



# THE KENTUCKY ARCHITECT

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University of Kentucky students address the professionals in a let-your-hair-down-session with the East Chapter, Kentucky Society of Architects, AIA.

#### STUDENT TALK



From left to right, Carl Awsumb, Robert Koester, Martha Daily and L. K. West.

Carl Awsumb: Our presence here denotes a sincere effort in communicating our feelings toward an architectural career and the eventual practice of architecture.

As we move closer to graduation there is great concern for that waiting on the other side of the diploma. We need your help in understanding many problems on that other side. We know you have much to offer us and we hope we may return something to you in relating our point of view based on our particular educational experiences.

Bob and Martha are going to describe the activities at the University of Kentucky School of Architecture. But, at this time, I will present a number of national and local trends in architectural education and continuing education for the profession and why changes are being made.

The federal government has asked the American Institute of Architects to participate in its congressional hearings on urban development and transportation. Furthermore, local governments, economic and ethic groups are seeking advice to solutions for environmental problems. Should such requests be ignored, these groups and governmental organizations will eventually turn elsewhere for advice or try to solve the problems themselves and eventually increase the isolation of the architectural profession. The AIA is responding to these demands, especially in the area of education.

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"... there is nothing which can replace the internship and the professional practice which you, as practicing architects, can give us."

Carl Awsumb

With cooperation from NCARB, the AIA has initiated pilot projects in four states where courses are taught in elementary and secondary schools assisting students in the appreciation of architecture and the environment. I am refering to this month's issue of the AIA JOURNAL and its article entitled, "Decision Maker 1985".

Another project consists of a two-year-course of professional training for architectural technicians. Upon graduation the technician would fulfill a role in the profession analogous to the medical technician's relationship to the doctor. A project of equal or greater importance is the accommodation of students aspiring to the architectural profession with the realization that the architect will bear an increasing burden in decision making. Upon graduation the candidate will be pre-certified to his training and educational experience. He will then undergo an intensive period prior to his examination.

I feel that regardless of the responsibility accepted by a school of architecture training the professional or the technician there is nothing which can replace the internship and the professional practice which you, as practicing architects, can give us. On the professional level the AIA has and is offering methods of internship. A familiar system is the logbook which causes interns to concentrate on experience categories relating to the state board examination.

A last proposal involves the re-examination of architects throughout their professional career. This hopefully would replace the present system of renewing licenses and encourage the practicing architect back into the academic system to brush up on the changes in technology affecting the profession.

Robert Koester: I might start off by describing what is happening at the University of Kentucky and what are the principal areas of concern

at universities across the nation. Three basic changes are precipitating upheaval in our schools of architecture and the architectural profession. (1) We have a rapid economic growth, (2) an exploding population and (3) new methods in gathering systemized information in face of increased demands. We must, therefore, have a new view of how architecture has to fit into this kaleidoscopic picture. The architect has to be more acceptable, adaptable and flexible to change. The unparalleled growth rate of the United States, now past the 200 million mark, exemplifies the challenge confronting the architect in comparison to other professions. It is interesting to note that engineers and doctors have 500,000 and 200,000, respectively, in their professions serving a total population of the United States. There are only 30,000 architects. The architectural profession is indeed small; being small in number the architect must serve a larger percentage of the population. In accepting the challenge of a larger job, he is finding it an advantage to be increasingly accustomed and/or willing to deal with tasks as developmental planning, operational research, feasibility studies, and property management, among other facets.

Examples of the trends in architecture may be illustrated by the following: In Canada the architect who designed Scarborough College wrote the entire curriculum for the school as well as doing the buildings. In Lexington, Kentucky, a group of architects are using the computer in determining maximum density and optimum building arrangement on a site involving a number of apartments. In Chicago, one office did a \$70 million campus while designing all buildings. We can see, then, that the architect's job is no longer the listing of spaces and arranging such spaces into a three-dimensional form of concrete, brick and other material.

Another factor influencing the architect is the overlapping of techniques. At many academic levels there are the development of many things that of engineering and scientific methods dealing

#### STUDENT TALK



Robert Koester

with problems now becoming available to all of us. Some of these tools are linear programming techniques, use of matrix algebra, analog models and simulation studies. And, if you've been reading THE AIA JOURNAL and PROGRESSIVE ARCHI-TECTURE, you're probably familiar with some of these terms.

Change is also being recorded at the University of Kentucky School of Architecture. The curriculum of last September was a traditional program which sponsored a tutorial relationship between the teacher and student. The student would make a decision and the teacher would judge that decision as good or bad. The student would make another decision unitl time either ran out or a deadline superimposed by the teacher had arrived. A majority of the courses, as structures, mechanical equipment or history, were not integrated. There was no sequence. A haphazard relationship existed between the student and the academic courses. A minimal opportunity existed for the development of special skills peculiar to the differing individuals.

In response to pressures as well as a timely maturation of the UK School of Architecture, changes were incorporated into the curriculum. The new program, as the old, is five years long and culminates in the student doing an individual design problem. All similiarity ends at this point. The curriculum is now much more ordered and relevant. It is broken down into a two-year section and a three-year section. The two-year section is called general studies; the last three years is called professional studies. The first two years deal with basic problems of making objects. Courses are given in expository writing, matrix algebra and linear programming. The last three years, called the professional years, integrate design and systems. Systems, a new course, is bringing together mechanical equipment and structures courses. The design and systems courses are coordinated each year in an incremental fashion so the material learned one year is valuable and necessary to the following year.

In the first professional year, a student studies internal systems. This deals with site, structures, mechanical systems and building materials, their function and most advangageous use. The second year, in essence the fourth year in college, deals with external circumstances as basic environment conditions as the sun, rain, snow, and so on, the things we connot control, and the facts of life in transportation, codes, ordinances, operational requirements, efficiency, theory and aesthetics, among other facets. In the third year, the individual student does a comprehensive topical design problem.

During the initial four years the student develops an individual theory of what architecture is, what it means and how architecture may be facilitated by the student's individual talents. In the fifth year, there is a culmination of this desire. The first four years has concentrated an in-depth study of all the material which traditionally consumed five years. At this point the student has studied information which is necessary in making complete and qualitative architecture.

A fifth year of school is spent in the comprehensive design problem in conjunction with a faculty member. Students may seek the development of their individual interests in identifying those interests with the study choices and inclinations of the faculty. A student, in essence, picks out the faculty member whose interests coincide with his interests. The student then does his own "The UK School of Architecture provides and encourages special programs for the enrichment of students."

Martha Dailey

independent investigation. This culminates in a design solution. This design solution is similar to the traditional thesis but is more comprehensive inasmuch as closer supervision with stronger teacher motivation is furnished. All courses have been so organized and pieced together so a minimum of energy has been wasted. The student has the advantage of developing his own individual interest and power in a deeper and more serious committment to architecture through a course more tailored to his individual needs.

Martha Dailey: The UK School of Architecture provides and encourages special programs for the enrichment of students. Many such programs are used by professionals for continuing education purposes. I will outline all programs in reference to students, students and professionals, and those for the professional.

Last fall the student, in collaboration with the faculty, initiated a series of social seminars. Student groups visited faculty member homes and discussed programs presented by the faculty. In turn, the students host annual student-faculty parties in both the fall and the spring. The spring event provides an outlet for long built-up tensions after the issue of a design problem to the faculty and then jury the solutions.

At present one of the requirements for graduation is going on three field trips: one in the first year, usually to Columbus, Indiana, to see its large collection of good architecture; two trips during the last three years to major cities. Last year we went to Montreal and Toronto and this year we will go to New York. On the field trips we visit a few architects' offices and see some of their work and spend most of our time exploring for ourselves. The field trips serve mainly to broaden our horizons. We also can broaden our view by contact with students from other schools. Last fall we hosted a regional meeting of the ASC/AIA. Representatives came from six of the thirteen schools in the region. Some of us saw many of the representatives at the annual Student Forum in Washington in November. On March 2 or 3, we attended another regional meeting and conference at Notre Dame. In discussions with the students of other schools we can better see the strengths and weaknesses of our curriculum, faculty and student body.

In some programs the school cooperates with government agencies. Three years ago several students worked with teams of architects from all over the country to design emergency operating centers. Some of your offices received reports of the results of the project. A proposed program is for architectural students to work with other students interested in the community in cooperation with VISTA, the local Citizens Action for Planning group and the architecture school. Together they would work in the poor districts of cities.

Turning back to the school itself, the resource used most frequently is the library. Many students find the Avery and Art indices invaluable for locating articles on specific subjects. The indices cross reference the material in all the magazines on art and architecture. Also frequently used arc the reference books. Students can find information on special projects in the expanding vertical file system. The 8000 books contain material on most subjects discussed in class.

Perhaps the most valuable stimulus we have are the visiting lecturers and critics. Formerly, most lecturers appear for just one day, but now following a national trend, the lecturers usually work with one class for a week and give at least one public lecture. Last fall, William Allen, a British architect was at the school four days a week for a month. This semester the fifth year class has a visiting critic from Venezuela. The visiting lecturers give students views that supplement those of the faculty.

The student AIA also sponsors movies and local lecturers. Last fall we showed "Monument to the Dream", an excellent film about the St. Louis arch designed by Erro Saarenen. The most promising program this semester is a lecture by Dr. Noffsinger on Williamsburg, Virginia, with an accompanying movie on the music of Colonial Virginia.

Another facility available to students is the gallery. Three exhibits are scheduled for the remainder of the school year: one by the faculty, one by Dave Brisson of the Rhode Island School of Design and one by the architectual students. Also there is the fine arts gallery of design which starts a showing of John Tuska's ceramics.

Besides the existing program for students which can be helpful to professionals are a few designed specifically for professionals. The most beneficial one parallels the medical profession in that the practicing architect is urged to return for refresher courses on Saturdays or for night courses or for workshops for a few days duration.

The second proposed program is for the development of the school by concerned alumni and other professionals. They could establish an architectural foundation with Producer's Council and other suppliers to help support the school's facilities, student scholarships, and programs of continuing education.

The third program has been proposed by the students to benefit both themselves and the architects. The students would like to set up visits with architects at their offices to discuss projects and ideas. In relation to this, some would also like to exchange juries with architects. Students could review the architects' designs and vice-versa.



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#### A New Way of Planning

The design of a new town offers a unique opportunity for a wide range of professional persons interested in urban activities to come together as an interdisciplinary team to create an optimal urban environment. The Midland new town, planned for eastern Kentucky, affords such an opportunity. The organization and procedures to be used in the design of Midland are offered as an example of an interdisciplinary approach to a comprehensive solution to a complex problem.

The proposed Midland is unlike most new towns we know. British new towns are basically designed to accommodate overspill population and industry from metropolitan areas. Recent new towns in the United States are built largely as speculative ventures by private corporations. Midland, on the other hand, is conceived as a means of creating a self-sustaining program of economic development in a socially and economically depressed area. Because of the scarcity of land suitable for industrial and urban development in eastern Kentucky, the new town of Midland illustrates 'a concept whereby undeveloped land, freed from flooding by land reclamation projects, can be intensively developed as a nucleus of a district urban network.

The new urban center, which forms the nucleus of the network, is to con-

tain an industrial park and regional urban service center, connected to satellite communities by a high quality

highway network. The nucleus will be the employment generator to which workers commute for industrial as well as service and commercial employment and from which wages will flow out into the district to create economic growth in satellite communities. With the passage of time, new generations will gradually migrate from the district service area to find residence in the urban center where opportunities for housing are better, and higher quality public services are more readily available. Thus, the early employment generator nucleus will begin to develop as a town, and settlement patterns throughout the district will gradually converge along the highway network in a closer relationship to the urban service center.

To design such a town so completely new in concept requires the utmost in creative thinking both in the physical development of the town as well as in the design of its administration and distribution of public services. The Institute for Environmental Studies, charged with the responsibility of designing the physical and the operational development program for this new town, has set about its tasks by organizing an interdisciplinary team of experts in the fields of law, economics, public administration, sociology, education, health, engineering design, landscape design and urban design. Specialists in each of these fields have been brought together to form two design teams, the physical design team and the operations design team. In order to encourage innovative thinking about the new town development, each specialist is given complete freedom at the very beginning to contribute his ideas to a concept of optimal form or function in respect to the design of the town. Throughout the design process, a continuing dialogue is maintained between specialists so that each may add the expertise of his discipline to the definition of design problems and the resolution of design solutions.

The process of design has been organized into three phases: First, the determination of general objectives and design constraints. Second, the development of alternative plans which reflect different design objectives in the building of the town. Third, the resolution of these alternatives into a final plan which may be supported by local, state, and federal agencies.

In the first step each specialist is called upon to establish objectives, standards, and values he believes to be valid in each of the functional aspects of the town (i.e. living, working, intercommunication, recreation, and cultural development). Here, a critical role is played by the sociologist, economist, educator, health expert, and administrator in an all-staff discussion and tentative determination of objectives. Following this, each staff member, both individually and in consultation with others, begins to define problems in achieving objectives considering the following:

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- 1. topography
- social and economic patterns and values of the communities
- 3. aspects of existing and new development technology
- limits and nature of economic potential for industrial development
- statutory limitations placed upon the development agencies in the development of the town and the administration of urban services.

In order to render such a wide variety of information usable, computer methods have been employed to establish a data bank programming the relationship of information about the constraints and opportunities in the five topical areas describing design objectives. Thus, it is possible to describe fully the nature of problems and the opportunities in achieving objectives.

The final part of this first step is to place the variety of objectives in an order of importance, to determine conflicts between objectives, and to ascertain as far as possible severity of problems arising from local constraints. Alternative hierarchies of ordered objectives, arising from different values placed upon particular objectives, form the basis for alternative plans and studies to be developed in the next step.

The second step, the development of alternative sketch plans, finds the staff reorganized into planning teams with their energies directed toward sketch plan developments based upon alternative ordering of objectives. Each physical design team is composed of

architects and planners with consulting engineers, sociologists, economists, and lawyers. The development of each physical design scheme is initiated by the physical designers, but with continuing consultation with the other specialists. At an appropriate time, alternative plan developments are brought before an all-staff meeting for a review and evaluation of concept and design development. At this stage, the design group proposals are held as very loose approximations in order to provide the basis for a dialogue of the entire staff. Ideas are brought forth from every member as to the best way in which the design objectives may be implemented in every aspect of the physical design framework. This procedure of development and review continues until each alternative plan develops the highest possible optimization of the objective hierarchy.

The next step in the new town plan development introduces another sector of expertise. Presentations of the alternative plans are made to appropriate local, state, and federal authorities, as well as to private interests who may be participants in the development of the new town. Depending upon their reaction to the alternative plans and an expression of their willingness and capability to support various aspects of the plans, the alternative plans are then re-evaluated and consolidated into a single plan based on the expressed level of support that can be expected from public and private agencies.

The interdisciplinary approach to decision making and design exemplified by the Midland new town design process is one made necessary by the complexity of the design problem and the need to determine, with the highest possible accuracy, the probability of public response to a unique venture. Only by utilizing the experience and creative thinking of a large group of specialists at every stage of decision may a design solution be achieved that has the best possibility of success.

As the year 2000 A.D. approaches, the design professions will be faced with overwhelming numbers of design problems that are parts of deep and complex root systems. Singular approaches to problem solving, as traditionally practiced by professional designers, deal with limited aspects of a problem system. By such partial unilateral treatment, the problem system is only diverted temporarily. The fault is not lack of expertise but limited scale of effort on the part of the designers. In order to fulfill our professional obligations to our clients, the design professions must match the growing scale of urban problem systems with an increased scale of interdisciplinary attack upon these problems. Furthermore, in order to fulfill our obligations to society as professional men, we must upon occasion step out of the passive role of involvement by invitation and assume an active role of public advocacy. The combined expertise within the design professions must be offered and joined with that of other groups interested in identifying problem systems if we are to enjoy a climate of public understanding that will enable designers to make comprehensive design proposals to satisfy the needs of urban America.





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