

**UDO KULTERMANN**

300 MERCER, 17 B  
USA - 10003 NEW YORK

UDC 72.036:727.3 (EL-KAFRAWI QATAR)

TECHNICAL SCIENCES  
ARCHITECTURE AND URBAN PLANNING  
2.01.01 - ARCHITECTURAL DESIGNING  
ARTICLE RECEIVED / ACCEPTED: 01.07.2000. / 13.02.2002.

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TEHNIČKE ZNANOSTI  
ARHITEKTURA I URBANIZAM  
2.01.01 - ARHITEKTONSKO PROJEKTIRANJE  
ČLANAK PRIMLJEN / PRIHVAĆEN: 01.07.2000. / 13.02.2002.

## EDUCATION AND ARAB IDENTITY

### KAMAL EL-KAFRAWI: UNIVERSITY OF QATAR, DOHA

## OBRAZOVANJE I ARAPSKI IDENTITET

### KAMAL EL-KAFRAWI: KATARSKO SVEUČILIŠTE, DOHA

DOHA  
EDUCATION  
IDENTITY  
KAMAL EL-KAFRAWI  
QATAR

DOHA  
OBRAZOVANJE  
IDENTITET  
KAMAL EL-KAFRAWI  
KATAR

Architecture in the Third World is in the process of finding ways to relate contemporary necessities to the old and often forgotten patterns of traditional building forms that were once in harmony with the life style and cultural values of the people. Among the numerous ways to achieve these connections are those which use traditional decorative patterns and superficial applications, or those which attempt to catch the inherent spirit of great buildings of the past and re-create them on a contemporary basis. It is symptomatic that among the building tasks in which these new tendencies toward a required cultural identity are manifested are educational institutions, often national university campuses such as those in Iraq, Algeria, Libya, Saudi Arabia, and Jordan.

Arhitektura u Trećem svijetu nalazi se u procesu izgradnje odnosa između suvremenih potreba te starih i često zaboravljenih tradicijskih oblika gradnje koji su nekoč bili u ravnoteži s načinom života i kulturnim vrijednostima. Jedan od mnogih načina postizanja ovih veza je upotreba tradicijskih ukrasa i zidnih aplikacija ili nastojanje da se uhvati duh velikih povijesnih građevina i taj duh prenese u suvremenu gradnju. Simptomatično je da se te nove tendencije u zgradarstvu usmjerene prema stvaranju kulturnog identiteta primjenjuju pri građenju obrazovnih institucija, često zgrada nacionalnih sveučilišta kao onih u Iraku, Alžiru, Libiji, Saudijskoj Arabiji i Jordanu.

**A**rchitecture in the Third World is in the process of finding ways to relate contemporary necessities to the old and often forgotten patterns of traditional building forms that were once in harmony with the life style and cultural values of the people. Among the numerous ways to achieve these connections are those which use traditional decorative patterns and superficial applications, or those which attempt to catch the inherent spirit of great buildings of the past and re-create them on a contemporary basis. It is symptomatic that among the building tasks in which these new tendencies toward a required cultural identity are manifested are educational institutions, often national university campuses such as those in Iraq, Algeria, Libya, Saudi Arabia, and Jordan.

The University of Qatar in Doha, by the Egyptian architect Kamal El-Kafrawi (1931-1993) can be seen as exemplary in this direction.<sup>1</sup> It fulfils the contemporary need for a large campus with all the technological and managerial requirements while still maintaining the spiritual presence of Islam. From the outset, El-Kafrawi rejected the idea to design and build in the traditional way. Instead, he insisted on incorporating modern technology, which he thought would benefit the total academic community. He also rejected the importation of building forms from Europe or America, as, in his opinion, these alien forms would disturb the perception of an Islamic environment. Therefore, a way had to be

found which would take from Western technology as much as necessary and from traditional architecture as much as was functionally useful. This most difficult task has been successfully achieved in the completed parts of the campus of the University of Qatar.

In 1973, when Kamal El-Kafrawi was commissioned by UNESCO to plan the University of Qatar, then called Gulf University, he began by carefully looking into the traditional ways of life and architecture in Qatar, and only after detailed research developed his project, which began to take shape in 1975. The actual building began in 1980 and 1983 had completed some parts of the first phase. The official inauguration of the first phase took place on February 23, 1985 and was celebrated by H. H. the Emir of Qatar.

The campus, which is about 7 km from Doha in Al Markhiah and 2 km from the Gulf shore, is situated on an elevated site. The complex will eventually contain a college of education for men and a college of education for women, a college of Civil Aviation and a College of Science. The colleges for men and women are on opposite ends of the campus, one on the south and one on the north. Even the circulations approaching the various campus facilities are programmatically separated. The academic facilities on the campus are complemented by a mosque, a main auditorium, library and cultural centre, central administration and health service, faculty club, amphitheatre, student housing for men and women, staff housing and recreational facilities. Circulation within the campus has been provided not by corridors and enclosed stairways, as in Western universities, but by a system of internal and partly covered courtyards, which is more appropriate to the hot climate and the Arab cultural tradition. Brian Brice Taylor has pointed to the main features of the various buildings as the octagon:

*The octagonal room plan has been employed for several reasons. A convenient support for the square wind towers and towers of light, the octagonal form also minimises heat absorption by shortening the period of time the sun shines on any given side.*<sup>2</sup>

The architect put strong emphasis on natural ventilation, one of the many links in which he relates to traditional architecture of the region. As specific models he used the few still existing wind-tower houses in Doha and modernized the basic principle. In the architects words:

*Not only are the Tower of Winds a substitute for mechanical ventilation and air condition-*

1 KULTERMANN, 1984.

KULTERMANN, 1999.

2 BRICE TAYLOR, 1985: 21.

ing in case of power failure, but they also characterize the outline of the University buildings and relate to the cultural environment.<sup>3</sup>

A successful traditional element was integrated into a contemporary design that interconnected past and present. Another element of this interconnection was the use of natural light in both the academic and residential buildings of the campus. In order to control the intense sunlight of the region, traditional devices that had successfully been used for centuries were reinterpreted. By lowering the illumination levels for visual and psychological comfort, scientific research and traditional methods were combined to achieve the intended goal. The various devices used included indirect light, as practised in all traditional building of the region, the use of screen in carved timber in the tradition of the Arab Moushrabir, the admission of light from shaded surrounding areas and the use of diffused overhead lighting from openings in the roofs of large spaces.

These structuring elements had a strong dominating influence on the architecture of the buildings. The shape and size of the individual lecture room, as well as the shape of the residential units, were given form and meaning from these elements which, in addition, created and awareness of cultural identity. The architect expressed his thoughts when he summed up his design philosophy in regard to the University:

*Architecture is a tangible expression of a civilisation, the product of the intellectual, social, economic and political activity of a whole people; construction technology is simply the tool with which to give form to this expression. One has therefore closely to analyse the environment of villages, towns and cities in the Arab world, to determine the effects of Western contemporary Architecture. Since the technology has been applied without the philosophy which underlies it, the modern buildings are foreign to the area, which shows how far Arab architecture has lost direction, and the profound effect this has in the individual and his environment.*

*One has to reconcile the immediate need for the import of modern technology with the needs also to adapt it for use in the local environment. This implies considerable study of the needs and aspirations of the individual.<sup>4</sup>*

The Middle East is in a phase of fundamental change, and the results will influence its development in the region for centuries to come. The planning and building of large universities is only one of the many important ele-

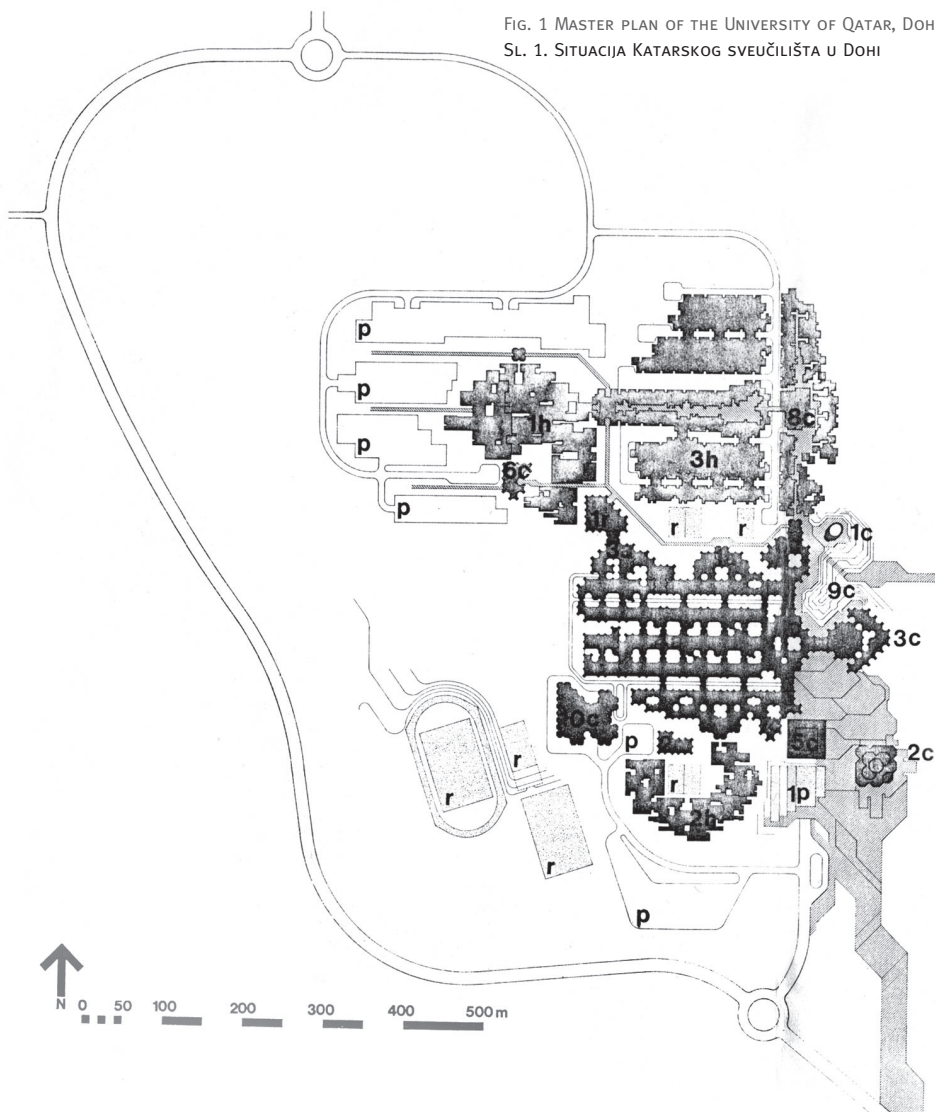


FIG. 1 MASTER PLAN OF THE UNIVERSITY OF QATAR, DOHA  
SL. 1. SITUACIJA KATARSKOG SVEUČILIŠTA U DOHI

- ACADEMIC
- 1A COLLEGE OF EDUCATION • MEN
- 2A COLLEGE OF EDUCATION • WOMEN
- 3A COLLEGE OF CIVIL AVIATION
- 4A COLLEGE OF SCIENCE
- CENTRAL
- 1C MOSQUE
- 2C AUDITORIUM
- 3C LIBRARY • CULTURAL CENTRE
- 4C AUDIOVISUAL AIDS
- 5C CENTRAL ADMINISTRATION AND HEALTH SERVICE
- 6C REFECTORIES • MEN
- 7C REFECTORY • WOMEN
- 8C FACULTY CLUB
- 9C AMPHITHEATRE
- 10C CENTRAL SERVICES UNIT
- HOUSING
- 1H STUDENT HOUSING • MEN
- 2H STUDENT HOUSING • WOMEN
- 3H STAFF HOUSING
- RECREATION
- 1R GYMNASIUM • MEN
- 2R GYMNASIUM • WOMEN
- R FOOTBALL PITCH
- ATHLETIC TRACK
- VOLLEY BALL • BASKET BALL
- HOCKEY PITCH
- TENNIS COURT
- PARKING
- 1P COVERED PARKING
- P PARKING

- OBRAZOVNI SADRŽAJI
- 1A OBRAZOVNI KOLEDŽ ZA MUŠKARCE
- 2A OBRAZOVNI KOLEDŽ ZA ŽENE
- 3A KOLEDŽ CIVILNOGA ZRAKOPLOVSTVA
- 4A KOLEDŽ PRIRODNIH ZNANOSTI
- SREDIŠNJI SADRŽAJI
- 1C DŽAMIJA
- 2C VELIKA DVORANA
- 3C KNJIŽNICA I KULTURNI CENTAR
- 4C AUDIOVIZUALNA SREDSTVA
- 5C UPRAVA I ZDRAVSTVENA SLUŽBA
- 6C BLAGOVAONICE ZA MUŠKARCE
- 7C BLAGOVAONICA ZA ŽENE
- 8C KLUB ZA NASTAVNIKE
- 9C GLAVNA AULA
- 10C SERVISNA JEDINICA
- STANOVANJE
- 1H STUDENTSKI DOMOVI ZA MUŠKARCE
- 2H STUDENTSKI DOMOVI ZA ŽENE
- 3H STANOVI ZA OSOBLJE
- REKREACIJSKI SADRŽAJI
- 1R DVORANA ZA MUŠKARCE
- 2R DVORANA ZA ŽENE
- R NOGOMETNO IGRALIŠTE
- ATLETSKA STAZA
- ODBOJKAŠKO I KOŠARKAŠKO IGRALIŠTE
- HOKEJAŠKO IGRALIŠTE
- TENISKO IGRALIŠTE
- PARKING
- 1P NATKRIVENO PARKIRALIŠTE
- P PARKIRALIŠTE

3 \*\*\* 1975.

4 \*\*\* 1975.



FIG. 2 KAMAL EL-KAFRAWI: UNIVERSITY OF QATAR, DOHA  
SL. 2. KAMAL EL-KAFRAWI: KATARSKO SVEUČILIŠTE U DOHI



FIG. 3 UNIVERSITY OF QATAR, DETAIL  
SL. 3. KATARSKO SVEUČILIŠTE, DETALJ



FIG. 4 UNIVERSITY OF QATAR, INNER COURT  
SL. 4. KATARSKO SVEUČILIŠTE, UNUTARNJE DVORIŠTE

ments in this process, and the numerous complexes under construction or in the planning stage are impressive: in Algeria: the Universities in Oran (Kenzo Tange), Constatine (Oscar Niemeyer), Blida (Skidmore, Owings and Merrill); Annaba (Zweifel and Strickele) and Steif (Devecon Oy); in Libya: the University in Benghazi (James Cubitt); in Egypt the Helwan University in Cairo (Skidmore, Owings and Merrill); in Jordan: Yarmouk University (Kenzo Tange and Jafer Tukan); in Iraq the Universities in Baghdad and Mosul (The Architects Collaborative and Hisham A. Munir); in Saudi Arabia the Universities in Riyadh (Hellmuth, Obata and Kassabaum); in Mecca: (Skidmore, Owings and Merrill). The new National University of the United Arab Emirates designed by Kisho Kunokawa is not yet built.<sup>5</sup>

El-Kafrawi's university of Qatar can and should be compared with these international solutions of contemporary campus planning in the Middle East. It is of greatest significance that the one university which successfully combined the regional cultural values with a contemporary technology was planned by an Arab architect who went so far as to take teaching methods into consideration:

*As philosophical principle in the design of the university, I posed this problem of the conflict between local culture and imported technology to experts in various disciplines. I would suggest that education in the effects of the conflict should be a principal aim of the new University of the State of Qatar.<sup>6</sup>*

And El-Kafrawi concluded:

*I am to extend the way in which traditional values and lives are expressed architecturally, so as to strengthen the psychological link with the Qatar character, and ensure a sense of continuity in the modern environment.<sup>7</sup>*

El-Kafrawi's University of Qatar is an important step toward the formation of a contemporary Arab architecture. It will enhance the significance of the region and contribute to the cultural elevation of the Arab people.

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5. \*\*\* (1975), *Dr. Kemal El-Kafrawi, Principle Architect*, Gulf University, State of Qatar

<sup>5</sup> KULTERMANN, 1993.

<sup>6</sup> \*\*\* 1975.

<sup>7</sup> KULTERMANN, 1984: 51.

## SAŽETAK

## OBRAZOVANJE I ARAPSKI IDENTITET KAMAL EL KAFRAWI: KATARSKO SVEUČILIŠTE, DOHA

Katarsko sveučilište u Dohi, koje je projektirao egipatski arhitekt Kamal El-Kafrawi (1931.-1993.), može se u ovom smislu smatrati primjerom. Ono zadovoljava suvremenu potrebu za velikim kampusom koji bi imao sve tehnološke i upravne sadržaje, a ipak održavao duhovnu prisutnost islama. El-Kafrawi odbacio je od samoga početka zamisao projektiranja i gradnje na tradicijski način. Umjesto toga, stavio je naglasak na važnost upotrebe moderne tehnologije smatrajući da će to koristiti čitavoj sveučilišnoj zajednici. Isto je tako odbacio unošenje građevnih oblika iz Europe ili Amerike jer bi, po njegovu mišljenju, ti strani oblici narušili doživljaj islamskog okoliša. Stoga je morao naći način kako da od zapadne tehnologije uzme onoliko koliko je potrebno, a od tradicijske arhitekture onoliko koliko se funkcionalno moglo iskoristiti. Taj vrlo teški zadatak uspješno je riješio u završenim dijelovima kampusa Katarskoga sveučilišta.

Godine 1973. UNESCO je angažirao Kamala El-Kafrawija da projektira Katarsko sveučilište koje se tada nazivalo Zaljevsko sveučilište. Arhitekt je proveo pomnu analizu tradicijskoga načina života i arhitekture u Kataru, a rad na samome projektu počeo je tek 1975., poslije iscrpnih istraživanja. Sama je gradnja počela 1980., a 1983. završeni su neki dijelovi prve faze. Prva je faza službeno otvorena 23. veljače 1985. u prisutnosti Njegove Visosti Emira od Katara.

Kampus se nalazi na uzvisini u Al Markhiahu, oko 7 km od Doha i oko 2 km od obale Zaljeva. Kompleks će sadržavati: obrazovni koledž za muškarce, obrazovni koledž za žene, Koledž civilnoga zrakoplovstva i Koledž prirodnih znanosti. Koledži za muškarce i žene nalaze se na suprotnim krajevima kampusa: jedan na jugu, a drugi na sjeveru. Čak su i pristupi raznim sadržajima na kampusu programatski odijeljeni. Obrazovne sadržaje u kampusu nadopunjavaju džamija, velika dvorana, knjižnica i kulturni centar, središnja uprava i zdravstvena služba, klub

za nastavnike, glavna aula, studentski domovi za muškarce i žene, stanovi za osoblje, te rekreacijski sadržaji. Unutar kampusa ne komunicira se hodnicima i zatvorenim stubištima kao na zapadnjačkim sveučilištima, već stavom unutrašnjih i djelomično natkrivenih dvorišta, jer to bolje odgovara vrućoj klimi i arapskoj kulturnoj tradiciji.

Arhitekt je stavio snažan naglasak na prirodno provjetranje, čime je ostvario jednu od mnogih veza s tradicionalnom arhitekturom regije. Ugledao se na nekoliko kuća s tornjevima vjetera, koje još uvijek postoje u Dohi, i modernizirao osnovni princip.

Na ovaj je način arhitekt uspješno unio tradicijski pristup u suvremeni projekt, spajajući prošlost i sadašnjost. Isto je učinio pri korištenju prirodnoga svjetla u sveučilišnim i stambenim zgradama u kampusu. Intenzivnu sunčevu svjetlost što postoji u ovoj regiji prigušio je primjenjujući na svoj način tradicijska pomagala koja se već stoljećima uspješno koriste. Spojem znanstvenih istraživanja i starih metoda smanjio je razinu svjetlosti do vizualnoga i psihološkoga osjećaja ugodnosti. Razna sredstva kojima se koristio uključuju: indirektno svjetlo kakvo se koristi u svim tradicionalnim građevinama u regiji, zaslone od rezbarena drva prema tradiciji arapskoga „Moushribira“, zatim svjetlo koje se odbija sa sjenovitih okolnih površina te difuzno stropno svjetlo iz krovnih svjetlarnika u velikim prostorijama.

Ovakvi strukturni elementi snažno su utjecali na arhitekturu zgrada te nametnuli oblik i veličinu pojedinih predavaonica, kao i oblik stambenim jedinicama, a istodobno su pridonosili svijesti o kulturnom identitetu. Arhitekt je ovako izrazio svoje misli i opisao bit svoga filozofskog pristupa pri projektiranju Sveučilišta:

*Arhitektura je fizički izraz jedne civilizacije, proizvod intelektualnih, gospodarskih i političkih djelatnosti čitavog jednog naroda; tehnologija gradnje je tek alat kojim se taj izraz oblikuje. Stoga čovjek mora pomno analizirati okoliš u selima, gradićima i*

*gradovima arapskog svijeta da bi izdvojio učinku suvremene zapadne arhitekture. Kako se u tim slučajevima tehnologija koristila bez filozofije na kojoj ona počiva, te su moderne zgrade strane u ovoj regiji. Tu se vidi do koje se mjere arapska arhitektura izgubila i kako je to duboko utjecalo na pojedinca i njegov okoliš.*

*Čovjek mora pomiriti neposrednu potrebu za uvozem moderne tehnologije s potrebom njenog prilagodavanja lokalnom okolišu. To znači da se potrebe i želje pojedinaca moraju mnogo proučavati.*

Bliski je istok u razdoblju korjenitih promjena rezultat kojih će utjecati na razvoj regije tijekom sljedećih nekoliko stoljeća. Planiranje i izgradnja velikih sveučilišta samo je jedan od mnogih važnih elemenata u tom procesu, a popis kompleksa koji su sada u izgradnji ili koji se planiraju uistinu je impresivan - u Alžiru: Sveučilišta u Oranu (Kenzo Tange), Constatinu (Oscar Niemeyer), Blidi (Skidmore, Owings i Merrill), Annabi (Zweifel i Strickele) i Steifu (Devecon Oy); u Libiji: Sveučilište u Benghaziju (James Cubitt); u Egiptu: Sveučilište Helwan u Kairu (Skidmore, Owings i Merrill); u Jordanu: Sveučilište Yarmouk (Kenzo Tange i Jafer Tukan); u Iraku: Sveučilišta u Bagdadu i Mosulu (The Architects Collaborative i Hisham A. Munir); u Saudijskoj Arabiji: Sveučilišta u Rijadu (Hellmuth, Obata i Kassabaum) i Meki (Skidmore, Owings i Merrill). Novo nacionalno sveučilište u Ujedinjenim Arapskim Emiratima, koje je projektirao Kisho Kunokawa, još nije izgrađeno.

El-Kafrawijevo Katarsko sveučilište može se i treba uspoređivati s tim međunarodnim rješenjima za suvremene kampuse na Bliskom istoku. Od najveće je važnosti da je to sveučilište, u kojem su uspješno spojene regionalne kulturne vrijednosti sa suvremenom tehnologijom, projektirao arapski arhitekt. El-Kafrawijevo Katarsko sveučilište važan je korak prema stvaranju suvremene arapske arhitekture. Ono će podcrati značenje te regije i pridonijeti kulturnom uzdizanju arapskoga naroda.

UDO KULTERMANN

### BIOGRAPHY BIOGRAFIJA

Prof. Emerit. **UDO KULTERMANN** was born in 1927 in Stettin, Germany. He graduated history of art and German literature at the Griefswald University, Germany (1950), and gained his Ph. D. at the Münster University, Germany (1953). From 1959-1964 he was director of the *City Art Museum* in Leverkusen, Germany. In 1964 he became professor of architectural history and theory at Washington University in St. Louis. He is corresponding member of the Croatian Academy of Sciences and Arts since 1997. He has written more than twenty-five books in the field of architecture, art history and theory, and modern art, which have been translated into many languages.

Prof. emerit. **UDO KULTERMANN** rođen je 1927. godine u Stettinu, u Njemačkoj. Diplomirao je povijest umjetnosti i njemačku književnost na Sveučilištu u Griefswaldu 1950. te doktorirao 1953. na Sveučilištu u Münsteru u Njemačkoj. U razdoblju od 1959. do 1964. godine ravnatelj je *Gradskega umjetničkog muzeja* u Leverkusenu. Od 1964. godine profesor je povijesti i teorije arhitekture na Sveučilištu Washington u St. Louisu. Dopisni je član HA-ZU od 1997. godine. Autor je više od dvadeset i pet knjiga iz područja arhitekture, povijesti i teorije umjetnosti kao i suvremene umjetnosti, koje su prevedene na mnoge svjetske jezike.