

*Abdel Mohsen Barrada*

The objective of architectural education could be thought of as training architects capable of producing meaningful architecture.

In order to assess the problems of architectural education it is essential to start by visualising the state of architecture that we would ideally like to attain in a given society. We need to define what is good architecture in that particular context and to compare the ideal with the architecture that is actually produced. If there is a discrepancy, this might be due to conditions of practice or to architectural education, or both. If architectural education is at fault, one needs to determine the reasons for its inadequacy.

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### **The Current State of Architecture in Egypt**

In Egypt one sees a rather simple dichotomy — architecture versus no architecture. There is architecture, in the sense that buildings have concepts, character, and language or, in the words of the practitioners, they have “something to say”.

Generally speaking, there are very few new buildings in Egypt that could be classified as architecture. This is true at all levels and includes structures designed by the four groups of “architectural designers”, which comprise formally trained architects, common builders and owners who do not use architects, civil engineers and expatriate architects.

Looking at the buildings currently produced by Egyptian architects, we find that with rare exceptions they try to reach the maximum size building envelope that is legal at the cheapest cost. They ignore the functional and aesthetic needs of the people and lack any concept or language. Very few have architectural values.

If we look at common buildings produced in urban areas without architects, which amount to up to 60 per cent of all building activity, we find that they resemble in many ways the first group. The architects have set the standards and values that the common persons follow. It is interesting to note that

at the beginning of this century the relation between the two sectors was the same, but, of course, then architecture was different. Both periods show clearly the disruption of the Islamic and vernacular traditions, together with their languages. This could be traced to the French and British domination of Egypt, when tradition and culture were defeated by new, Western images (not the reality) of culture, and Egyptians imitated the new buildings and did not look within themselves or at their own environment.

The third group responsible for building designs is civil engineers. This may sound strange, but, as the laws of Egypt require only a qualified engineer to be responsible for buildings, many civil engineers actually design buildings. Those of them who have large offices sometimes appoint junior architects to assist them. The types of buildings that are produced are, frankly, close to what architects are producing today.

Looking at the work of expatriate architects in Egypt, we find that most of it looks transplanted and out of context, aggravating the state of “no architecture”.

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### **Some Factors Affecting the Practice of Architecture**

The current state of “no architecture” in Egypt is partly due to factors affecting the practising architect.

Building laws and the difficult economic conditions certainly have a major impact, as they drive landlords and architects to attempt investments at the expense of maintaining standards. There is a universal lack of any sense or awareness of the meaning or value of architecture. Society does not distinguish between good and worthless architecture. In some quarters even talking about architectural values is considered a luxury. According to a survey made by the Supreme Council of Culture in 1980, the word “architecture” does not appear in any educational text used at any stage of education. There is a paucity of good examples of

architecture for the public and even for architects or students of architecture to see.

The number of registered architects is about 16,000. They increase at the rate of over 1000 architects each year. The numbers are fairly high. The competition between architects is not in excellence but in fees, which have reached levels where the mere production of safe buildings is imperilled. Due to the above-mentioned forces and conditions, most architects, irrespective of their education, do not or cannot attempt to produce architecture, even if they are motivated to do so.

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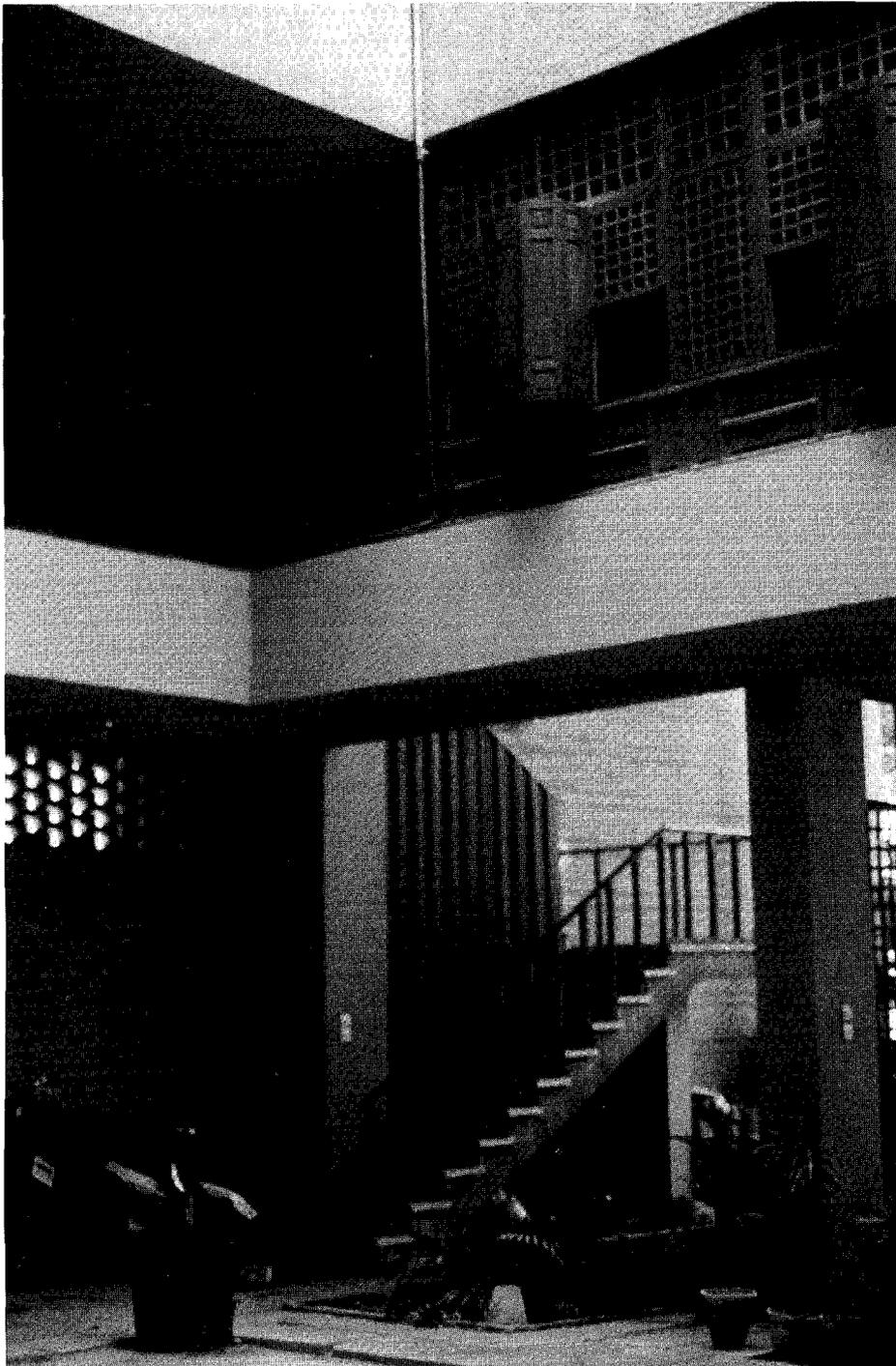
### **The Capabilities of Newly Graduated Architects**

What are the concepts and capabilities of newly-graduated architects? There is no doubt that architectural graduates understand, in varying degrees, the technicalities of building. However, they are not aware of concepts and values. Their ideas about architecture are disturbed and so are their ideas about their role in society. They are not prepared for the forces that act upon them. In such conditions, they become just what society expects and wants them to be, just building engineers.

This current status of architects has roots in the early stages of architectural education in Egypt. At the beginning of the nineteenth century, there were no pure architectural schools in Egypt. Consequently, most architectural work was done by foreign architects.

The first Egyptian engineering school that covered architecture was established in Cairo in 1820 under the name of “Mohandeskhana”. It was followed by another school, also in Cairo, in 1834. The training programmes in both these schools were seasonal.

In 1839 the School of Works was established, and the other engineering schools became affiliated with it. The organisation of that School of Works followed a system



*A. Ibrahim, Centre of Planning and Architectural Studies, interior*

*Photo: C. Avedissian.*

similar to that of the Paris Polytechnique, but this school was closed from 1854 to 1858 and from 1861 to 1866.

A new "Mohandeskhana" school was established in Abbassia, Cairo, in 1866. It was transferred to another location in Cairo in 1868 before finally settling in Giza in 1905, in what is now the location of Cairo University. By then its name had changed to the "School of Irrigation and Architecture", but it was also given other names. In 1935 it became the Faculty of Engineering, which included a Department of Architecture.

Thus, architecture was originally conceived of as a branch of the very powerful and respectable profession of civil engineering without roots in art or "architecture" as we would define it now. It was seen as merely that part of civil engineering that dealt with buildings, which were traditionally less important than the construction of canals, dams and roads, which were the life and soul of Egypt's agricultural society. Even in 1960 Cairo University architectural education started with a general preparatory year and a first and second year of joint study with civil engineering. Tying architecture with the faculties of engineering is still the pattern in the departments of architecture that were set up in Alexandria in 1941, in Ain Shams in 1950, in Assiut in 1957, in al-Azhar in 1964, in Shubra in 1975 and in Mataria in 1980.

The long association with the faculties of engineering has forced most of the departments to adopt the same methods of teaching, exams and, in many cases, courses as the engineering departments. This has encouraged the conception of architecture as a profession based on technology and engineering. Even the schools established within the Faculties of Fine Arts in Cairo and Alexandria, surprisingly, fell in line with the others and sought the title of "Architect Engineers" and the acceptance of the Syndicate of Engineers.

The Engineers' Syndicate is still governed by the powerful civil engineering section, which holds the majority of leading seats in its board. Laws and conditions of practice are, of course, biased in their favour.

We cannot look at the problem of architectural education in Egypt without taking into consideration these factors.

**Elements of Architectural Education**

The main elements in architectural education are the teachers, the curricula and the students.

**The Teachers**

Teachers are important, not only because they are responsible for teaching, but, also, because they are responsible for developing the curricula. Unfortunately, they are responsible for creating the major part of the problems of architectural education.

The number of architects in the nine schools of architecture in Egypt is about 200. Almost all of them had their higher education in the U.S.A., the U.K. or France. The average staff/student ratio is 1/18. Thus, there is no shortage of staff.

At Cairo University twenty years ago in 1965 there were thirteen staff members; four teaching architectural design, three history and theory, two building, three planning and one services.

In 1985 the staff had increased to thirty-one. Two had Beaux Arts qualifications and twenty-six others had Ph.D's in the following specialisations: theory and history (2), planning (4), housing (2), environmental control (4), construction and technology (4), specific building types (6) and design methods (4).

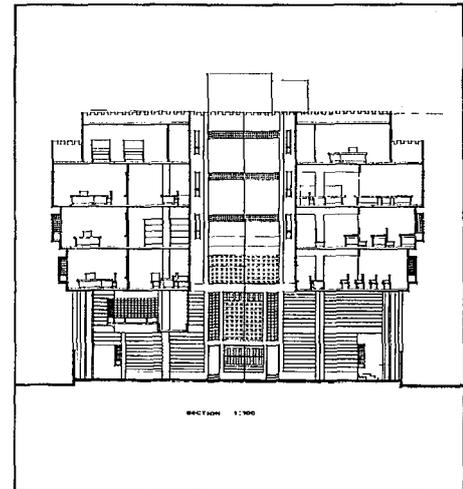
The increase in the numbers and specialisations of the staff has resulted in adding the following subjects in the Department of Architecture: environmental control, design methods and computers, operations research, urban planning, housing, landscape architecture and statistics.

Those additions were made in 1969, encouraging the conception of architecture as a

profession largely based on and associated with science and technology.

This has influenced all of the other schools, which have developed in the same direction — including the two fine arts departments.

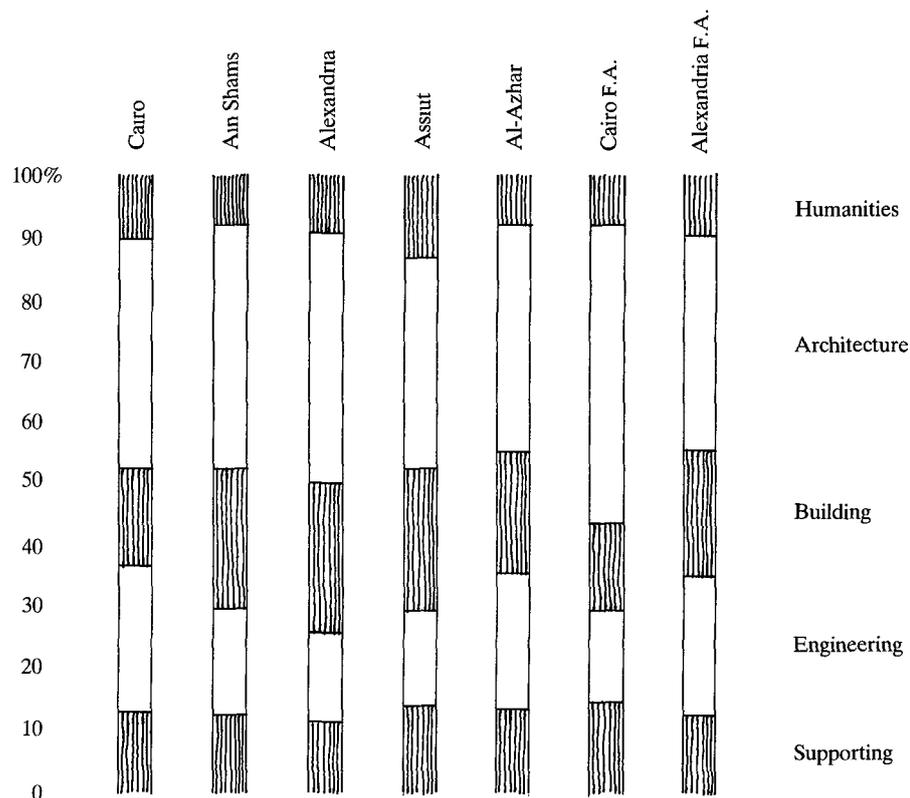
This shift, together with the previously mentioned increase in the number of subjects taught, has had the following consequences. The teaching time devoted to each subject has been reduced, forcing the curriculum to be cramped and condensed. Thus, the students have virtually no time to digest, to develop, to observe or even to think. In fact, they have *no time to learn*. Education favours the more specialised subjects like building, technology, engineering (see the graph). Very little emphasis is given to the humanities, the social sciences, art or culture even in the two architectural fine arts departments. More seriously, a state of frag-



A. Ibrahim, Centre of Planning and Architectural Studies, section

Photo. A.K.A.A

**Proportions of Subjects Groups in Various Schools of Architecture in Egypt in 1985.**



mentation has been created, aggravating the difficulties of co-ordination and integration of the courses. Each subject in each year has become an independent island with its own methods and objectives. Accordingly, the students take the subjects as unrelated fields of knowledge, thereby losing any chance of understanding the wholeness of architecture. Certain general topics have been discarded, like the role of architecture in society, the responsibilities of the architect and understanding of the total environment or the local environment.

If we look in some detail at how the main architectural subjects are taught we find the following pattern.

The theory of architecture is usually combined with or taken as a part of the history of architecture in the twentieth century. Sometimes it covers types of buildings. It gives information and is not intended to stimulate thought, student involvement or appreciation.

In all Egyptian Schools architecture architectural is taught in the "Beaux Arts" tradition of studio work. But, with the reduced time allocated for it and with the large numbers of students, it has become impossible to maintain the direct relation between the teacher and the student that is basic to that system. With the increase in the number of students and staff, the teaching of architectural design has become a team endeavor. That is, in each year, say, four to six staff members teach the subject. Since they have various backgrounds, attitudes and capabilities, the consensus usually favours teaching neutral, passive architectural design. This means design on a module, with no special features or individual expression but only the *logical and functional tradition*. No specific approaches are endorsed. The products are uniform and characterless.

It must be mentioned here that it has always been thought that, because the teachers of architectural design have had their higher education in other countries and have been affected by other cultures, they would transfer the architecture and concepts of those foreign societies. There is no evidence of

this, simply because in those countries they were studying subjects other than architecture.

The staff members teaching architecture mostly have their Ph.D's in a variety of specialisations not directly related to architecture. When they teach, they fall back on their undergraduate education and on their own practises.

#### Students

When we think of education we think of teachers and methods, but when we talk of learning, we must consider the student. One should recall the wise comments that learning depends on the individual, his capabilities, motivations and aspirations and that the amount and rate of learning depend both on the environment the individual lives in and the characteristics of the individual.

What are the characteristics of the individuals admitted to schools of architecture?

Admissions to all universities are constrained by the total grades that the student gets in the Egyptian General Certificate of Secondary Education. Faculties of Engineering usually take the students with the highest grades from within the scientific and math sections. After the general preparatory year, students with the highest total grades are admitted to the departments of architecture.

As all tests in secondary education and in the preparatory year in engineering test the ability to retrieve information and not learning or understanding methods or motivations (and this is a general problem of education in Egypt), it is students who are best in assimilating information who are admitted to architectural departments. Of course, this comment does not mean that retrieving information is the only ability they have. Whether this ability is usually associated with the required characteristics of architects is something that calls for investigation together with attempts to define those characteristics.

#### Conclusions and Suggestions

What can be done about the problems related to architectural education?

It has become clear in the case of Egypt that those problems cannot be treated in isolation from external problems.

In 1980 the Committee on Architecture within the Egyptian Supreme Council of Culture reached the conclusion that it was essential to develop a general awareness and appreciation of architectural values in society as a whole as a prerequisite for any improvement in the quality of architecture.

This requires the existence of examples of good architecture for the public, the students and the architects to see.

Thus, proposals were made for measures such as awards, competitions, publicity and introduction of architecture in primary education.

This could be accompanied by appropriate changes in building laws and the organisation of the profession.

The value of "learning" and the motivation to learn have to be developed very early on in general education, instead of just inculcating awareness of the importance of passing tests and motivating students to obtain a certificate. Students must be exposed to the humanities and culture.

Admission systems to architectural departments must be rethought.

Regarding the problems of architectural education proper, it seems logical to divide them into what could be done in the short and in the long terms.

In the short term we might undertake:

- 1) Reorienting the teachers of architecture so that they appreciate the problems of architectural education. This could be done through seminars and other mechanisms.
- 2) Reducing the number of the subjects and the general course load in a way that would allow the students to digest, to think, to observe and, thus, to learn.

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- 3) Relating architectural courses to the environment.
  - 4) Attempting to co-ordinate and integrate subjects so as to create a feeling of the wholeness of architecture.
  - 5) Reorienting courses on the theory of architecture away from history to help the student appreciate the different approaches and languages and critical theoretical problems.
  - 6) Using the study of architectural design to encourage the student to experiment with different approaches and to develop his own capabilities.

In the long term we might undertake the study of:

- 1) The association of departments of architecture with the faculties of engineering.
- 2) The type of teachers engaged in architecture education, including the issue of whether the specialised Ph.D. is the right, or at least a sufficient, qualification.
- 3) More balanced and integrated curricula.

In closing, I feel compelled to ask: are these truly the problems and constraints? Or, do we have to revise the objectives of architectural education from the mere qualification of architects to the rebuilding of individuals in the contexts of their environments so that they look at architecture as a way of enriching their lives and a source of pleasure?