian mythology. The rising sun is apposite for the emergence of a new beacon of learning. The unique roof structure is also reminiscent of the contemporary computer. But, I will leave this kind of discussion to others and to the imagination of the visitors to the Library and the readers of this essay. Rather, I will pursue a different approach. Architecture speaks to us at many levels, and a building should be viewed and discussed at these different levels. Thus a thoughtful critique of the architecture of the new Bibliotheca Alexandrina building would function at multiple levels.

*The building as a building:* The simplest, most direct appreciation of the building’s functional response and aesthetic qualities. Volume, space, light, materials, and colors, the entire lexicon of studied architectural criticism is brought to bear on the building, taking it apart and putting it together again both in physical and experiential terms.

*The building in its physical context:* Harmony or discord, intentional or unintentional, can be either positive or negative. The building’s relation to the environment, both natural and man-made, can enhance or diminish the stature of the achievement.

*The building in its cultural context:* Its “fit” and appropriateness in the context of a cultural heritage expressed through a legacy of already-built forms produced throughout the society’s history.

*The building in its international context:* Positioning of the creative act as a part of the international network of currents, styles, schools, and ideas, as well as the extent to which it contributes to the evolution of that debate, by either reinforcement or by innovation.
Artistry in the articulation of volumes and spaces appear even before we enter.
The building in its own local/regional intellectual milieu: To what extent does it make a statement on the immediate level of the debate that presses upon the intelligentsia of the region? This is no mere reflection of the international context, although it could be. The local/regional intellectual milieu is much more concerned with issues that are geographically circumscribed, even though they may have universal overtones.

Applying this type of criticism to this exceptional building is certainly instructive. It enriches our perception of the artistry embedded in it. Proper criticism is a prism. It allows the viewer to suddenly be made aware of the many colors of the spectrum that are embedded in the brilliant shaft of white light that is the work of art. It teases out the hidden dimensions, thus revealing to the viewer and user a richer experience, whether they accept or reject the critic’s views.

The building as a building

The building as a whole is surprisingly modest. Despite its size, it does not crush the visitor who approaches its main entrance. Once inside, the transition to a larger scale is gradual. The entrance hall is surprisingly austere and still does not give an impression of the grandeur to come. After crossing the closed doors of the “threshold” to the library proper, one glimpses the open space beyond. As you move closer to the main hall the soft indirect light and the well-positioned electric lights imbue the scene with a special ambiance. Then, a few steps further takes one onto the viewing balcony, named in honor of Callimachus (the great Hellenistic poet who created the first organized record of the ancient library’s holdings organized by subject and author, thus becoming the father of library science). There, one is overwhelmed by the great space of the Reading Hall: spectacular, soaring, elegant, out of this world, are some of the expressions that come to mind. Yet after a brief saunter back from the promontory provided by the Callimachus balcony, one descends the stairs to
The Callimachus Balcony is a fine promontory for visitors to see the beautiful Reading Hall.
enter the Reading Hall, and one is surprised again that the experience of the space from the ground level is truly different from what you experience from the balcony. This experiential sequence is the mark of truly great architecture. It engages you at both the emotional and intellectual levels. One is constantly engaged by the roof structure, the elegant columns, the books and the exhibits. You feel that you are literally at the center of an amazing space that engages the reader and visitor alike. Despite the enormous size of the hall, the talent of the architects and the skill of the engineers have combined to make this space attractive, modest and human in scale by splitting the vast Reading Hall into seven levels, each of which has a reading area and a shelving area as well as a reference desk. The cascading effect of this design means that while one glimpses the other levels, you do not have the feeling of being in a large hangar. Each reading space is attractively scaled and fathomable to the human psyche.

The library collections and services are spread over the seven levels of public space. The collection is organized according to the Dewey Decimal Classification system and reference services desks as well as individual study rooms are available on each floor.

The First level (B4) level, is the largest floor space of all levels and is reserved for the reference collection, maps, periodicals and newspapers and monographs. It also has an information desk for the Entrepreneur Corner which is a service offered by the Library for the Alexandria business community. The rest of the monograph collection resides on the floors (B3-F2) and is organized in an ascending order according to the Dewey system.

The Second level (B3) is dedicated to the library collection, users space, and the Library Learning Center which is a computer lab dedicated for teaching information fluency and basic IT skills and also includes a specialized library for the Arts and Multimedia.

The Third level (B2) includes a specialized library for rare books. A few feet away from the Fourth level (B1) where permanent exhibition galleries are located as
Two floating seminar rooms linked by bridges connecting to the administrative and the main service facilities.
well as the Manuscript Museum. This is also the key level that connects a large part of the complex under the Plaza. It has other exhibition areas, the Antiquities Museum which is accessible by a stair from the main lobby, and the History of Science Museum which is laid out around the Planetarium on the B2 level but is accessible only through the B1 level at the entrance of the Planetarium.

**The Fifth level (E)** the entrance level from the plaza, includes a number of important points such as circulation, membership, computer reservations, general information in addition to the open book stacks, computer workstations and the Internet Archive.

The Library offers a multitude of services for different types of users. All services are placed strategically to facilitate access to these special users. For example, the Taha Hussein Library for the Blind and Visually Impaired is located on the Entrance level to be easily accessible to blind patrons from the street level. This library was named in honor of the great Egyptian writer, man of letters and educator, whose illustrious career remains an inspiration, and a reminder to all blessed with sight as to what a blind person can achieve.

**The Sixth level (F1)** is completely devoted to monographic collections and quiet reading areas. At that level, on the other side of the spine and accessible directly off the stairs through the lobby, are the entrance to the research facilities, and the specialized libraries for the young adults (age 12-16) and for children (age 6-11); and a special room for the international associations of friends of the Library of Alexandria. This is also the location of the secretariat for the Egyptian Friends of the Library.

**The Seventh level (F2)** is solely devoted to the depository library collections and its services.

Above these seven levels there are two floating seminar rooms attached by bridges to the administration and the main service facilities of the building.
The building’s curve covered with the beautiful gray granite wall that displays letters from the alphabets of some 120 languages.
The structural achievements of the building are as impressive as its architecture. A soaring roof that allows natural light and withstands wind, with elegant thin columns that create a true “cathedral of the book” effect, and the world’s largest diaphragm wall, and a building going some 18 meters below sea level. It has rightly been seen as award winning-engineering, not just award-winning architecture.

The materials are modest and robust, the effect pleasing and understated. The furniture is all ergonomically designed, and the entire building and its components fit well together creating an effect where the whole is more than the sum of the parts.

Criticisms of this great building are few. The unfulfilled desiderata that I would list include a missed opportunity to use the roof for a great environmental experiment in solar energy, the need for even more facilities than originally envisaged but which were well incorporated into the design as we progressed. Due to our mounting collection of artworks we will need more exhibition galleries. Finally, coping with the enormous success of the building where the number of visitors is continually increasing. In the first four years since inauguration, some 3,000,000 visitors had come through the building, and the flow is increasing every year. On the whole these are trivial points compared to the enormous achievement represented in this building. Perhaps the best compliment I can give it is that it is truly worthy of bearing the name of the Great Library of Alexandria.

The building in its physical setting

The Bibliotheca Alexandrina is clearly a landmark building. It provides an anchor for an area that could be one of the most beautiful areas in the world, the old historic harbor of Alexandria. Regretfully, the rest of the area is not yet developed with sufficient attention to an overall effect that links buildings to their surroundings, both natural and man-made. Plans are underway to try to do this in the next few
Looking out from over the roof of the Library at the Silsilah and the sea
years. A five-star hotel facility is currently under development to serve the Library visitors and its conference participants.

The panorama of the old harbor is truly exceptional. The gentle sweep of the bay is restful to the eye, and the scale of the bay is suited to the human psyche. It is neither overwhelming nor too small for the visitor to be impressed and yet feel welcomed and “at home”. The old eastern harbor should be the focal point of Alexandria for tourism. For that purpose, the Library complex will be an important magnet, and an “anchor” for the visitors. It makes sense that it should be physically linked to the Silsilah and to the touristic developments and service facilities that should surround it. The urban design must include proper attention to the traffic and access aspects, including parking needs for cars and buses, and the possibilities of reviving the horse-drawn carriages for visitors who want a more leisurely promenade. The need for comprehensive services should not be at the expense of quality. Local character and international standards would have to be maintained throughout. Here the new building of the Bibliotheca Alexandrina sets a standard, in concept and execution, in design and detailing.

**The building in its cultural setting**

The building is unusual in that it does not have peers in the previous experience of Egyptian built form. It innovates and thus adds to the architectural lexicon in both form and detailing. Its simple yet elegant design has inspired visitors and architects alike. It will undoubtedly enrich the architectural vocabulary of the next generation of architects.

By rejecting the slavish copying of past forms, or even the effort to remain rooted in place by remaining attached to a particular local tradition, the designers ran a risk. Nevertheless the Library has successfully avoided the twin dangers of ossified copying of the past and cultural inappropriateness.
The size and splendor of the cascading Reading Hall
The Library’s success is an immediate indictment of the kind of slavish adherence to the past and its decorative details, the kind of historical style widely criticized for superficiality and irrelevance, and which—we hope—is on its way to being totally discredited. The building can, therefore, function culturally in the local context as a liberating influence that helps local and regional architects acquire a level of sophistication in the ability to read the symbolic content of their heritage in a way that enriches their ability to produce relevant buildings for today and tomorrow. It can help liberate them from the fear that the heavy hand of the past architectural forms and details can be abandoned only at the risk of being rootless.

Yet, there is an unusual aspect in which this building is truly related to a part of the great tradition of Muslim architecture in Egypt. It is common in many parts of Mamluk Cairo to enter large and beautiful buildings through a relatively discreet and/or broken entrance that does not reveal the full size and splendor of the space inside, allowing for the impact of discovery. This aspect is very much present in the Bibliotheca Alexandrina. It is deceptive at the entrance and the entrance hall is barely a transition. The experiential sense of discovery as the visitor walks into the building, finally discovering the splendor of the great hall with its soaring columns and its magnificent light is a re-interpretation—knowing or unknowing—of that great tradition of buildings past. It is a celebration of builders who lavished love on their designs from the largest and most general concept to the smallest detail.

**The building in the international discourse**

Modernism with a difference, that is one way of thinking of the new building. Whereas Modernism was a quintessentially 20th century phenomenon that was rightly seen as largely spent by the forces of post-modernism in the late twentieth century, the very best of it has been revived, transformed and transcended by this building. Like great buildings of different periods, from Mies van der Rohe’s
Water surrounds the whole building, creating a hint of “floating” the building out of reach of the surroundings.
Barcelona Pavilion of 1927 to Frank Lloyd Wright’s Falling Water of 1936 to Bjorn Utzon’s Sidney Opera House of the 1980s, great buildings are timeless and speak to us through time and space. Like these landmarks, the Bibliotheca Alexandrina could well, with the patina of time, be seen as a true classic.

At a time of “signature architects” and the dominance of capricious form over function, the success of a young team of then-unknown architects and the quality of their design was a challenge to the prevalent mode and fashion in the architectural world. It was, I believe, a successful challenge.

The building in the local/regional setting

The building makes a very bold counterpoint to the tired and tiresome debate about “Modernity versus Tradition”. In practically every forum dealing with our contemporary reality, someone can always be counted on to frame the issues under discussion in the form of a dichotomous relationship between “Tradition” (usually identified from a Muslim or Pharaonic perspective and presented as harmonious and wonderful) and “Modernity” (usually presented as alienating, dehumanizing, and awful). Someone can also be counted on to immediately reverse the dichotomy, arguing that we cannot live in the past and that modernity (here presented as science, technology, and progress) is the future. This is not only technically and critically flawed (if not outright wrong), but it is also highly unproductive and even counterproductive. The debate is unproductive because it usually leads to endless repetition and the marshalling of ever more examples and highly selective anecdotal evidence to buttress the a priori positions. The debate is also counter-productive because it tends to raise passions and make critical rational discourse even more difficult than it already is.

That this debate is technically flawed derives from the simplistic reductionism implicit in the dichotomous position. As if the rich tapestry representing the
Boldness and simplicity in the architecture
historical experience of the Muslim people could be reduced to a single “tradition” (or traditional position in the debate), or that modernity—a complex, evolving concept that is highly relative and intertwined contemporaneously—could be conveniently circumscribed into a single definable reality that covers all the complex reality of contemporary Egypt, much less anything that could be applicable from Morocco to Indonesia and from China to Africa.

This debate is also critically flawed because it does not use the tools of criticism to expand our understanding of the issues involved. Without such an expanded understanding we are unlikely to progress beyond the repetitious, sterile litanies of this tired and tiresome debate.

Here the Bibliotheca Alexandrina makes a bold and uncompromising statement. It is Architecture as intellectual discourse in the very best sense of the word. There is no effort at some kitsch rendering of Pharaonic columns or of Islamic arches. No Greek or Roman ornamental motifs find their way into a building that is very much of our time and aimed at the future. It is of our time by the materials and technology it uses. It is for the future by the boldness and simplicity of its vocabulary, the sophistication of its articulation of the volumes and its management of natural and artificial light. It is an appropriate response to a futuristic program, and challenges the local milieu to break out of the narrow confines of the prevalent debates and to take on the most intangible, yet most powerful, of all human activities: the unleashing of the mind in the pursuit of knowledge.
The slim elegant pedestrian bridge crossing from the University Campus in the south-east towards the sea in the north-west.
Envoi: The building as intellectual statement

Great architecture always engages us to rethink the meaning of architecture. The Bibliotheca Alexandrina certainly does that. It reminds us that great architecture is more than function, more than form. It can interpret an idea. Visitors to this remarkable building, will, I think agree that it epitomizes the feelings we should have in a center of culture. It invites the spirit to soar. It enjoins the mind to explore and to listen to the better angels of our nature, to be true to ourselves and open to the other. That is what great architecture can do.
A VAST COMPLEX OF LIVELY INSTITUTIONS
The Library complex swarming with visitors, national and foreign, from the four corners of the globe
The Bibliotheca Alexandrina, the new Library of Alexandria, is dedicated to being a center of excellence for the production and dissemination of knowledge and a place for dialogue and understanding between peoples and cultures. It intends to recapture the spirit of the original. It aspires to be:

- The world’s window on Egypt
- Egypt’s window on the world
- A leading institution of the digital age; and, above all
- A center for learning, tolerance, dialogue and understanding

To fulfill that role, the new complex is much more than a library. It contains:

- A library that can hold millions of books
- A center for the Internet and its archive
- Six specialized libraries for (i) Arts, multimedia and audio-visual materials, (ii) the visually impaired, (iii) children, (iv) the young, (v) microforms, and (vi) rare books and special collections
- Three museums for (i) antiquities, (ii) manuscripts, and (iii) the history of science
- A planetarium
- An Exploratorium for children’s exposure to science
- Culturama a cultural panorama over nine screens, the first ever patented 9-Projector interactive system. It is a remarkably informative and attractive multi-media presentation of Egypt’s heritage through 5000 years of history to these modern times, with highlights and examples of Ancient Egyptian and Coptic/ Muslim heritage.
The grandeur of the Reading Hall fascinates all visitors.
• VISTA, (the Virtual Immersive Science and Technology Applications) system is an interactive Virtual Reality environment, allowing researchers to transform two dimensional data sets into 3-D simulations, and to step inside them.


• Four art galleries for temporary exhibitions

• A conference center for thousands of persons

• Seven research institutes covering (i) manuscripts, (ii) documentation of heritage (located in Cairo), (iii) calligraphy and writing, (iv) information sciences, (v) Mediterranean and Alexandrian Studies, (vi) arts, and (vii) scientific research; and

• A discussion forum

Today, this vast complex is a reality, receiving close to a million visitors a year. These include pre-school children and learned scholars, young researchers and curious tourists. The library tries to respond to a broad definition of culture, and the many lively components of the library provide a rich mosaic of art, music, science and literature, that overwhelmingly involve Egyptians and others, and that find expression in some 500 separate events every year.
The Reading Hall filled with students and researchers diligently making use of all facilities and tools provided
The Young People’s Library and the enthusiastic builders of the future
Tourists fascinated by the artistry of the collection on display.
Children attentively listening to their guide in the Pharaonic section of the Antiquities Museum
The sundial attracts the curiosity of visitors in the Plaza.
The open and inviting Plaza.
The Aga Khan Award for Architecture

is presented to

Bibliotheca Alexandrina

An Outstanding Contribution to Architecture for Muslims

on this day
14 Shawwal 1425
27 November 2004
in Delhi, India

by
His Highness The Aga Khan
upon recommendation of
The Master Jury

Aga Khan.
ARCHITECTURAL PLANS
1- Reading Area
2- Storage Area
3- Digital Lab
4- Offices
5- Spine
6- Escape Stairs

4th Basement
1- Reading Area
2- Storage Area
3- Training Labs
4- Computer Room
5- Arts & Multimedia Library
6- Offices
7- History of Science Museum
8- Spine
9- Escape Stairs

3rd Basement
1- Reading Area
2- Storage Area
3- Print Shop
4- Staff Parking
5- Offices
6- Rare Books
7- Spine
8- Escape Stairs

2nd Basement
1- Reading Area
2- The World of Shadi Abdel Salam
3- Impressions of Alexandria Exhibition
   (The Awad Collection)
4- Manuscripts Museum
5- Offices
6- VISTA
7- Antiquities Museum
8- Permanent Exhibition Area:
   Arabic Calligraphy, The History
   of Printing, The Artist's Book
9- CULTURAMA
10- Press Room
11- Meeting Rooms
12- Parking
13- Planetarium
14- ALEXploratorium
15- Spine
16- Escape Stairs
17- Escape Way

1st Basement
1- Reading Area
2- Taha Hussein Library for the Blind and Visually Impaired
3- Internet Archive
4- Storage Area
5- VIP Entrance
6- Staff Entrance
7- Main Entrance
8- Callimachus Triangle
9- Auditorium
10- Escape Stairs
1- Reading Area
2- Children’s Library
3- Young People’s Library
4- Cafeteria
5- Bridge
6- Spine
7- Escape Stairs

1st Floor
1- Reading Area
2- Offices
3- Spine
4- Escape Stairs

2nd Floor
1- Floating Meeting Room
2- Offices
3- Nobel Section
4- Spine
5- Escape Stairs

3rd Floor
1- Floating Meeting Room
2- Offices
3- Spine
4- Escape Stairs

4th Floor
1- Director’s Office
2- Meeting Rooms
3- VIP Area
4- Escape Stairs

5th Floor
Massive storage space is provided beneath the cascading floors of the great Reading Hall, which is enclosed in a beautiful columned space covered by the impressive ceiling.

The planetarium is a sphere hanging in the air by four tunnels and surrounded by the History and Science Museum. The elevation of the building in the background shows how the height is reduced by embedding four floors below ground and how the volume is reduced by the slant of the ceiling.
The Bibliotheca Alexandrina is more than form.
Ismail Serageldin

Director, Library of Alexandria, also chairs the Boards of Directors for each of the BA's affiliated research institutes and museums and is Distinguished Professor at Wageningen University in the Netherlands. He serves as Chair and Member of a number of advisory committees for academic, research, scientific and international institutions and civil society efforts. He is a member of l'Institut d'Egypte (Egyptian Academy of Science), TWAS (Academy of Science for the Developing World), the Indian National Academy of Agricultural Sciences and the European Academy of Sciences and Arts. He is former Chairman, Consultative Group on International Agricultural Research (CGIAR, 1994-2000), Founder and former Chairman, the Global Water Partnership (GWP, 1996-2000) and the Consultative Group to Assist the Poorest (CGAP), a microfinance program (1995-2000). Serageldin has also served in a number of capacities at the World Bank, including as Vice President for Environmentally and Socially Sustainable Development (1992-1998), and for Special Programs (1998-2000). He has published over 50 books and monographs and over 200 papers on a variety of topics including biotechnology, rural development, sustainability, and the value of science to society. He holds a Bachelor of Science degree in engineering from Cairo University and Masters' degree and a PhD from Harvard University and has received 19 honorary doctorates.