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## Introduction

### Premises and Scope

Although this topic rightfully belongs to the field of historical inquiry, there has not yet appeared a single detailed historical treatment of the education of Ottoman and Turkish architects or the development of the profession in Turkey. Brief overviews, such as those by Sey and Tapan (1983), fall short of revealing the complex interrelationships between historical developments and the evolution of the architectural profession. This may be due to the fuzziness of the data available.

A case study of architectural education in Turkey focussing on any period cannot be meaningful unless it takes up the subject within a framework of diachronic relationships. The present study therefore attempts to examine some of the changes in architectural education, in terms of the space in which relations within and between two interrelated processes take place: professionalisation of architecture and architectural education as social production.

It should be noted that this space is a construct, and that the needs governing it and events taking place in it can be utilised to construct alternative future events (constructive alternativism), such as possible future directions of architectural education. This study attempts to develop such a theoretical construct with which to explain the shaping and development of architectural education in Turkey. In order to have a better construal basis, a detailed examination of specific changes that have occurred at the Faculty of Architecture of the Middle East Technical University (METU) is presented, and the specific case of METU is compared to the shaping of architectural education in the country as a whole. Finally, it is attempted to anticipate future developments by utilising the methodology of constructive alternativism.

### Conceptual Framework: Social Order and Control

In any social system, including organisations and informal groups, social control of the ways of approaching, organising and orientating toward transactions with the environment are effected through social status categories (power) and their contents (norms). Social systems are evaluated on the basis of their positions with regard to these dimensions of social order. Norms are thus the coding content of social order

A norm is the content of a rule generated by the joint construal of the members of the social system or by the social system and its social environment. It guides behaviour to what is appropriate or inappropriate. The number of possible alternative normative orders and possible alternative attitudes in each norm is a function of the complexity of the social system at any given time.

On the other hand, the structure of social order is the organisation of social position dimensions. This is the categorisation component of the social system. Social status refers to the position on certain social space dimensions that have an evaluative connotation for the social structure. It provides a measure of the amount of control the system can impose on the social and physical environment, or, alternatively, a measure of the control that members of the system can impose on the system.

Formal or informal social systems of high status have more power to affect the course of environmental events, and they are expected to order the events for the whole population that is implicated in them.

At the operational level, constructions of differentiation and integration are the operational measures of such properties.

Differentiation can be taken as either the measure of the number of dimensions or the distinctiveness of the elements which constitute the environmental context of social systems.

Integration is the connectedness among parts of the structure (power relations) or the level

of conceptualisation or categorisation of the norms.

The construal space for constructing the development of architectural education in Turkey will not be using each and every parametric relationship between the dimension of norms, power relations, and properties of differentiation and integration, but only will refer to

- 1) alternative norms of knowing architecture, architectural education and the environment; and the possible alternative attitudes in each norm as an expression of *social differentiation*;
- 2) the possibility of change or development between and within levels of salient norms as an expression of *social integration*; and
- 3) *the environmental control* potential of architects or their education in terms of the position of architects on the power relations scale.

It is also expected to observe the development of architectural education in

- 1) higher levels of differentiation in the norms of architectural education and within alternatives of each norm;
- 2) having salient norms of architecture or architectural education which integrate architects, the public and the educators either within their own groups (lower level of integration) or among all those groups (higher level of integration); and
- 3) architects or architectural educators gaining concrete or potential control of the environment.

All in all it must be a change towards more complexity. This essay will attempt to evaluate the process of change in architectural education in the flow of linear time. A multi-dimensional, multi-modal study can be made through accepting different senses of time.

### Sources of Multi-modal Architectural Services and their Organisation within an Integrated Educational System: 1300-1700

According to Erdenen (1966) the first appearance of architects within the formal order of a Turkish society is reflected in a document dating from 1329, concerning the organisation of the state services system of the Ottoman Turks (Erdenen, 1966b; Terzioğlu, 1984). Architects were accepted as civil members of the order which were generally called *kapıkulu*, and more specifically *acemi oğlanlar*.

This small group (then about ten in number) called *mimarın* were in close relationship to the sultan; its members, like janissaries, were mostly boys of non-Muslim origin who were given training in Islamic religion and socialised into Turkish ways of behaving (*devşirme*) (Ortaylı, 1976). Since the sultan was on the move most of the time

conquering new territories, these corps had the chance of gaining experience and developing their own ideas through observing alternative types of buildings and by building for the sultan. There were no theoretical courses to interfere with their integrated practical education.

Similarly, the problem of serving the users versus serving the client was minimised since the sultan owned the land and the people so that the buildings reflected the culture of the state. Consequently, the problem of structure versus content did not apply to such building activity since all architectural behaviour was structural. It then seems that a young *acemi oğlan* selected for his manual artistic abilities and serving the state was trained in the arts of construction technology, climatology and ornamentation, but devoid of any theoretical or social content.

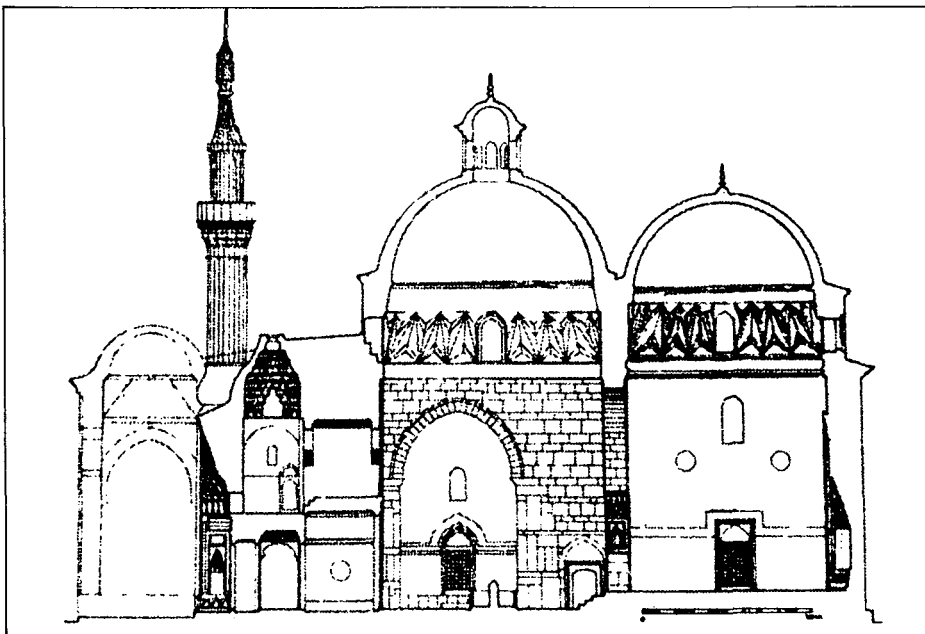
However, this type of approach was not the case for the people or small principalities of Anatolia. People usually built for themselves

and those who had a better sense of construction became *usta* or *kalfa* (better man on the job) building more and better buildings for others including the local notables and lords (beys). *Ustas* or *kalfas* were specialised in one or two manual skills or materials. They were organised into guilds (*lonca*) through which their rights were protected (Erdenen, 1967; Kuban, 1970). Some *ustas* or *kalfas* who became popular attracted the attention of a number of beys for whom they built numerous buildings. The guilds were integrated according to members' interests, although they served the needs of the people, as well. The education obtained in the guilds was a mixture of mainly manual skills (techniques) and professional ethics with socio-cultural and religious content deriving mostly from the mystique of an heterodox sect.

The travelling *mimars* on the other hand were able to carry styles of one culture to another at different scales, acting as agents of acculturation, if they or their proposals were accepted by the courts. The architect of Sırça Medrese in Konya, for example, is Osman Muhammed from the city of Tus in Khorasan, and the Alaeddin Mosque also in Konya was built by Mehmet Halvan of Damascus (Kuban, 1970). Their education was a combination of learning through practice and the protected formal learning from the elderly masters of the sultans' court, to which they were attached.

These kinds of normative professional differentiation of architectural service types were reflected in architects' learning or knowing styles. They learned and acted in the socio-geographical space without overpowering others. However this rich complexity, unintegrated as it was, was hard to control for a healthy development of Anatolian cities until, at least, the period of Mehmet II, when the central institutions of the Ottoman Empire were consolidated and the Palace School was established (Terzioğlu, 1984; Sözen, 1977; Erdenen, 1966a).

After the mid-fifteenth century there were a number of new *madrasas* established in Istanbul. In 1526 a special one for architects was established in the Palace and architects were organised by the order of Süleiman the



Yeşil Cami, Bursa, 1412-13, section

Photo: A Kuran

Magnificent as a professional branch of janissary corps: Hassa Mimarları Ocağı. The corps of imperial architects numbered eighteen and their educational facilities were placed in Dar-ül-hendese (School of Geometry) and Süleymaniye Medresesi, where mathematics, geometry and applied arts were taught. There were also some specialist schools (Necceran-i Mimarın Kârhaneleri) which produced items of different scales for janissaries in wood, including architectural items, and the curricula included courses in architecture and geometry. Geometry was thus the integrative course because of its use in construction, ornamentation and possibly planning. Both schools accepted students from *acemi oğlanlar* while each candidate was examined by one of the headmasters or head-architects (Mimar Ağa) on manual abilities (such as carving), arts (e.g. geometrical ornamentation) and techniques of construction (e.g. stone masonry and carpentry). If the candidate was found able to continue, then Mimar Ağa showed his approval by presenting him with books about the trade, hand written by the Ağa himself. Later he was introduced to the Sheikh of the Ocak who gave religious clearance and his blessing (Erdenen, 1966b).

The director of construction in each of the Ottoman provinces was appointed by the head of the Hassa Mimarları Ocağı (Corps of Imperial Architects). Imperial architects and others appointed by them controlled urban construction to assure safe and unobtrusive buildings, and they had the right to demolish those which were improperly built (Turan, 1963; Terzioğlu, 1984; Erdenen, 1966a). It is understood from an imperial edict of 1572 that there still existed private practice and builders belonging to various guilds. People who were not satisfied with the services of the private architects complained to the sultan, requesting the provision of better services. Süleyman the Magnificent in this edict orders Sinan to educate more architects in the Ocak and that they be sent to the provinces especially for the construction of the public buildings. Probably as a consequence, the capacity of the Ocak was increased and number of imperial architects reached 40 in 1665 (Erdenen, 1966a).

It seems that during the late fifteenth, sixteenth and seventeenth centuries educated architects were high in the power scale. Being educated by the best means, they were highly sought both by the central government and by the public (Ortaylı, 1982). Control of student admissions by a selection process also shows how seriously the Ocak took education. Although there was a normative differentiation between giving architectural services and creating a relative complexity, both roles were well integrated right in the heart of academia which was controlling the code of ethics for architects and civic code of construction in cities. Academic and professional intervention in public life was at its zenith.

### Unintegrated Changes in Technical and Architectural Education: Facing Reinterpretation Problems of the Effects of Modernity

It is still not clear to me how a society so centrally controlled and so consciously closed to new inputs from its environment (and one in which no new normative differentiation or new, untried alternative behaviours or attitudes were developed) could have solved the problem of needed paradigm shifts for new levels of integration without strong opposition and threats to its existence.

When the Ottoman Empire was defeated in Europe and had to sign the treaties of Karlowitz (1699) and Passarowitz (1718), it began evaluating the reasons for Western military power. The Ottomans thus developed an intellectual curiosity regarding how Europeans developed and established their organisations and technology. Turkish observers of the time noted that it was the way of understanding and organising technical education that had played a major role in Western European advancement.

As a consequence, technical schools were opened in 1727 then in 1734, but without success since the janissaries, who had by now become a reactionary force, compelled them to close (Dölen, 1985; Tekeli, 1980). With

these developments architects were also threatened because of their links with the Ocaks (Dölen, 1985).

Finally, however, the School of Naval Engineering (Mühendishane-i Bahr-i Hümayun: 1773; re-organised, 1789) and the School of Gunnery and Fortifications Engineering (Mühendishane-i Fünun-i Berri-i Hümayun: 1792) were opened. The latter is considered as the first institution of technical training as one would understand it today. The Naval Engineering School was separated in 1830, and the School for Gunnery and Engineering Fortifications was then named Mühendishane-i Berri-i Hümayun and in 1847 was re-named Harbiye ve Mimarlık (School of Gunnery and Fortifications). *Mimarlık* meant design of fortifications but was later dropped as a separate branch. These schools were, of course, all under the influence of the military contexts in which they were established. Some of the graduates of Mimarlık opened private architectural practices. Their competition in the market with the Imperial architect was not successful since they were not a part of the architectural tradition (Bora, 1978).

In the meantime and especially after the Tanzimat (Reorganisation: 1839) architectural services in Istanbul and in other major cities were rendered either by foreigners coming from abroad, or by non-Muslims who had architectural training in Europe (like most members of the Balyan family), or by Muslim and non-Muslim *ustas*, most of whom were copying from European books on architecture and architectural orders (Erdenen, 1966a; Erdenen, 1967; Tuğlacı, 1981).

Building for new institutions with their precedent-breaking modern programmes were thought to be difficult for Ottoman architects. Both Turkish architects and architectural education lost status in the social structure and their once powerful role in shaping the environment of cities (Tekeli, 1980b; Terzioğlu, 1984). Actually, the disintegration of the old order's organisation led the way to a normative differentiation of educational institutions (from the Palace), and of their professional and administrative extensions.

A further differentiation developed by allowing alternative educational courses.

In 1831 Mimarbaşılık (Directorate of Architects) had lost its independence and was joined with Şehreminliği (Local Authority) to form Ebniye-i Hassa (Organisation of Imperial Buildings). In this way architects lost the power of creating norms and controlling related behaviour and became keepers of buildings within a local authority system, with a diminished status.

In order to raise the status of architecture, an old teacher of the Ocak, Hoca Seyid Abdülhalim Efendi, proposed in 1833 some scientific principles for architects to follow and teach. This was, of course, to fit with the technology-biased norms of the time (Batur, 1985; Dölen, 1985).

A few years later in 1839 when the new civil ministries were being formed, Ebniye-i Hassa was attached to the Ministry of Commerce, and the following year, a group of civil intellectuals, on the basis of Seyid Abdülhalim Efendi's proposals, managed to obtain an order from the sultan to set up a school of architecture in Istanbul. Due to technical problems, such as the scarcity of academically trained teachers, the school could never be established in its ideal form. Much later, in 1881, Osman Hamdi Bey, the painter who started fully figurative Turkish painting, became the first director of the civil Sanayi-i Nefise Mektebi Alisi (The High School of Fine Arts), which was then attached to the School of Commerce, an extension of the Ministry of Commerce to which Ebniye-i Hassa was also attached. One can argue that education, practice and control were once more integrated, but this time within a civil unit. Sanayi-i Nefise Mektebi Alisi consisted of four schools: painting, sculpture, calligraphy and architecture.

At about the same time it was also decided to have a civil school for training technical staff in civil services, and Hendese-i Mülkiye was opened, with civil students but with teachers and staff from the military School of Naval Engineering. Because in the early years it was difficult to attract students to such a civil engineering school, there were only thirteen students in the first graduating class in 1888.

It seems that about a hundred years ago the engineering and architecture disciplines were becoming differentiated as professions, but it took another twenty seven years to establish a civil engineering school: Mühendis Mektebi Alisi, attached to the Ministry of Public Works, began instruction in 1909 with foreign staff members. It was transformed in 1928 into an independent school which had, according to some sources, a two-year architecture course after the first three years. Later it lost its independence and came under the jurisdiction of the Ministry of Education, and finally, in 1944, it was reorganised as Istanbul Technical University.

The first consequence of this development was structural: both engineering and the arts and architecture came out of the control of the Palace and out of the medieval system of Ocak, seeking new identities. Architecture was ideologically separated from engineering and related to arts. It was becoming a civil occupation, whereas engineering was established within a military context.

It can be said that while the Palace and the military sought modernity, they did not fully understand that it meant training critical universal minds. The Palace and its modernists simply aimed for a static, improved technological state to contribute to their military and organisational efficiency.

Architects of Turkish origin were few, probably because they were neither ready for this new profession nor brought up with a modern outlook, and architects from the minorities took up the profession. The latter group became powerful in shaping the physical environment and more or less stripped the new buildings of their old cultural (Islamic) content. I believe that they started an unidentified process towards modernity in schematic representation of content.

The complexity of the educational norms was increased, but the differentiation along norms was not considered. There seem to have been no alternative values or theories that were substantially affecting the architectural educational norms.

### **Turkish Architects' Self-defeating Search for a New Integration of Architecture within an Old Schema of Turco-Islamic Architecture in a Context of Turkish Nationalism**

About the same year as Mühendis Mektebi Alisi was founded (1909), Sanayi-i Nefise Mektebi was able to take students via an entrance examination, establishing its salient fields of discourse and normative differentiation in the integration processes. This must have had a differentiation effect on student admission due to the high level of minority education. In that year there was only one Turk and 38 minority students who passed the exam. This might be due to the low status of the art schools among Turks.

As architect Koyunoğlu remembered, the contents of the courses then were abstract and oriented to foreign styles (Pehlivanlı and Birkan, 1977). The prevailing taste was either rococo or a highly eclectic one, reflecting imported tastes from Europe. Koyunoğlu called this style decoration architecture without a project. Mimar Kemalettin a leading figure of the next two decades was also trained at this school between the years 1909 and 1914.

High quality technical assistance on site was required by architects and engineers once they were in charge. As a response the Kon-döktör Mektebi Alisi (Higher School of Technicians) was established in 1911, educating technicians in construction. It later became Yıldız Technical School, then the State Academy of Engineering and Architecture, and finally, Yıldız University (1982), gradually abandoning its initial aims and orientation.

Due to World War I and the War of Independence, these three schools produced very few graduates. As a consequence, after the wars very few architects and engineers were left to face the new reconstruction and settlement problems (Eldem, 1983).

During 1920 Sanayi-i Nefise Mektebi Alisi was turned into an Academy of Fine Arts. Nothing much changed in terms of the school organisation or the curriculum of architecture since the teaching staff also remained

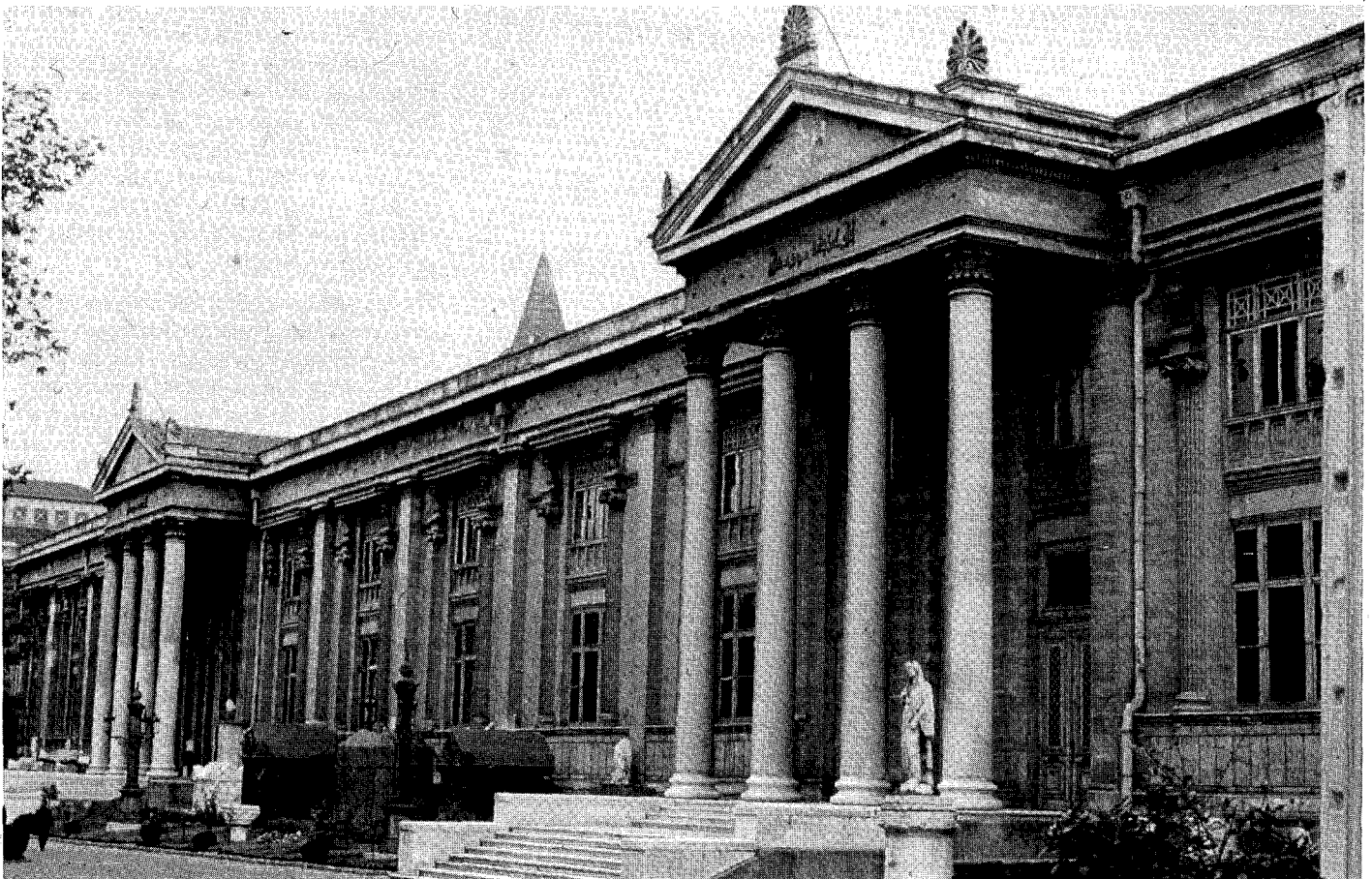
the same. The head of the architecture department was Vallauray, who had a Beaux-Arts training. However, from talks with Koyunoğlu and Mutlu (Pehlivanlı and Birkan, 1977), we feel that there was never the Beaux-Arts training in its fullest and strictest sense; for example, the end of the year competitions never took place. The first formally educated Turkish architect Mimar Vedat (Tek) was a colleague of Vallauray (Özkan and Yavuz, 1982). Later Vedat started the first course in architectural history. In the Mühendis Mekteb-i Alisi those who continued for the final two years in architecture — after the preliminary three in engineering

— were educated by the German architect and researcher Jachmund, who had been appointed by the Imperial German Government to study Ottoman Architecture in Turkey, and his Turkish colleague Mimar Kemalettin, who had finished his post-graduate studies abroad. Although some writers argued that the German background of Jachmund had an effect on this school that has continued until the present day, it should be noted that Jachmund had his architectural training in France at the Ecole de Beaux Arts.

The idealistic-Orientalist (Orientalist-affective) approach of Vallauray and Jach-

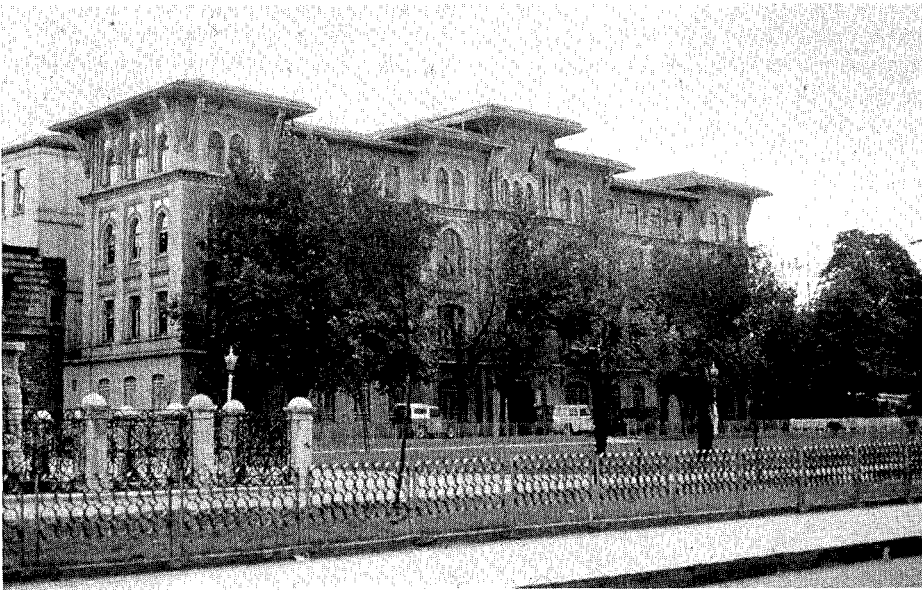
mund in their monumental building was, of course, quite different from the nationalist/ Islamic (Ottoman-affective or behavioural) approach of Kemalettin and Vedat in their domestic, human buildings. The two had by then joined forces to teach and design architecture in what would later be named the First National Architecture Movement. This kind of integration was a thematic one and could easily direct conceptualisations from research to practice.

The success of Mustafa Kemal in Anatolia against foreign forces also strengthened the nationalist spirit. After the War of Independence, both of these Turkish architects left



*A. Vallauray, Archeological Museum, Istanbul, 1891-1907*

*Photo: University of Pennsylvania.*



Vedad (Tek), *Imperial Offices of Land Registry, Istanbul, ca. 1906.*

Photo: University of Pennsylvania.



C. Holzmeister, *Central Bank Headquarters, Ankara, 1933.*

Photo: University of Pennsylvania

their teaching positions in Istanbul and moved to the city of Ankara to participate in the building of the capital. Although they had a chance of raising and linking the status of architecture in general and of Turkish architecture in particular with the Republican forces, they met great difficulty in doing so. One reason was their lack of experience in large-scale urban design and planning, and the other was lack of *ustas*, most of whom were either killed or left the country during the war. Finally, the new government's bureaucrats interfered so much with their designs that both were discouraged intellectually and left Ankara.

In 1927 Turkish architects founded the Türk Yüksek Mimarlar Derneği (The Association of Turkish Master Architects), which played a major role in preparing The Law on Architectural and Engineering Services. However, this legislation did not help Turkish architects since it took another thirty years to produce the necessary regulations. But, a second new law, Teşvik-i Sanayi Kanunu, helped foreign architects. With this law it became possible to invite to Turkey foreign technicians, builders and architects who could be employed with a preferential pay scale.

Thus, a new wave of foreign architects arrived in Turkey. This was encouraged by another decree of the ministry of Education (1934), which made it possible to hire foreign experts in universities. Foreign architects also acting as teachers at the two schools of architecture upheld the status of teacher-designers and architecture. Between 1920-1931 Mongeri was the head of the Academy of Fine Arts, and Vedat Bey worked with him. The education at the Academy was based on the study of architectural classics and classical styles (Sayar, 1986). Sedat Hakkı Eldem remembers that as students they were using Vitruvius' treatise when Le Corbusier's *Towards a New Architecture* appeared (Eldem, 1983). This also explains why the young Turkish architects were not up to date and ready for the job expected of them.

### Kemalism, Turkish Architecture and Architecture Education

The 1930s in Turkey was a period during which social, cultural and economic life was shaped directly by Kemalist principles. Kemalism engulfed the people and institutions and spread an euphoric mood. Architecture and urbanism were strong symbols reflecting the goals of Kemalism to establish a new Turkish Republic in the heart of Ankara. In order to evaluate new architecture, local Directorates of Construction were formed, beginning with Ankara in 1928. The status of architecture became higher than it ever had been through the construction of the national capital as well as regional ones. Increased use of functionalism safeguarded by the positivistic attitude of the new regime made it possible for foreign architects to finish off the First National Architecture Movement. As a consequence, Modernism became differentiated from academism or neo-revivalism.

The new orientation changed the system of higher education. The University of Istanbul replaced the old Dar-ül-Fünun and the status of university education increased. At the Academy of Fine Arts Ernst Egli became the head of the Architecture Department and introduced students to modern functionalist architecture. Under his chairmanship required training in construction and structures was emphasised, an appropriate requirement since, due to the lack of artisans, architects had to calculate and design constructions very carefully. Egli also introduced a few electives such as city planning (Mutlu, 1986). In 1937 the Architecture Department was fully opened at the Engineering School under the influence of Clemens Holzmeister. Though both Egli and Holzmeister were not regionalists and had no vernacular tendencies, they jointly supported young Turkish architects in their search for a more local or contextualist architecture. Egli supported his assistant Eldem's National Architecture Seminars. Bruno Taut, who became the Head at the Academy after Egli (1937), even asked his assistants to do their theses on Turkish architecture. Taut also wrote the first book for Turkish students, *Architectural*

*Knowledge*, placing emphasis on aesthetic concepts.

Although Holzmeister and Bonatz insisted on a technical university in Ankara, the government seemed satisfied with the separation of the teaching-learning centres from construction. Of course, it did not mean that Turkish architects were cut off from practice. There were the first competitions for Rural Institutes (Köy Enstitüleri), for People's Houses (Halkevleri) and for local government centres, in addition to ones for buildings both in Ankara and in the provinces. These opportunities created enough jobs for the architects of the 1930s.

Architects from Istanbul visiting sites in Anatolia for competitions or for the construction of their buildings met with popular architecture there. This new experience coupled with the reactions of Istanbul's elite against the modernism of Ankara was reformulated by a very conscious and modern personality, Sedat Hakkı Eldem. His interest was not in reacting to modern architecture, but in explaining to others through design what he was searching for and how he understood the traditional development of civil spaces and forms in the Turkish architecture of the past. Since he was an effective teacher at the Academy, he found the means of organising his students for research and documentation of that tradition. Eldem and Emin Onat joined forces during the 1940s and offered a good example of how architects could use universities as a base and produce architecture for the large-scale programmes required by new demands, while still reflecting the symbolic values of place. Some criticised their work as being retrogressive, but others saw it as a timeless way of building.

During the first half of the 1940s, Eldem and Onat argued for a fully differentiated architectural education. Both the high quality of the first students in the Department of Architecture at I T U who studied under Onat, and the support of Holzmeister, who was very powerful in government circles, made it possible to develop a Faculty of Architecture. Onat and Holzmeister were joined by Paul Bonatz in 1946. Since the school had gradually emerged from engineering, the

professors were keen to downplay the traditional techniques side of the courses and asked for lavish drawings and stylised elevations (Mutlu, 1986; Alsaç, 1986).

After Egli left the Academy of Fine Arts without being able to complete his educational reforms, Bruno Taut established a modern approach to architecture, expecting contemporary principles of design and construction in student work. However, he was not looking for functional analysis and would insist that students focus on the external appearances rather than plan studies which "the architectural technicians ought to prepare for architects" (Mutlu, 1986). After Taut died in 1938 and Hans Poelzig was not able to take his chair, Eldem was appointed chairman. Turkicisation of the only true school of architecture of the time was completed.

Turkey did not enter World War II, but experienced a period of austerity with lack of funds and decreasing construction activity. The tight market led to a resentment against foreign architects some of whom, such as Taut, had senselessly played with traditional architecture and ridiculed regional styles, probably unconsciously. These two developments diminished the status of foreign architects and created differentiation possibilities among the Turkish and foreign groups since integration on architectural principles was impossible.

In 1944, the Turkish Association of Architects began publishing a bi-weekly journal, *Mimarlık*. It started with a survey of attitudes regarding National Architecture, trying to elicit positive support for this approach and denigrating foreign architects. This was successful. Surprisingly, the survey did not include any questions about education, and the respondents did not refer to education. During the same year the First Turkish Congress of Building met and, strangely enough, had no educational issue on its agenda. The main issue was a differentiation between those who had Masters degrees in architecture or engineering and those who did not. This was important since an acceptance of such a differentiation can be reflected in pay scales. It later affected the teaching pro-

grammes when schools of architecture decided to separate B.Arch. and M.Arch. programmes. Another request was to establish the separate responsibilities and rights of architects and engineers (*Mimarlık*, 1946).

While this tendency to create new categorical norms on the business side of technical disciplines was inevitable, there was still the need to keep out foreign architects. Action was taken in a number of ways. In 1944 the Association of Turkish Architects called for competition juries to be formed by Turks and demanded that competitions should be open to Turks only. The same organisation established an Institute of Turkish Architecture directed by Professor Saim Ülgen. It not only produced good examples of documented Turkish civil architecture, but, also reprinted old imperial edicts. *Mimarlık* continued attacks on foreign architects throughout the late forties, generally saying that they were good as educators, but should not interfere with building activity (Akkaynak, 1946, Gökdoğan, 1946).

During all these years the academic circles remained the style-setters for practising architects. In the late 1940s, when the Union of International Architecture (U.I.A.) was established, the first Turkish delegation to it consisted of a group of Turkish university faculty with Bonatz included (Kuruyazıcı, 1946).

### **Modernisation Brings Democratization and a New University to Regulate Attitudes and Strategies of Modernisation**

1950 ended one-party rule and meant democratisation. The party that won the elections had a populist-rural base that gradually tried to mechanise and modernise the rural environment. For that purpose, it sought help from European and American industries and the accompanying mentality without any references to the Turkish intelligentsia. The Turkish budget expanded with foreign aid, and comparatively large funds were channelled to the urbanisation pro-

cesses. The government decided to invite thirty architects from Germany to cope with the increased work load. On this issue the Architects' Association stood up and issued strong criticism. After a year, the Architects' Association, which was turned into the Chamber of Architects in 1954, succeeded as a pressure group in changing the mind of the government, and no Turkish government ever again tried to commission so many foreign architects at once to work on projects. In contrast, universities did not openly defend the Association, which resulted in a rift between practitioners and academics.

Democratisation and increased foreign relations brought Turkish architects closer to the international architectural scene. Yet, in the faculties of architecture only two styles were being discussed: international architecture versus organic architecture. In 1955 a better integration of Turkish architectural circles was achieved without any participation of university representatives.

A further integration of architects with the community and business circles took place in 1956 when the Law of Reconstruction was passed. It explicitly stated that architectural projects could only be undertaken by architects, and a related regulation made it possible for private architects to bid for large-scale projects commissioned by the state. These decisions made the profession very attractive for the upper classes of Turkish society. The most capable young men applied for positions in faculties of architecture. Centres of learning therefore gained in importance. In 1959 the Ministry of Reconstruction and municipal authorities accepted that architectural projects could only be prepared by members of the Chamber of Turkish Architects. Since all graduates with architecture degrees could be registered with the Chamber, there was no quality control over who could join the profession. Universities lost influence by not demanding a professional practice examination that would be conducted by them or by the Chamber. One of the reasons for this could be the devotion of the staff of the universities purely to academic topics and their opposition to getting involved in sensitive matters.

### **The Conception of the Faculty of Architecture at M.E.T.U**

The increased rate of urbanisation in the late 1940s and early 1950s exceeded the housing supply, and masses of people who settled around cities began developing a form of make-shift housing called *gecekondu*. This process created serious urban problems in Turkey, similar to the ones in other countries of the Middle East. In 1954 United Nations experts proposed to establish an advanced research institute in Ankara to deal with such issues and to train students from Turkey and Middle Eastern countries to cope with problems of urbanisation. The Middle East Technical Institute opened in Ankara on November 15, 1956, with 50 students of architecture and a staff of six. In spring 1957 the Institute became a University, and, apart from the Faculty of Architecture, a Faculty of Engineering with emphasis on mechanical engineering was added. The language of instruction was English. The first members of the staff came from several different countries of Europe and North America. The curriculum emphasised design and manual practice in summer, as well as frequent site visits to parts of Anatolia for a better understanding of settlement issues.

This new school presented a clear alternative to the academic establishments of Istanbul. There was a normative differentiation of values in teaching architecture which had more long-lasting effects than were expected at the time of its foundation.

### **Creating a Potential for a "Homeless Mind" among Students of Architecture at METU:**

The METU curriculum in architecture directly aimed at giving Turkish youth an evaluative, critical, de-localised and broad outlook to enable them to look at tradition without any prejudice. There was a basic design course that introduced new concepts and ways of seeing and understanding environments. The first year meant a real re-orientation with a view to organising the construal space of students. Then, the open jury sys-

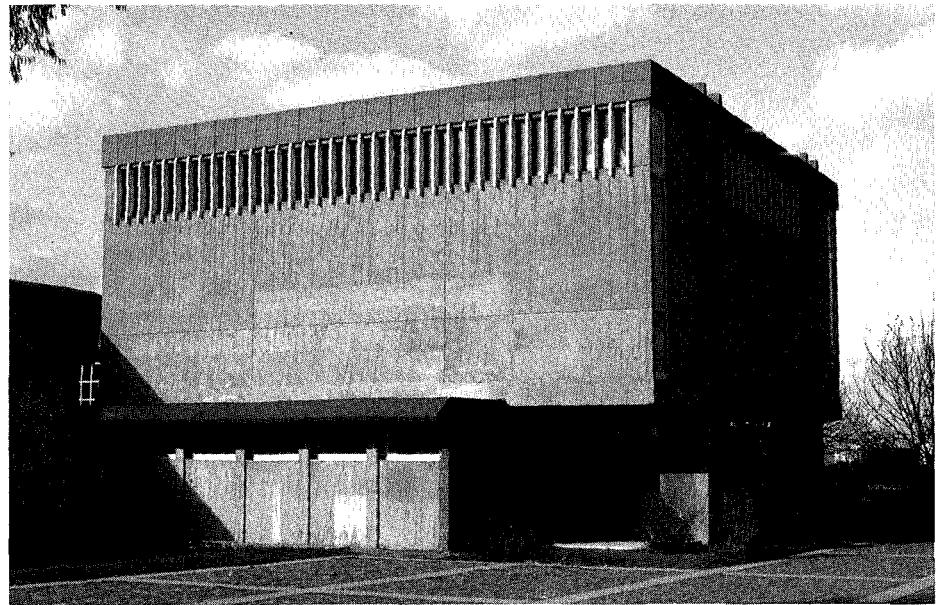
tem, with literally everybody present and able to participate in heated arguments, enabled students to evaluate themselves as well as others in terms of conceptual frameworks and to develop their personalities and architectural values.

All students were organised to practice manually during the summer terms, constructing building components (1 year) and total buildings (2 years) such as village schools and village guest rooms (Özkan, 1975). The students, mostly from urban upper classes, learned about detailing and about different life-styles on site. During normal term-time these experiences were enhanced by frequent trips to various places in Anatolia for site surveys, history courses, and the like. This search for understanding traditional values in construction and society aimed at a better control potential for the students and the faculty.

Finally, integration of staff with educational status and the social system was established smoothly in the definitions of academic jobs. Educational backgrounds as well as rank were de-emphasised. About half a dozen foreign staff joined Turkish faculty each year, emphasising competition while promoting a single style of architecture and a universal mind within a humanistic context.

### Pluralistic Democracy, Planning and Scientific Mentality

The military who assumed power in 1960 had a pragmatic mentality and tried to balance the possibility of a democratic and social pluralism and state planning with a mixed economy. As a consequence, the way was opened to all types of economic, social and intellectual development. The State Planning Organisation and Turkish Scientific and Technological Research Institute (TUBITAK) were established during the first two years of the 1960s. With a booming economy and a growth rate of 6 to 7 per cent, new industries and technologies developed. In this decade of pluralism professions tried to compete and to consolidate their status



*B Çinici, METU, Faculty of Architecture.*

*Photo: S Özkan*

In 1961 the Chamber of Turkish architects increased its control of the profession and also of the environment by starting to monitor the appropriateness of individual project proposals, first in Ankara and then in three other major cities. This system was open to abuse, for a chamber could not and should not control the quality of its members during the practice of their profession. A quality control of the architects entering profession is the only acceptable means to ensure quality, and this calls for academic participation.

At the Tenth Annual Meeting of the Chamber of Architects (1964) there was no serious mention of professional education or its alternatives. However, within the profession, group differentiations had begun. A significant development was the opening of private schools of architecture in the major cities. However, these schools were not well equipped and students entering such schools were those who failed entrance examinations to state universities. A difference of quality emerged between the private and the public schools, and in the second half of the decade

the Chamber of Turkish Architects declared graduates of private schools unqualified and rejected their candidacy for membership. In 1966 the Chamber was taken over by socially conscious architects. Differentiation within the profession continued during 1965, and an effective Association of Turkish Architects (Türk Mimarlar Derneği) was formed. In the same year leftist architects formed the Ideological Club of Socialist Architects (Toplumcu Mimarlar Fikir Kulübü). In 1966 the Union of the Students of Architectural Schools (Mimarlık Okulları Öğrenci Birliği) was founded and immediately organised talks with Cabinet ministers about student grants, summer practice and architectural awards. In 1967 there was an attempt, mainly by white collar architects, to establish a separate union of architects to defend their economic rights, but it failed. White collar architects working in government offices were accepted as technical staff, which increased their material benefits (Güngör, 1985).

At the schools of architecture there developed more socially conscious architectural

attitudes in the form of new studio subject matters or theory courses. TÜBİTAK encouraged scientific research attitudes, especially in the form of design methods. University faculty members were divided on this issue. The liberalisation of education helped to develop a context where critical minds could flourish. Sedat Hakkı Eldem even re-opened his course on National Architecture in 1960.

All these new developments resulted in turning the second half of the decade into one long discussion on architectural education. It started off with an article in a 1966 issue of *Mimarlık*, asking deans of architecture faculties to discuss and present the role of art in architectural education. Deans generally tried to integrate their architectural education discourse via examples from abroad (Erim, 1966). Only the METU representative presented cases from his school and explained the basic design and summer practice courses.

On the Turkish UIA education committee of 1967 only one member was from the university. Academia was losing power over the profession.

A 1968 issue of *Mimarlık* was fully devoted to architectural design methods, and it was the ITÜ Faculty of Architecture that dominated the issue. ITÜ was made to seem the pillar of scientific architectural thinking in Turkey. During the same year a competition for the special student awards of the Chamber of Turkish Architects began. Jury members were from ITÜ and DGSA, and five of the eight awards were won by METU students. In that period a number of METU graduates had impressive results at architectural competitions.

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#### Changes at METU

With the practical results of new integration levels at METU, a number of programme differentiations were unavoidable. A new department of restoration and, with it, a masters' programme in architectural restoration was opened in 1966. Two years later the Master in Architecture programme developed two options. The first one was by design and

the second, by way of a written dissertation, through research on social, technological, cultural or organisational aspects of architecture.

These were the years of coming of age at METU's Department of Architecture. The first graduates, including Doruk Pamir, Yıldırım Yavuz, Kemal Aran, Ahmet Gülgönen, Gönül Aslanoğlu did their post-graduate work in the United States, before returning as graduate assistants to METU. Most of them were highly influenced by Louis Kahn, and on their return they had a profound influence on the students of the mid-1960s, emphasising a sense of order and light through conscious uses of geometry and materials.

At the beginning of this decade a new programme was established in architecture that continued until 1982 with very minor changes. What had been required subjects were dropped in the mid-1960s, and a wider selection of electives was offered by new tutors. These electives, especially those with a theoretical content, affected the level of student progressiveness at METU.

The structural integration of the course developed around the following schema: design was 40.8 per cent of the total course (TC), the building science course (structures, construction and mechanical equipment) was 25.3 per cent, the history-theory courses were 12.6 per cent, general courses (mathematics, physics, English) were 12.6 per cent, and electives were 8.7 per cent.

There was a chance that those who wanted to have a different role than that of designer could do so by taking all of their electives and theory courses in one area. This happened and a significant number of graduates became planners with a social and economic focus, or philosophers, psychologists, computer scientists and the like.

The building of a new METU campus on barren land increased the belief in control over the environment. Architectural summer practice in rural areas enriched this sense of control. The success of graduates in finding jobs in Turkey and abroad proved their quality.

However, by the 1970s this high sense of mission turned into a one-sided revolutionary force that tried to change or participate in changing everything from the university to the national administration. It was a great setback for the intellectual developments at METU, although it helped later to increase the appreciation of tolerance among the staff and students. But the spirit of the school was broken, and METU would never be the same again.

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#### A Joint Reconsideration of Architectural Education

After the student movement of 1968-1969 that engulfed Turkish universities, it was the schools of architecture that seemed to question and want to change the existing situation the most. The new administrators at the Chamber of Architects were sympathetic towards students and asked the deans of schools to have a meeting to discuss possible changes in education. The deans were naturally more interested in fundamental changes in architectural education than current issues and demands. A fundamental issue which came out was dividing education into separate stages and different implications for each stage. METU and ITÜ proposed a two-year scientific or fundamental training in architectural subjects followed by a further two years of more professional training. DGSA proposed seven (3+1+3) years of full training, first at the school on subjects pertaining to the construction of buildings, then one year training practice in professional offices and, finally, three years of specialisation at the university. Specialisation was taken as an extension of creativity. Another important contribution of this discussion to an understanding of the position of architectural education was the shared proposal for ordering architectural curricula in a way that would fit the architect's joint labour with the engineers. A wider perspective was opened up by architect C. Bektaş. He proposed including in this programme the education of technicians and the public in joint action for a better environment.

The 1960s were important for Turkish development, not just for the freedom of thought and the emergence of alternatives in many fields, but also because teachers of architecture were trying jointly to reconsider the fundamentals of their trade. Students and professionals from the public and private sectors were not invited to participate in such a discussion. This discussion of education would not be conclusive since there was no participation or approval from the decision-makers of the society. However, it was a good start for restructuring thought on recent developments in academic architecture.

### Modernity in Architectural Education Spreads Across Different Systems of Schools in the 1970s

The military intervention and the economic recession of the early seventies and, later, the mounting terrorism left a disheartened and demoralised group of educators and students in a rapidly changing educational context. The fiftieth anniversary of the founding of the Turkish Republic in 1973 was a major event in boosting the morale of the intellectuals in Turkey. Other positive events of the decade were the closure of private schools, which continued at much the same pace and with similar content but which were kept open as nationalised academies, and the establishment of a Building Research Institute (Yapı Araştırma Enstitüsü: YAE) in Ankara.

Economic recession, chaotic divisions and the resulting identity crisis of the moment forced some intellectuals to search for a holistic and historical identity. Historical research became popular in general and also among architectural theorists. Those encouraged by the YAE tried to find their identity first in design methods then, more specifically, in either the environmental social sciences (man-environment relations) or the environmental sciences.

In 1972 a permanent Education Committee of the Chamber of Architects was formed.

This made it possible for Turkish architects to participate in and to respond to the proposals of the UIA, which asked the Turkish Chamber of Architects to organise architectural education research for the other UIA-related chambers of Europe and the Middle East (*Mimarlık*, 1978a).

This new responsibility of the Chamber in educational affairs at an international level showed the UIA recognised that architectural education was carefully handled in Turkey and that it could be an organising force within its "Chapter Two" region, which comprises the Balkans, Eastern Europe and the Middle East. The reasons for the Chambers' interest in education were twofold. Firstly, there was the realisation that reproduction of professional values was difficult during professional life and that most of it was structurally established during education. Secondly, the members of the Chambers' Board of Directors were themselves very young and recent graduates. A meeting to present overviews of the situations in each country was held in Istanbul during October of 1977. Participants were from the Balkans and Eastern Europe with only one representative from Arab countries.

One of the keynote presentations was a paper by Professor Mustafa Pultar of METU (*Mimarlık*, 1978b). He proposed that we should start an overview of the field by a differentiation of the study of the subjects, architecture and architectural product, and the study of technology and the conditions leading to it in a scientific manner, the architectural sciences. He emphasised that most of the problems in architectural thought would be easily solved if the two branches were provided with a high level of integration. That would mean that both areas would need to have their own theories, as well.

A group of theorists and architectural or environmental scientists mostly from METU (Mustafa Pultar, Mete Turan, Suha Özkan, Vacit Imamoğlu, Yıldırım Yavuz, Mehmet Asatekin), including others from İTÜ (Yıldız Sey, Nigan Bayazit); and KTÜ (Erdem Aksoy, Kutsal Öztürk) who were trying to

establish this theoretical differentiation attempted to arrange meetings throughout 1977 and 1978. The attempts were first supported by the Chamber of Turkish Architects, and the initial meeting in the summer of 1977 was actually a preparation for the UIA meeting. The second one in December 1977 was also significantly supported by the Chamber. However, since the Chamber's interest was more on the professionalisation of architecture and the political significance of the relations between the profession and education, it stayed away from the following conferences as the meetings became more academically oriented and concerned with the theoretical and technological dimensions of architectural education.

The KTÜ December Seminar on Architectural Education was a presentation of facts and statistics about the profession and the content of education (*Mimarlık*, 1976). However, in an important paper by Özkan and Turan, both from METU, it was proposed that architectural education needed more democratisation and scientific orientation in order to move to a higher level of integration.

The second seminar was about post-graduate studies in architecture (Yavuz, *et. al.*, 1977). By then, the Society of Building Science and Environmental Design was established at the Faculty of Architecture, METU, and it was the host for this seminar. The topic of building science was fully discussed, from the opening of a related department to a presentation of scientific decoration styles, and from new approaches in city planning to restoration of buildings through the scientific approach.

The third seminar was held at Ege University where the discussion dimensions were how and when to differentiate between specialists and generalists in an architectural curriculum, and the possible stages of passing on information about architecture as discussed by most of the architects, who wanted to separate and differentiate by identifying themselves as generalists and wanted to argue that the scientific information flow goes in both directions (Tuna, *et. al.*, 1978).

It was said that architects engaged in learning while doing create the generic knowledge of the design act for the scientists, while the propagators of architectural science are more interested in establishing relevant civil institutions. There was an idea of a union of building science and local building science training in research centres throughout Anatolia. The first such centre was later founded in Ankara.

In the 1970s there were a number of empirical studies made on architectural education. A study by Özalp *et. al.* (1972) of the contents of courses found that METU emphasised design more than other schools, and that structures and building science and city planning courses were emphasised at ITU

Another study by Aktüre and Birkan (1976) showed that design (including drawing, and urban design) was the most emphasised course in the METU curriculum (49 per cent; ITÜ: 44 per cent; DGSA 40.5 per cent) ITU, on the other hand, emphasised engineering (22 per cent; METU: 17.5 per cent; DGSA 17 per cent) and city planning (ITU: 9.5 per cent; DGSA 5 per cent; METU: nil). DGSA came out as emphasising interior decoration (3 per cent) but construction was also emphasised at METU (75 per cent; DGSA: 14 per cent; ITU: 11 per cent). METU also provided an education in landscape design (3.5 per cent).

During that year there were no electives but 38 required courses in the programme at ITU. At METU and DGSA, however, there were elective courses (9 and 8, respectively) besides the mandatory ones (18 and 26, respectively).

In 1978 the Department of Building Science and Environmental Design was opened at METU. In the autumn of 1979 the First National Conference of the Society of Building Science and Environmental Design was held at METU. Presentations were empirical or rationalist-operational studies, running from city planning to interiors. The Society also started publishing its bulletin and announced the winner of its First Award: Professor Sadi Sirel of ITU, whose main contribution was in the technology of lighting and the establishment of the first Turkish

environmental control laboratory in lighting. KTU under the direction of Erdem Aksoy with support from UNESCO built a similar but multi-model and multi-dimensional laboratory in the 1970s. The Design Research Society (U.K.) and ITÜ held a meeting in Istanbul and in 1979 a seminar was held at KTU, Trabzon, on Human Sciences and Architecture, emphasising the theoretical basis and scientific implications of man-environment research.

This concerned attack on the "artistic approach" establishment of the architectural scene was mostly confined to the universities. However, it was effectively supported by continuous theoretical and scientific contributions to: *METU Faculty of Architecture Journal*, *KTÜ Faculty of Architecture Bulletin* and *ITÜ Faculty of Architecture Bulletin*. Most of these writings were not just pieces of theory but were based on serious field surveys or experiments (Pultar, 1978; Pultar, 1979).

During the 1970s some of the important local authorities in Turkey were monitored by plan-oriented councillors who were inclined to experiment with new settlement or resettlement projects. For help they turned to planners and architects at universities. Experimental projects were taken up at an unprecedented scale in Istanbul, Ankara, Batı-Kent, Izmir, Antalya and elsewhere. The idea that emerged from the debates of the 1960s, especially those concerning social consciousness in design, participation and the strong belief in large-scale holistic planning, were all used in designing for construction on different scales. Influenced by this, teachers of architecture began introducing less theoretical and more realistic projects in their studios. Their experiences also encouraged those who supported the learning-by-doing approach, but without the social consciousness content. It was a pity that the two conceptual frameworks were not able to join forces.

The following categorical dimensions in the teaching contexts of architecture were prevalent at the end of the 1970s:

1) Scientific research and/or explanation of architectural and environmental phenomena

versus intuitive uses of architectural traditions and resources.

2) Social consciousness in architectural design versus consciousness of architecture as art.

3) Theoretical approaches as the foundation of true architecture versus learning by pragmatic applications and practice.

4) Regional values of building versus universal traditional values of conceiving architecture.

These views were held by different groups from different faculties, possibly without sharing the same poles of the dimensions. Alternative educational systems among and within schools were established. This led to the academic differentiation within every faculty or department of architecture. The most differentiated faculty of architecture in terms of its programmes was at METU, where there were five departments with full programmes: architecture, building science and environmental design, restoration and conservation of historical monuments, industrial design, and city and regional planning. The department of landscape planning was at the proposal stage.

The status and means of promotion of the teaching staff is also an indicator of academic differentiation. At ITU assistants were only able to move up the academic ladder by way of producing a Ph.D. dissertation. DGSA accepted both a Ph.D. and an evaluation of proficiency in the profession, which could be a professional achievement of high merit. At METU both of these and a study reflecting the person's ability to teach were required for promotion. The last was an integrational acceptance of possible distinctions in profession, academic research and teaching.

The status of architecture was slowly declining in the second half of the 1970s, since there were fewer job opportunities due to large numbers of architecture graduates from the nationalised private schools and because of the economic crisis which adversely affected the construction sector.

Architecture became less attractive for high-school graduates. Since there were no spe-

cial admission requirements for architecture, students who got the minimum qualifying points in the general university entrance examinations were eligible for entry. Some of them enrolled without any inclination for studying architecture. Since most males competed for medicine or electronic engineering, architectural education began serving a large female student population.

#### **The Faculty of Architecture at METU: Constant and Sudden Changes**

The tolerance for differentiation between staff and programmes depended on a tradition of constant changes, which were also rather sudden since most of the educational proposals were immediately put into effect. Only on the main B. Arch. Programme was there general consensus, so it could not be structurally changed. However, this programme also experimented with many new contents for most of the courses that it included.

During the seventies the department of architecture focussed more on the environment rather than building activity as its context.

Changes gained speed with young staff returning from abroad with a research-based scientific approach to man-environment studies. This group was responsible for the formation of the Department of Building Science and Environmental Design. It also created a happy medium of publications and architectural meetings, where others also found an outlet for presentations.

The architecture graduates of METU, who by the end of the 1970s reached 800, produced good architects who were socially accepted. Apart from D. Pamir, A. Gülgönen, K. Aran we can count E. Şahinbaş, Z. Aldemir, Ö. Akçalı, Z. Tanalı and A. Buluç among the new architects

However, some negative aspects of the system also started surfacing. There was isolation on the campus during times of terrorism. Following this there was a problem of

empty studios most of the time since no one wanted to stay on an isolated campus.

At the beginning of the 1970s because of terrorism the summer practices in far provinces of Turkey and even field trips became difficult to handle since the students were sometimes attacked by villagers. Although these were resumed in the mid-1970s, the place of construction was the METU campus.

As part of a condemnation of imperialism, some people both on the left and on the right condemned also the use of English for teaching and research purposes. They argued that it alienated the system from its Turkish environment.

The theoretical conceptualisations of architecture used in Turkey at the time (new nationalism, regionalism, Miesianism) were neither fitting to this stage of development nor able to withstand the paradigm shift proposal of the scientific approach to architecture.

Although it is possible to say that the scientific approach had also originated abroad, the way Pultar and friends formulated it was totally fitting for the Turkish case and for developing the fundamental conceptual framework. It led to environmental design. Architectural quality was never discussed except analytically, that is, as in the experimental testing of the quality of rooms. Still, the practising architects continued without theoretical references. In the Turkish scene there was no formulated architectural or environmental theory until the 1970s.

The scientific approach in general did not fit the formal and informal public interest since there was no widespread popular respect for scientific endeavours, and scientific organisations were few.

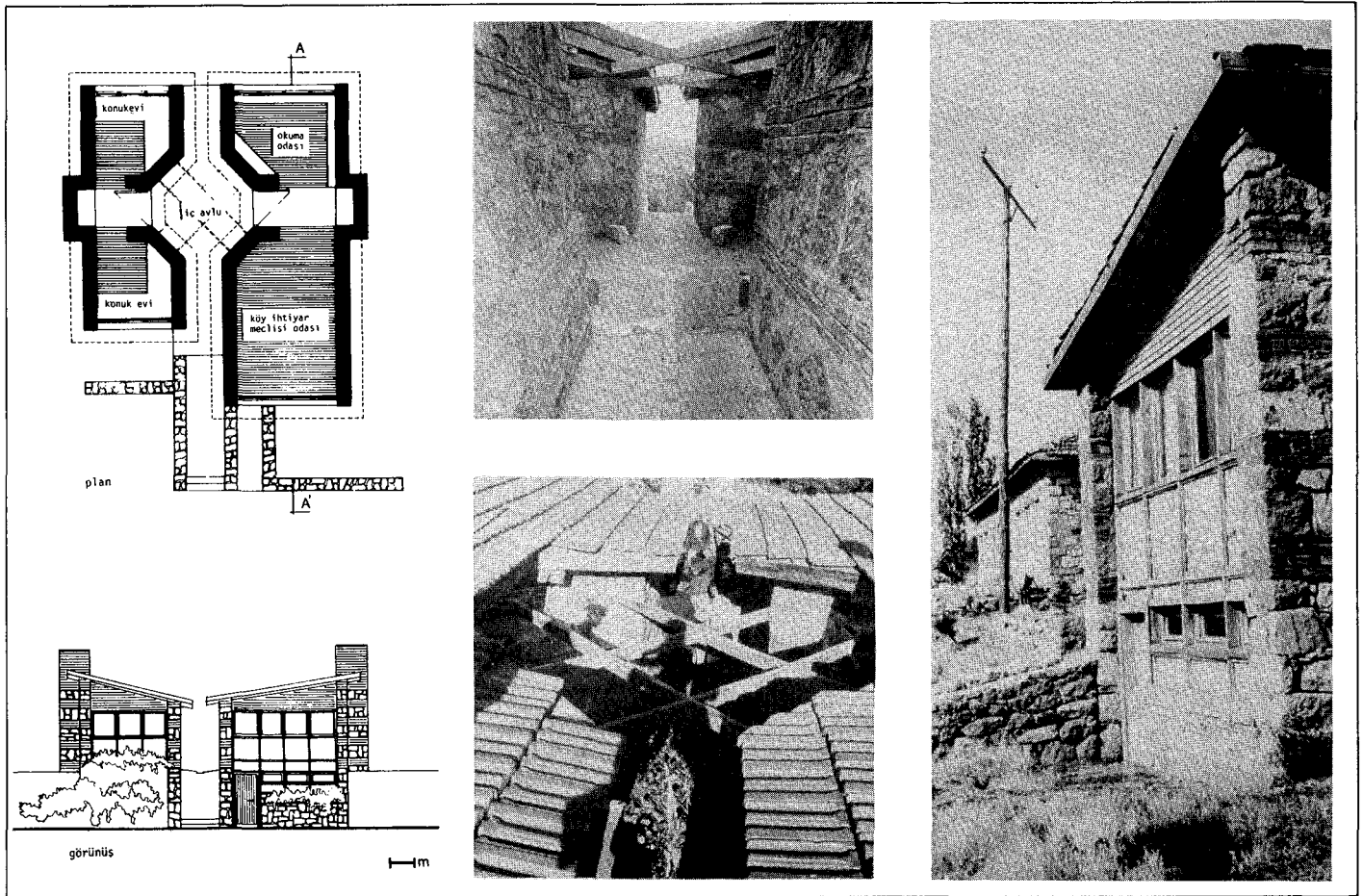
People from the left first saw this as an opportunity to use science in order to develop a scientific class-consciousness. However, later they turned into the harshest critics, accusing scientists related to the movement of doing "scientism."

#### **Developments in the 1980s and Centralisation of the Organisation of Architectural Education**

In 1980 Turkey was in a dire situation. Terrorism claimed about twenty lives each day. Energy shortages were at a peak. No enjoyable academic life or experiences were left for the student. Opposing student groups from the left and the right clashed day and night. Student attendance was low and student strikes were a daily event. Architecture students were not able to visit the sites of their projects, no group work could be undertaken outside of the faculty, and liberal professors' houses were bombed by students from both sides. Despite this, for different reasons, about which people cannot agree, universities were seen as one of the sources of anarchy in the country.

After the military takeover in September 1980, universities were taken as one of the institutions to be reorganised by the new regime. Reorganisation was to be done by leaving out the differentiated parts and integrating at a lower level. A new control on higher education was set by the Higher Education Council (YÖK). The Council decided on the alternative programmes possible both at the graduate level (organised in departments around faculties) and post-graduate level (organised in departments around institutes). In architecture there was the possibility of just one department, and others had to be closed. Departments of building science and environmental design and departments of restoration were closed. Again, YÖK decided that post-graduate studies could be done in two types of institutes, one for basic and applied sciences, and one for the social sciences.

The Faculty of Architecture of ITÜ with all its departments became the Institute of Social Sciences, whereas METU's Faculty of Architecture was joined to the Institute of Basic and Applied Sciences, a practice that was against the basic aim of integration. This involved a kind of differentiation based on central labelling of academic endeavours beforehand. However, in the turbulence of



*METU students' summer projects.*

*Photo: AKA*

the changes the faculties could review their curricula.

Another reductionist attitude prevalent during the first half of the decade was to restrict the development of architectural educators in academic life by making promotion possible only through one channel: that of writing Ph.D. dissertations. Designing buildings or being a good lecturer-critic have no rewards. Some of the staff from the Faculties of Architecture at METU, KTÜ, 9 Eylül and İTÜ departed for various reasons. This was the worst blow to these institutions since the great majority of those departing

were of very high quality. Between 1981 and 1985, a total of 25 faculty members resigned from the Department of Architecture at METU: one professor, one associate Professor, 9 assistant professors, 10 instructors and 4 assistants. It meant a heavier teaching load for those who remained plus less time for academic research and output. This, coupled with increased number of students, might result in a decreased quality of graduates which, in turn, lessen the grip of architects on the environment in the long run.

One other reason for less academic output is the new venue of practice at the faculties. During the last few years of full economic liberalism, the construction industry re-emerged, especially with programmes in housing and public and local authority services, and it has become more profitable to produce projects than research.

As faculties struggled to redefine themselves there was no other body from which they could seek help, the Chamber of Turkish Architect's included. With the construction sector booming, the status of especially good architects was rising, but the Chamber of

Turkish Architects was not accepted as the voice of architects by the new government or by its members for a variety of reasons. Generally, one could blame the excessively politicised approach that the Chamber brought to any and all issues it tackled. As a result, local authorities denied the right of the Chamber to evaluate projects proposed for construction in their own areas.

One of the positive aspects of this decade seems to be the Turkish construction capacity that is being used abroad. Good experience for those working abroad, job opportunities for graduates, plus knowledge of large-scale methods of construction can be expected to be brought to Turkish academia as a result.

Finally, one should mention the effects of the Aga Khan Award for Architecture and the publication of the periodical *Mimar* on the Turkish architectural scene and the education of architects in Turkey. *Mimar*, with its proper tone of evaluation and presentation, was informative and enlightening.

Most people involved in this profession became aware of the first cycle of the Awards right after the awards were distributed. Since there was a representative selection of buildings from Turkey, people — apart from the losers — did not speculate about the results very much. The second cycle was effective with its conferences, especially in academic circles.

It was the Awards of the second cycle that really aroused the interest of the public, architects, lecturers, critics and students. This was mainly due to the comparison of the Turkish award-winning scheme with others that won. Now, during the third cycle Turks are more aware of the principles and protocols of the programme. It keeps offering new values from old lands or the reflection of old traditions on new people and buildings.

A number of student competitions organised by the Award were effective as well, one specially addressing Turkish students, others bringing into the studio new ways of thinking about traditional programmes.

The closure of some departments, including those of building science at METU, was significant at a time when the scientific approach to architecture was turning its attention to the study of subjects like the urban and rural vernacular, and disaster planning and design. This approach might have gained a content that could have won respect for its identification with the Turkish setting. It was also starting to establish international contacts and was receiving positive recognition from them. It might have become possible to establish links between the faculty of different universities through the Building Research Institute using concepts taken from such activity. Such possibilities could not be operationalised. A disintegration of previous relations took place while each faculty tried to re-identify itself.

There was a restructuring of educational orientations at the Faculty of Architecture of METU. After the 1981 reorganisation METU's system of education was also joined to the central system of YÖK. This was necessary in order to standardise and control individualistic tendencies. Other schools of architecture now are at Yıldız (formerly Technical School), İTÜ, Mimar Sinan (formerly DGSA), Gazi (formerly Academy at Ankara), Ege, Karadeniz (formerly KTÜ), Dicle (newly formed), Kayseri (newly formed) and Anadolu (formerly Academy at Eskişehir) Universities. Their total intake is about 800-1000 students each year, whereas METU's departments of architecture take 50-60 students each year. YÖK proposed a basic infrastructure for architectural education upon which each school was left free to establish its own programme. This area of freedom comprised about 37 per cent of the total teaching hours of an academic year and could be filled through electives. YÖK's proposal compared with METU's programme reduced the share of building science courses drastically to 16 per cent TC (versus METU: 25.3 per cent) and theory and history to 3.8 per cent TC (versus METU: 12.6 per cent). Design was about 37 per cent, again less than what METU had in its programme (40.8 per cent). Staff at METU thought of this situation as a good opportunity to re-evaluate the educational system they had

used for the previous twenty-six years. An assessment of the possibilities of the YÖK programme was also planned.

A seminar on Architectural Education was held at the department during the 1982-1983 academic year with the full participation of staff and a representative group of graduates. As data from Özkan and Yolal's 1979 survey of our graduates showed, 33.9 per cent of the graduates worked as designers; 11.88 per cent in employment such as construction managers in the building construction sector or site or building supervisors; 11.27 per cent at different universities all over the world teaching architecture or related subjects; and 10.9 per cent within the Turkish bureaucracy. Only 4.08 per cent became developers. The faculty invited well-established METU graduates from all of these areas and tried to elicit from them what kind of architect was required for each activity. Individual seminars were conducted under the themes of teaching architectural design, teaching building science, teaching theory and history of architecture, and teaching restoration of architecture.

The seminar proposed that the following be considered during the restructuring of the curriculum of the department of architecture. The points are given below with the operational consequences of the decisions.

1) YÖK limited the maximum years of training architects to four, but it is not quite possible to give a full professional education within this limit. Most professional training will be left to the employing persons or bodies. Therefore, a way should be found to have a type of graduate who can understand and approach most of the possible problems of the architectural environment with great enthusiasm and self-confidence.

2) The Turkish architectural context needs intellectual designers more than ever. Both the public and the private sectors' representatives were happy with our previous graduates who had the intellectual designer attitude, because they were quick to respond to any problem on site or at the office with great alacrity of mind. Such graduates also learned more quickly and had better results in job training.

3) The first year of the course should be designed to expose students to as many dimensions of the architectural profession as possible, such as physics or mathematics, (to be formulated in building science and mathematics of architecture); social and cultural sciences or history (to be formulated in introduction to architecture); and drawing (formulated in surveying).

4) Reliability of design competence should be checked constantly and more design exercises should be given in one term for each class.

5) To link studio practice with theoretical outlooks towards Turkish building tradition and the universal context of architecture, it was decided to include theoretical elements within studio hours. Presentations during such hours would include lectures or architectural polemics by staff or visitors. This procedure was expected to culminate in two jointly-organised studios in the fourth year: Architectural Design VII and Professional Practice Studio.

6) Students first of all should develop an interest in and love for architecture or its topics. Then they should learn something about them and see what their personal capacities are for each topic, and, finally, they should be enabled to attempt to develop their capacities, which might lead them into certain jobs or post graduate education programmes. In this 1+2+1 system, electives should be reserved until the fourth year, when there should be fewer required courses.

7) Summer practice needed to be re-established, but manual relationships with basic and everyday construction practices and surveying (developed as first-year summer practice) should be differentiated from the experience of a more developed industrialised production of building (developed as second-year summer practice).

The first type of summer practice is being held at the Technical Teaching School under the supervision of the instructors and *ustas* there; whereas the second type aims at arrangements with the construction firms

employing industrialised building construction techniques.

8) The Department of Architecture at METU should keep its previous national and international contacts and also must open more frontiers and possibilities of communication with other new institutions. Nationally, more frequent contact is being established with the building sector, local authorities and construction. The number of applied industry research projects increased nearly eightfold from 1981 to 1986. Frequent seminars with building materials and equipment firms were held. Internationally, students organised and produced a magazine of their own which was sent abroad and they also became active members of the Association of the European Schools of Architecture.

The new programme at the Department of Architecture increased the weight of design courses to 41.3 per cent and technical courses to 26.8 per cent. Theory and history courses were comparatively reduced (8 per cent) since theory and history were also employed in design courses.

Table 1 attempts to show the emphasis placed on different subject groups at different faculties of architecture. Only four faculties were considered. From the Table, it can be observed that METU and ITU emphasise design activity more than the curricula elsewhere do, contrary to the belief that since they are technical universities, design would not be highly emphasised.

On the other hand Mimar Sinan and 9 Eylül emphasised building science courses and did not leave any choice for students to elect courses according to their needs and interests.

Although it seems that after the establishment of YÖK faculties use similar curriculum structure, course contents can be very different.

### **Possible Future for Architecture Education**

As trends in architectural education and its context show, Turkish architects have come a long way in their relations with the profession (Table 2). Originally organised by external forces, they were not able to develop conceptualisations that could embody building activity in theoretical frames. Later, as Turkish architects became detached from the military, the proposed behavioural styles were in a sense reactionary in relation to the exemplary work done by foreign architects. The liberation of Turkish architects from foreign architects took place and was won at the universities during the passage to democracy. This put faculties in an advantageous position, and they were able to control most architectural output during the 1950s. Further possibilities of democratisation then brought differentiation within and between the teaching and practising groups. Integrations were coming out of the "concrete", "in-group" conceptualisation level and becoming "thematic", "theoretical" understanding. A strong case for scientific research and building science developed, but without being able to integrate itself with practice. Recent historico-theoretical attitudes increased this alienation. Now, the possibilities are provided by the Housing Fund, the new wave of large scale planning by local authorities, the new level of semi-industrialised building construction, and the attractive contracts of the construction sector that are won abroad. These force the practitioners and educators to form new multi-modal and multi-dimensional integrations.

Since the paper is oriented towards the education of architects, two possible changes in its organisation will be considered.

Within a centrally organised system of education one could construct an elected Architecture Education Council of Turkey, which should be responsible for developing:

1) Educational norms and status for schools of architecture.

Table I A Comparison of Salience of Course Groups Between Faculties and Within Changes at METU

Faculty	Credit Hours Percentage of credit hours in total credit hours	Courses					TOTAL
		General Courses (Maths, physics, sociology, psychology)	Design (Arch., landscape)	Building Science (Structure, construction, env control)	History Theory	Electives	
METU	cr	42	97	63	21	12	235
After YÖK	%	17.8	41.3	26.8	8	5	98.9
METU	cr	54	174	108	54	36	426
Before YÖK	%	12.6	40.8	25.3	12.6	8.4	99.7
İTÜ	cr	23	76	50	16	10	175
After YÖK	%	13	43	28	9	5	98
Mimar Sinan (OGSA)	cr	18	86	94	32	—	230
After YÖK	%	7	37	40.8	13.9	—	98.7
9 Eylül	cr	22	60	53	14	—	149
After YÖK	%	14	40	35.5	9	—	98.5

2) The terms of quality control at admission, during education and at graduation.

3) Controls for integrated effort in organising education for building sector services

Here funds would be coming from the central government.

Within a liberally organised system of education one could form a partially elected faculty board of trustees besides the Architecture Education Council, which would develop:

- 1) Separate attitudes regarding their norms.
- 2) Terms of quality control at admission, during education and at graduation.

3) Terms of relations with specific building sector services such as re-establishing building technician programmes and becoming shareholders in certain building sector investments.

Here funds would come from the universities, from research, from students and from Trustees

These are also being proposed to YÖK as possible developments. Such developments can only take place within a democratic (participatory), scientific and theoretically integrated context where a number of possible future proposals compete for the service of architecture.

Table II **Changes in Architectural Education, Status of the Profession and their Social Context**

Periods	Changes by Integration	
	Changes in Structure (Status of the profession and education) (Power relations)	Changes in Content (Norms used to integrate educational and professional values) (Level of conceptualisation)
1300-1700	Architecture and its education centrally organised and approved within an authoritarian social system. Strict control of architecture and the environment through the palace organisation.	Highly integrated in practical vocabulary of practice and in terms of the social system.
1700-1800	Decentralisation of palace services. Undefined control of architects or their education.	Attempts of modernity are valued. Modernity seen as a new technocratic stage.
1800-1900	Modernisation effects on architecture defining it as a 'civil' activity. Foreign architectural styles and foreign architects were of high status.	No special architectural conceptualisations in education in new technical schools. No Turkish architect with a modern outlook. However architects are becoming westernised.
1900-1920	Turkish architects not very effective, even within the Republic. The Association of Turkish Master Architects established to achieve a national identity and status for architects.	Abstract concepts and courses at the university serving westernisation. Identity search conceptualised in an 'Ottoman-Turkish affective' style (First National Architectural Movement).
1920-1930	Architecture through foreign architects gains status. Turkish architects not integrated with society.	New wave of foreign architects at universities conceptualise and practise with Classical Turkish style 'pastiche'.
1930-1950	Foreign architects design Ankara. Turks design Istanbul and the provinces, according to their status as accepted by the Republicans. Local directorates established. End of decade: Academy liberated from foreigners.	Cubism and Modernism in Ankara. A new reaction to it is conceptualised as the Second National Architecture, using civil Turkish building examples. Entrance examinations for the Academy introduced.
1950-1960	Architects in the context of new democracy win over foreign architects, and form a Chamber of Architects. Profession and its education becomes attractive for upper middle classes.	New modernity and International Style emerges. However quality control on projects was also established.
1960-1970	Socio-political organisation of architects. Recognition of architects as builders. Education of architects most important as generalists.	Planning and socio-political approaches to architecture. Emphasis on the socio-economic context over projects. Technology and Design Methods.
1970-1980	Modernity in architecture and specialised architectural education. Architects losing social effectiveness due to increased numbers. Historical research emphasised. Architects begin working with local authorities.	Environmentalism, Technology, Design Methods, Theoretical Study, Science and social research are new conceptualisations.
1980-1982/ 1982-1985	Across faculty integration increases. Scientific and technological research develops. /YÖK's central organisation is formed. Across faculty integration decreases. Scientific and technological research decreases. Local authority planning and design projects create new possibilities of integration within the profession.	Programs were similarly conceptualised but contents (quality) are different. Historical Criticism, Historical Theory are new developments.
1985 →	Searches for new organisations of the building activity. Searches for new organisations of the architectural services. Searches for new organisations in architecture education.	Possibilities of alternative systems vs level of content of integrations in building architectural and educational activity.

Periods	Changes By Differentiation	
	Changes in Structure (groups differentiated)	Changes in Content (group norms established)
1300-1700	a. Mimar başı, b. Usta-Kalfa, and c Travelling architect	Norms established by Sultan's order Hassa mimaran and mimar başı as teaching contents
1700-1800	b and c. still existing; but architecture underplayed against engineers	A kind of technical architecture proposed.
1800-1900	b still existing plus foreigners from abroad; non Muslim architects trained in Europe and by Ustas School of Engineering and School of Architecture differentiated	Foreign names and styles from experience or books Scaleless imperialism
1900-1920	Education of technicians besides architects and engineers begins.	Schools have a modern mentality but practice have a Turco-Islamic one
1920-1930	Differentiation of Turkish and foreign architects	Both groups have a classical style
1930-1950	Turkish staff and architects interested in 'Turkish Architectural Seminar'. Foreign functionalism.	Cubism/Modernism, Second National Architecture Functionalism
1950-1960	METU formed as an alternative education	Homeless mind vs local mind. Critical mind in architecture and planning.
1960-1970	Politically motivated vs socially conscious vs other architects Differentiated representation of architects Faculties of architecture being differentiated along the same line	No discussion of education in general; discussion at METU for more plural education New studio projects due to social developments New courses due to positive scientific attitudes
1970-1980	Scientific research vs intuitive uses of tradition Social consciousness in design vs consciousness of architecture as art of society. Theoretical approaches vs pragmatic applications Regional values of building vs universal values of conceiving architecture Differentiated mind vs non-differentiated mind	Science/non-science Social consciousness/consciousness of architecture, theoretical approach vs pragmatic application, regional values vs universal values.
1980-1982/ 1982-1985	Science creating multi dimensional space/undirectional space Highly differentiated programs/reduced number of programs.	Above differences exist Emphasis of differentiation within the scientific attitude/Historicist, theoretical position becomes differentiated within
1985 →	A return to multi-dimensional space of conflicting tendencies and resolved tendencies in separate institutions.	New strategical (at the international and national levels) and tactical (national and individual centers levels) conceptualisations should be developing

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