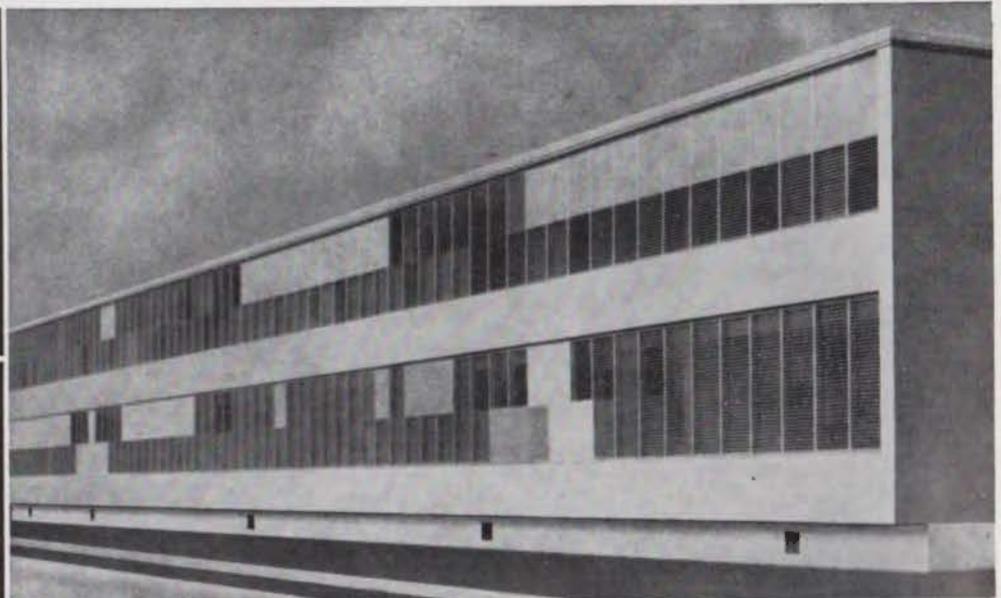
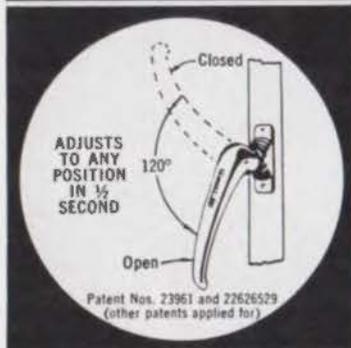
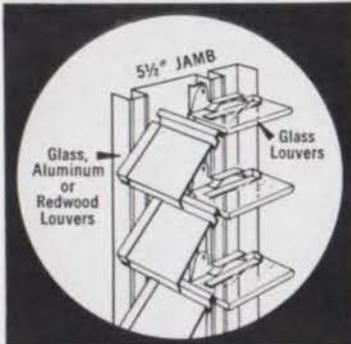




Texas Architect

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COVER

Effective night lighting and pictur-
esque landscaping bring to life the
vivid beauty of design of this month's
award winner, KHOU Television
Studio in Houston. (Architects: Wil-
son, Morris, Crain & Anderson).
Gulf Television Corp. is the owner.

The President's Letter

By
L. W. "SKEET" PITTS
President
Texas Society of Architects



(Note: Thoughts while waiting to become a Past President)

Changing of the guard has been going on for years—the dedi-
cation of past T.S.A. officers and directors and past A.I.A. directors
as evidenced by their service on current committees and attendance
at conventions.

Harold Calhoun's outstanding qualifications for office and the
great year ahead under his leadership—also an assurance of future
quality leadership with Arthur Fehr in the on deck circle.

The progress Texas Architects have made and the part T.S.A.
has played—the importance of maintaining a vigorous Society.

Heavy demands on our Regional Director, Reg Roberts, and his
level-headed and intelligent approach to problems. His dedicated
service on the A.I.A. National Board.

Our good fortune with the adroit representation of T.S.A. by
John Flowers—the wise counsel of Carl Hardin and the quiet effi-
ciency of Mrs. Nations.

Necessity of living within income and the careful attention of
these details by Vic Probst, our accountants and our staff.

Successful chapter visitations—thanks to Horace McCord and
hardworking visitation team members. A substantial increase in
membership—thanks to Bob Garland.

The importance of good public relations and the vehicle of the
Texas Architect. How much we owe Don Legge as our capable
editor.

Our great Fort Worth convention and the opportunity to meet
with friends in the profession and in related fields. The recognition
of competence in our practitioners and students with the awards
programs. How much convention planning and effort is required—
a dedicated Fort Worth Chapter—a chairman with the sincerity
and competence of Bob Woltz. The appropriateness of the theme
"Education"—and the success of our seminars because of careful
selection and direction by Phil Creer.

Important work of basic committees and special committees.
The unlimited talent for mutual professional assistance in our T.S.A.
family.

The great job Fred MacKie has done with the Texas Architecur-
al Foundation—its assistance to educators and students of the pro-
fession in Texas.

Importance and honor that accompanies the job of chapter
director—the good judgment and advice each brings to our board
meetings.

And then the many delightful families that compose T.S.A. and
this opportunity I have to wish each a wonderful Christmas and to
say "May the New Year bring to you enough success to make you
eager and enough challenges to keep you strong."

L. W. "Skeet" Pitts

I am particularly grateful for the opportunity to discuss professional education for total architecture because it gives me a chance to express thoughts that have arisen during a long involvement in architectural education and practice. During these forty years revolutions and counter-revolutions have taken place in the arts, and architectural education has gone through a series of drastic changes reflecting the conditions of the times.

My talk will be gratefully influenced by today's conditions as we experience them and comments that you have probably read in the architectural press. I shall lean heavily on articles, among them the "Constant Controversy about Architectural Education"; a series begun in 1954 that resulted from a survey on education conducted by John Knox Shear of the Architectural Record. This pointed to a common concern of architects and students over the relation of theory in the schools to reality in offices. The texts brought out a

practice and technology were already superbly covered by the Architectural Forum back in 1955 and published in book form under the title, "*Building U.S.A.*" Here the whole ramifying and changing process of building was described with emphasis on the status and somewhat precarious role of the architect. A challenge to the profession was thrown out in these words: "Democracy and the immense productivity of industry have for the first time in history produced something like a *total* market. This revolution has led to an idea as radical as the idea of *total* war; the concept of *total* construction and with it the possibility of *total* architecture."

Education for architecture is therefore confronted with two major problems: first, a constant controversy about easing the transition from education to practice, and second, the demands of *total architecture*.

PROFESSIONAL FOR TOTAL A

By: Professor Walter F. Bogner, F.A.I.A.

Professor of Architecture

demand for the easing of the transition from education to practice and the strengthening of relationships between students and the profession. During the years that have intervened the question of reality versus theory may now be more precisely defined as *reality versus abstraction* in teaching. As the pace of these restless times accelerates the controversy is becoming more intense and we are presented with one aspect of education that needs increasing attention.

However, the more critical situation confronting us today is the stylistic confusion which has overtaken Western Europe and the United States. Progressive Architecture has described the state of architecture in the '60's as the period of "chaoticism." In a series of articles that resulted from questions to individual practitioners by the Editor, Thomas Creighton, the new influences on the practice of architecture were brought out: The Period of Chaoticism; New Conditions in Practice; and Technological Freedom. The changes in

What is Total Architecture?

The challenge to do something in architecture about the conditions of building in the U.S.A. has met a response in the AIA's *Report on Your Profession*. In 1960 the architects seized on the opportunity to expand their services to be of professional help to society in all problems involved in the design and construction of man-made environment. This proposal for a major revision in architecture aimed at total practice naturally vastly affected education.

Total architecture from a philosophic point of view aims for a new way of life. This is a high goal and its accomplishment demands a major effort in education and in practice. Architectural schools, as we know them today, are inadequate to prepare men for the broad tasks that confront them in a mobile world of big business and industrialized production.

Architectural Schools

Architectural schools have come a long way in preparing a design force for the building industry. In spite of shortages of teachers, inadequate school plants and funds they can and will continue to accept the new and larger responsibilities. Let us look back and see what has happened in the last thirty years.

Many graduates who now are successful architects and do the important work of the country were trained under a system that is so much under attack that today a teacher of architecture almost hesitates to mention its name. I am of course referring to the Beaux Arts method which flourished for the better part of a century. Those architects who were trained under it were given fundamental principles for the creation of designs and compositions which are just as applicable today as they were when expressed by their patrons. Though the methods of application of the principles had changed

and illustrated in *Gaudet's Elements et Theorie de L'Architecture*, one of the rare clear cut simple descriptions of how to design buildings. The French teachers of the time used this as their gospel. Combined with these doctrines went the rules for the classic orders. Under these disciplines every student knew what was expected of his design and every teacher and critic had a basis for the evaluation of the student's work. No student would have been admitted to the Ecole in Paris if he had not completed a thorough grounding in preparatory studies to master the orders as well as drawing, mathematics, descriptive geometry, construction and statics etc. Students took a formidable admission exam and those not qualified for study on the higher level found work in offices or on construction jobs. A possible nostalgia may make the past seem more appealing but one cannot help feeling that the tremen-

L E D U C A T I O N R C H I T E C T U R E

Seminar Speaker, 22nd Annual TSA Convention

Harvard University

along with the methods of construction these architects were able to evolve their own languages of expression for the new types of buildings of the first quarter of the 20th Century. They produced architectural landmarks America can be proud of: Rockefeller Center, the United Nations buildings and the Brussels' Exposition Pavilion. (New York has lacked a Raymond Hood on the present design team of Lincoln Center). The Beaux Arts method fell into disfavor because it refused to keep itself alive by eradicating some foolish practices that had crept in. In 1930, building functions and construction practices demanded different design elements from those of 1864 when the first diplom par le Gouvernement Francais was awarded. The adherence to old tricks of dazzling the eye with entourage, peche and fakery on facades spelled the deterioration and death of a once great system. However, one must not forget that its success was due to definite principles and methods described

dous rate of failures in architectural schools could be overcome by preparatory professional training followed by a qualifying examination for superior architectural education. From the French system only one thing has been carried over into today's teaching, namely, the problem method. This is a case study process similar to that of law schools, business schools etc.

There were many acrimonious accusations at the time the system was fought to its death in the U.S., about 30 years ago. Now that architecture has moved almost full circle in its regard of Art for Art's sake one can take a more sober look at what made the system great. The U.S. imported great teachers from France that devoted all their time and energy to their students. There were competitions which gave students an opportunity to distinguish themselves in their local schools and ultimately try for the highest national honors which were the Paris or Rome prizes. Heads of schools, practicing architects, and design critics like Dean Emerson

of M.I.T., Zantzinger the Philadelphia architect and Paul Cret, the great Beaux Arts teacher, looked after the organization and welfare of architectural education throughout the U.S. Seldom if ever, since that time, have heads of architectural schools been willing and able to support students out of their own private funds, nor have practitioners or critics given as much time to active participation at design juries, in class rooms and on national educational problems. The dean who now practices or consults on architecture extending all over the world just does not have that time for his school and students. The pace of the world has quickened, education is struggling to keep up with the growth of knowledge, and man's behavior is affected by the changing society. The architectural schools have become crowded, the burdens of teaching and conferences heavier and the individual student with his personal problems is lost in the mass.

Today's five-year undergraduate program in architecture originated during the Beaux Arts period, and in spite of changes in architectural philosophy the basic curriculae structure to architectural education has remained. Now it has to be re-appraised. But design is still and should remain the backbone of the curriculum

to society must penetrate deeper into the life and affairs of mankind. Three to four years of college followed by three to four years of architectural school result in seven to eight years after high school. Confronted with two years of military training and usually three years of internship, one must note that students from graduate schools can expect to begin practice as architects only when they are thirty or over. We may compare the length of formal education of men we recognize for great achievement and reach our own conclusions about the number of years in school. *Frank Lloyd Wright was twenty years old when he ended his formal education, Miss Van der Rohe only fifteen and Le Corbusier seventeen. They ended their apprenticeship at 26, 25 and 22 respectively.* These facts were brought out in an article by Russell Hitchcock. I hasten to add that one cannot make a general statement that the long road leading through college into professional school is the best. It has the advantage that the students have a better understanding of the world and are more mature when they enter architectural training. They also have had a chance to postpone the choice of a profession to the end of their stay in college. However, mature judgment and the acceptance of scholarly attitudes are not

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for architecture supported by technical and cultural subjects. The content of the courses has changed and many new little courses have been fitted in among the technical or design subjects. Beginner's design has become basic design, an abstract way of learning to manipulate form and materials. Here, many fetishes and cults have been built up out of a method of indoctrination that had some meaning at the Bauhaus. In the architectural design courses of the upper years the problems increase in complexity and the methods of teaching follow the divergent concepts of the schools or individual critics.

The five years of professional school after high school have become an extremely intense and crowded experience for the students. The required architectural subjects do not leave enough time for courses of general education of sufficient diversity to provide a cultural basis for later life. Some universities like Harvard have always insisted on a full liberal arts program as preparation for professional education. This means four years, for bright students occasionally three years of college. More schools are beginning to follow this plan. They recognize the value of a general education in the humanities, sciences and arts as a foundation for architecture; particularly at this time when architects in their service

always aids to freedom of artistic expression and the development of skills for creative art.

Some educators feel that the five-year undergraduate professional program is too short to include all the knowledge that should be added to education. Others feel it is too long and that—combined with military service—a high age at entry into practice keeps graduates from making their contribution to architecture when ideas are freshest.

Let us look at European schools for a moment; they have a system of education that places men into practice from schools at university level at a relatively early age. They finish their work for a diploma (at least equivalent to our B. Arch. degree) when they are twenty-four. Military service is never more than one year, in Great Britain there is no conscription. The levels of education are structured so that an educationally qualified elite of students is prepared on a higher level and the quantities of technicians needed in the offices on a lower level of school training.

The typical educational programs of Central European technical universities have never been tried here, even though they follow an educational process that achieves the strong tie between reality and theory demanded by U.S. practitioners. For example, at the

Technische Hochschule of Zurich the complete architectural program requires only eight semesters *i.e.*, four years for the award of a final diploma. We find that it stands for a high caliber of ability. Germany is also developing a high measure of competence in technical universities. Education for the building field requires two years of technical high school for a preliminary diploma examination. Then the students begin practical experience. After one year they can take an examination for admission to higher studies in architecture leading to the final diploma. Those who do not want to or cannot go beyond the basic two years training fill a diversity of jobs as building technicians. With us, they would become the office personnel that is needed in such numbers in the large offices. The insertion of practice within the program leading to a final degree develops the understanding of reality as a foundation for study in the advanced design courses. We might well think about the advantages which these educational methods would offer us: first, as a means of fusing reality to theory, and second, as a way of reducing the total time in school. This system cannot be copied in the U.S. because there are great differences in secondary education and also in architectural practice. However,

One accepted the somewhat naive assumption of functionalists that beauty grows automatically out of a functional plan and structure. At least, that offered a simple way of drawing elevations but now that magic lifeline of the groping students has vanished. The students are left to their own interpretations of what they may pick up from their class critics, sometimes two or three in number, with possibly an equal number of divergent philosophies. Should they insist on a text book they can resort to, one of Kepe's books, or to "Vision in Motion" by Maholy Nagy and gain an insight into the author's interpretation of the creative processes of the avant-gardes painters, photographers or sculptors in statements like these: "After mastering the relations of all degrees of positive and negative volumes an intensive penetration into the material follows, creating polar contrasts." Further on they can find: "We deny volume as a spatial form of expression . . . For what else could space be beyond an impenetrable depth? Depth is the only form of expression in space."

To the students this mysterious language may seem exciting, entertaining or frustrating, but invariably it leads them to finding that it is far easier to put together words as arguments for or against a design than to put

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there is no reason to assume than an American method could not be developed that achieves the same advantage. The insertion of a requirement of practical experience into the professional educational program would overcome the most frequent complaints about inadequate preparation for work in architects' offices.

Today's architectural education in American schools revolves around the architectural design course. This course is the prestige subject—it is regarded so by teachers and students. Students who do not succeed in design have a hard time completing their studies. As already brought out by John Burchard in his speech at the Grindstone Teachers Training Conference, "the drop-out rate of architectural students in colleges and universities exceeds 50 per cent by a wide margin."

With all the emphasis on design in the schools where does the chaoticism referred to in the press come from and what can be done about it. Perhaps the largest part can be blamed on this restless age. How it can be overcome if confusion is passed onto the students is hard to see. The very lack of any unifying and simple definition of the principles of contemporary architectural design is the cause of the confusion. Back in the early thirties when the functional approach displaced the Beaux Arts method one followed rationally in design.

lines on paper to illustrate sensible architecture. They are hungry for philosophic statements in the hope that one or another migrant critic may throw light on a path that might lead them out of frustrating design efforts.

These statements of mine may be lonely outcries of a teacher all too cognizant of the changes these restless times have brought with them. But they are made with a feeling of hope that by a fusion of reality and theory greater sense can be brought back into education. This is by no means a simple job as it demands the extraction of farsighted principles out of extremely complex conditions. America is not alone in facing these problems in architecture. Conversations with heads of schools in Germany and Austria, England and Switzerland point to similar situations. However in most of these countries the strength of the technical courses and the opportunity to see and analyze forms of distinguished historic buildings give a greater solidity and substance to the programs of education.

Expanding Teaching for Total Architecture

Total practice of architecture described by the *Committee on the Profession* places the architect in the historic role of "Master Builder." To quote the report: "He will be first of all designer, but not only of individual buildings but of all design involved with man-

made environment." He will also be "businessman, involved in the maneuvering of needs, money, land and know-how." In other words he will be dealing in addition to his normal tasks with programming, financing and execution of construction. These are all responsibilities outside the type of practice the usual architectural education has prepared him for.

Simultaneously another committee at an "Inter-Society Conference on *Expansion of Schools to Serve the Building Industry*" defined similar demands and even enlarged on them. It was proposed that the architectural schools assume the training of engineers for structural, mechanical and electrical work in anticipation of a time when these fields will be cast off by the engineering schools. There is a likelihood that the new needs of the sciences and technologies will not leave room for civil engineering. So architectural education finds itself before a whole array of new responsibilities.

The expansion of education to meet these added requirements presents formidable problems to the professional schools of this country. One would certainly not want to weaken the quality of education by spreading it too thin, nor would one want to give up training toward an art in architecture. *An inability to achieve*

What might these special courses be?

I see them grouped under three divisions:

1. *Design*
2. *Building Technology*
3. *Architectural Administration*

The expansion of education to meet these added requirements is far more difficult to achieve than the easing of the transition from school to office.

Architectural Design is pictured as the division of studies that gives visual expression to the social needs and creates architecture instead of mere structure. Present curriculums would have to be enlarged to cover certain phases of planning and landscape architecture. Here the artistically talented would be trained for a high level of performance.

Building Technology as a division, would have to add to the present courses on structural, mechanical, electrical and acoustical engineering new subjects creating an understanding for the problems of labor and materials and costs, now the province of contractors. Here the scientifically inclined would be prepared.

Architectural Administration as a division, would have to offer not merely what is now included in that

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aesthetic appeal within the profession would be suicidal and would only result in sacrificing the role of architecture as a cultural force and the lowering of the architect's status to that of a speculative builder or promoter. In man's environment dullness, ugliness and monotony would be compounded and the pleasure of living would be destroyed for everyone but the blind and insensitive. What would have to be taught under the expanded education demanded and how could it be accomplished?

To meet the challenge presented by *total architecture* the entire educational facilities in the country preparing for the building industry would have to be reviewed to locate the potentials for the expansion of the curriculum. There would be few universities, if any, where at this time all the subject matter could be offered that belongs to these new aims. What seems more likely is that schools would have to choose specialties for which they would develop competence. This might demand optional programs or advanced curriculums of specialization on top of general professional programs. Students might be offered education in a special area of total architecture for which they have their individual talents or aptitudes. The advanced programs could prepare a top echelon of professionals for the diverse branches of total practice.

frequently neglected subject of architectural practice but would have to reach into the complex problems of programming and site selection, financing, the development of real property and business management. Here executive ability would be developed.

Training in these three areas would have to aim for the development of competences greater than those of the commercial builders or package dealers. If education for total architecture does not lead to a superior professional performance it is a lost cause.

A group of courses giving a general education for the basic indoctrination of all students of total architecture would have to be given prior to specialization. The future numbers of the professional team would first have to learn the subjects in which they have a common interest and gain understanding of mutual aims. This would produce generalists who might even end their education without advanced specialization. In this way the masses of technicians could be trained that are needed in such disproportionate numbers.

The generalists' level in the educational structure would be like the base of a pyramid that forms the foundation for *total architecture*. The gifted would then get their special training at the top toward the apex. This would be similar to the structure of Central Euro-

pean education. In the example of the Swiss or German schools previously mentioned students leave the class rooms on completion of a program of courses leading to a preliminary diploma. Those that can pass a qualifying examination after a period of practice of about one-half to a year go on to the completion of studies for a final diploma. Not dissimilar is a British proposal by Professor Harper of Manchester University. He proposed to prepare architects and building technologists in a four-year program leading to practice followed by three years of advanced study or research of which the first is a qualifying year. The upper level program aims at specialization.

Against the ready acceptance of any such proposals for the U. S. stands the traditional structure of architectural education and a host of other little problems. Great Britain's efforts have so far not brought any results judging from my conversation at the London Architectural Association this fall.

In this country the growth of the mammoth architectural and engineering offices, the success of the package dealers, the new power of the home builders, the changes in the clientele of the architects and the influence of government in building make a solution to the

major problems before education require: First, that the controversy between realism and abstraction must be kept on an even keel and, Second, that education must be expanded to achieve total *architecture*. Both issues are inter-related and recognition of realities without sacrifice of the artistic ideals will benefit both. Perhaps it might help to draw on a few examples from experience to show how these problems have already been dealt with in schools.

The boom years of the twenties followed by a crash in which reckless building was a contributory factor had a sobering effect on the architectural schools. The old design approach that had assumed conditions of wealth and ostentation as essentials of the programs for problems was out of place. In 1934 I started a course at Harvard that was listed as the Functions of Buildings and aimed to teach planning principles and the influences of building economics (costs and income and financing) on design. Later this subject was incorporated in my design course and became a part of the study of solutions to building problems. In this way, for example, studies to explore the development of a former railroad yard in the heart of Boston were undertaken. Students were asked to show what they would

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new problems before education urgent. If architects and educators are serious about making a contribution to society through the creation of a better environment they must determine what must be done in education and how it can be accomplished. There is a serious danger that in the expansion of services architects might sacrifice the ethical and social ideals of their profession to the mercenary interests of business unless education succeeds in elevating their aims.

These comments point out the complexities of the problems of education for *total architecture*. All member schools of A.C.S.A., the Accrediting Board and the National Council of Registration Boards would be affected. New curriculae and standards for profession competence would have to be set up, experience would have to be gained and exchanged between the schools and the practitioners, research would have to be undertaken and publications prepared. These demands go beyond what committees in their usual efforts can accomplish. A central clearing house would be needed with a staff to facilitate the new tasks before education and the profession: its duties should be education and research.

The Issues before Architectural Education

From the foregoing we can conclude that the two

propose for the development of the property. First, through this approach they were given experience in programming. Secondly, they gained an understanding of another design profession's point of view as students of M.I.T. and Harvard in city planning and architecture collaborated. The preliminary exploratory studies were then developed to illustrate the design of building groups resulting from the differing proposals for the development. At the judgment of the designs, professors in architectural design and city planning with members of the Boston Planning Board and Real Estate Board expressed their reactions to the students who thus finally saw the whole broad range of factors that were of importance to designers, planners and realtors. (As an aside, the mayor of Boston finding the proposals realistic and appealing used the designs to persuade a developer to take an option on the property and carry out the suggested land use represented in one of the proposals. This was the origin of the Back Bay Center Project which has since had an influence on developments in other cities and countries.)

In following this approach to design teaching the students are stimulated to go beyond the normal scope of an architectural problem into the broader aspects of *total architecture*. My experience indicates that more

can be accomplished by unifying training in the various related subjects of architecture within case studies, than through a system of isolating subjects in splinter courses. Design study on the upper level of the professional programs can emphasize diverse aspects of whole problems so that the students become aware of total architecture; at times it may be slanted toward the engineering aspects, or toward the functions of a building type, or economics etc., to give a diversity of experiences while serving the entity. In each case the achievement of an aesthetic appeal for the visual expression of the solution is of paramount importance so that the prime distinction of architecture is always before the students.

Educators in the various schools across the continent and in Western Europe have their own experiences and through their comments will have much to contribute to the expansion of education for total architecture. Fundamentally, a teacher shapes men to become practitioners so they may in turn shape the environment. The teacher has a special responsibility to understand his human material and to stimulate responses to his treatment of the individuals of diverse aptitudes and abilities. With the accelerating procession of fashions that crosses the architectural scene it is important to insist on this effort in a search for truth and an empha-

BOGNER: PROFESSIONAL EDUCATION

sis on principles. Methods are secondary and must be integrated within the larger objectives. There is no room in the crowded years of the excessively long programs of architectural study for the elaboration of methods by meaningless tricks. With chaos about us we must rely on realities to prevent confusion.

Education for *total architecture* is a complicated and slow process of achieving improvements in man's environment. Unfortunately, much faster and of more direct impact are advertising and the slogans of commercial organizations. The home builders' or package dealers' spreads in the magazines have a powerful influence on the public. They shape opinions out of which demands grow; it is relatively simple to sell new houses, offices or factories with alluring pictures and smart phrases. The harder job is to create an understanding for the more fundamental needs of society. The complaints about the crowded cities and the devastation of the landscape through ugly builders' developments make it obvious that the public is not satisfied with the commercial services it has bought. Cures for social ailments that grow out of bad environment are a professional responsibility. Too seldom is the question asked whether, for example, the problem of juvenile delinquency could be cured through physical improvements in the urban environment—whether a good school in

friendly surroundings would help to overcome the teenage problem. Serving society would in addition to handling commercial, industrial and institutional projects demand the creation of a different environment from the troublesome slums of cities. There is already criticism of the inhuman aspects of urban renewal with the vast job of the rebuilding of cities having hardly started. One need not be led to believe that Jane Jacobs' plea for keeping a "hole in the wall" is a realistic solution to neighborhood deterioration and urban growth, but one can find in her message an appeal for planners and architects to create that human quality in environment which leads to a neighborhood spirit and a more honest expression of the word 'community.' Congestion and stagnation of circulation in cities is of course one of the most obvious environmental problems. There is no ethical basis to that attitude of those concerned in the development of property as is obvious from the compounding of congestion which is now going on. The Pan American Building in New York is a case in point. It is the responsibility of education to create an understanding for the fact that individuals must be controlled so that harmful exploitation in the cities and countryside can be prevented for the benefit of society. Selfish or business interest will only cause more crowding in cities with bigger and higher buildings and without con-

cern for cars or transportation. *Only a master plan controlled by zoning can stop the spread of ailments in cities and spread the gains from an individual to a greater number. A profession that professes a dedication to the creation of a better environment must concern itself with these issues.* Education which is divorced from selfish interests can have these ideals before it and demonstrate the ethical basis to the *service to society*. This would provide a basis to *total architecture* that would give a reality to *the building of a better environment*.

Education for total architecture is therefore not merely a matter of prescribing additional courses or making teaching in professional schools more effective for the benefit of the profession; it is the problem of developing the ability and interest of architects so they may truly serve society in building an environment that will make a better life in cities and along the countryside.

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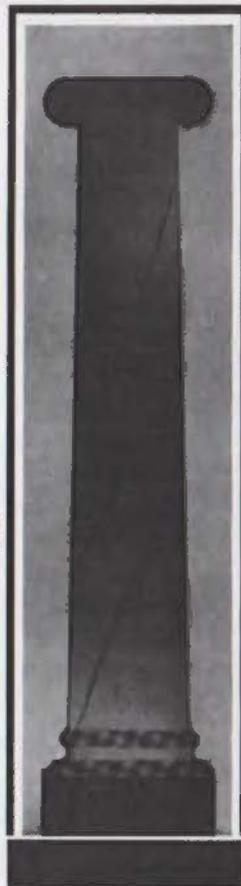
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HAPPY MOMENTS —

Above: Obviously Past Pres. Herbert Tobin, F.A.I.A., Secretary Victor G. Probst, and Prof. Goldwin Goldsmith were enjoying a convention business session.

Right: Edward L. Wilson, F.A.I.A., receives a plaque from Pres. L. W. Pitts, F.A.I.A., honoring his distinguished service to the Ft. Worth Chapter, TSA, and AIA.

Far right: Mr. and Mrs. Pitts will long remember the 1961 convention, and here the photographer captured their pleasure upon receiving a memento.

Spotlight: Pres. Pitts congratulates his successor, Harold Calhoun, F.A.I.A.





NOISE ANNOYS

If predictions being made by education authorities, and echoed by publications such as *TIME*, are accurate, we will be short, at present rate of construction, some 400,000 classrooms in the year 1970. Since developing opposition to continued tax increases make doubtful any definite acceleration of building facilities, not to mention the anticipated shortage of teachers, it is the conclusion of such authorities that we must begin immediately to assign larger groups of children to available teachers and classrooms. Some authorities consider it inevitable that morning and afternoon shifts will be required.

The detrimental effects that will result from a general development of a situation wherein excessively large groups (as judged by present standards) will be the rule, have been assessed in detail. According to these analyses, strain imposed upon classroom teachers will drive many out of the profession and the lack of specific attention to the individual student will bring about an impossible educational situation. It is somewhat surprising that the detailed evaluation of the detrimental effects of such large classroom groups could have been made without spelling out and analyzing causes so that it could be determined whether some of the conditions existing in large class groups accepted as inherent in such situations, are not actually avoidable conditions.

In the countless educational publications which we examined, we have never seen mentioned the effect of ambient noise on teaching and learning situations. Practically everything is mentioned in describing the "natural learning environment" even to the specific color shading of walls and ceilings. There is, of course, the standard specification of acoustical materials, but beyond this, the prevalence of noise is evidently assumed to be an inherent classroom factor since little mention is made of its affecting classroom environment.

Some Greek philosopher stated that the ideal teaching-learning situation is a teacher for every student because the presence of a second student introduces a number of problems. What the Greek gentleman did not anticipate is that the availability of present day electronic equipment, which overly large groups of students will inevitably demand, can make possible an approach to the ideal situation of a teacher for every student. It is doubtful if this ideal situation, even with

BY GIB DEVINE
President
Language Arts, Inc.

Editor's Note: Mr. Devine has pioneered in the development of teaching aids for language students, such as film strips with LP records, tape recordings and other electronic devices. His research into the problem of flexible teaching facilities at reasonable cost has led to the development of portable wireless transmitting and receiving units.

the best of equipment, can be very closely approached, but certainly classrooms can be equipped for large student groups which will provide a much better teaching-learning environment than exists in present day classrooms without regard to student group size.

The passage of the National Defense Education Act makes available government money to defray half the cost of school electronic equipment purchases. Its principal contribution made to date is that it has provided the "foot in the door" for the installation of electronic equipment to *assist* teaching and learning. Language laboratory equipment has been purchased in quantity, and even though much of it gathers dust in the classrooms, school administrators are beginning to envision the possibility of teaching all subjects employing electronic equipment assistances.

In evaluating equipment available for classroom use, any possibility of eliminating a classroom teacher should be ignored to begin with since no machine has been invented which can control class discipline. Starting with the definite recognition of the need for teacher assistance in teaching and student assistance in learning, investigation will disclose that equipment is now available which provides these assistances. Basically what the equipment must do first is eliminate ambient noise. In doing so, teacher strain is certainly reduced, if not eliminated, and student listening strain is likewise reduced or eliminated.

We are required to make and compare classroom recordings. Such comparisons prove that ambient noise indicated by VU meter readings increases much more as students are added than in direct proportion to the number added. If it is possible to eliminate practically all ambient noise regardless of the size of the class group, classes can be increased to a point which will be regulated by some factor other than teacher or student nervous strain. We recently made two recordings, one in a class of 32 children, and the other in a class containing 26. The recording made with the smaller group indicated an ambient noise level approaching maximum minus 3 db's over which the teacher was required to speak. The recording made with the larger group using electronic equipment indicated such a low level of ambient noise that it was not indicated by meter readings.

Considering the problem facing schools as a result of the anticipated large group handling, the evaluation of equipment should not be made by school administrators. Except for the rare hi-fi enthusiast, most school administrators are bewildered by the jargon of competing electronic sales representatives and take refuge in buying the same thing that some other school bought hoping that the other fellow knew what he was doing. A complete evaluation of all electronic equipment offered to schools should be made by some national organization after determining the needs of teachers.

Architects and contractors, but more reasonably the

former, should determine the type of equipment best suited to the particular requirements of each school system and its buildings. Cost of such equipment distributed over its usable time period does not approach the cost of providing classroom space and teaching personnel. It is to be hoped that Architects, in the design of buildings, will realize that good teaching and concentrated learning is the result of the best possible communication.

Is it not possible that the long sought definition of good teaching is actually nothing more than good communication, whether it be of ideas, facts or demonstration? Special classroom design allowing movable partitions and the employment of team teaching methods are excellent solutions to impending problems but these plans must certainly assure the availability of complete communication. Facilities to provide perfect teaching-student intercommunication is already available. What is needed are recommendations of its use.

"F" Is For Frances!

Some architects clubs are bigger than we,
And greater publicity menaces;
Individually, some pose on drawing boards
Some are as old as Genesis
Lots of them have lots more grace
And cut fine figures at dances,
While we wuz born with galoshes on
But nobody else has Frances

Lots of clubs are wiser than we,
And carry within their cranium
The ways and means for everything
And operate with uranium.
They've surveyed the position of every star
In heaven's vast expanses;
We really don't care just who they are
Cause nobody else has Frances

Speaking of wisdom and wealth and grace—
As recently I've dared to
There are lots of clubs compared to whom
We had rather not be compared to
There are clubs we ought to wish we wuz;
But under the circumstances,
We prefer to continue just as we is
For nobody else has Frances

(If this poem isn't exactly a smash
Blame most of it on Ogden Nash)

This poem, written by Mrs. Clyde Hueppel-sheuser, is dedicated to Frances Woltz in recognition of the splendid job she has done as our "First Lady."

EDUCATION

For The Free World

The assigned title embraces more than I would have wanted to tackle even when I was younger and more willing to try to be cosmic. But I will do what I can with it.

I start with some assumptions. Those of us who live in the relatively free world will continue to be able to do so. The uncommitted and relatively democratic nations like India will continue their pursuit of technological advance and economic development in a *milieu* where the freedom of the individual is respected. The insecure, confused, newly liberated tribes of Africa will coalesce somehow in due time into viable nations, led more by statesmen than by demagogues, with fewer and less violent dictators. While this is all happening, we must hope that the Africans will learn somehow that successful freedom of the individual demands self-imposed restraints on eccentricity; that though whites have many things to be ashamed of, so do blacks; that arrogance has no relation to the color of skin; that criticism needs to be accepted as well as tendered.

We might finish off by hoping that as time goes on first some of the livelier satellites and then the main body, Russia, will also achieve the freedom that many individuals in these countries sense to be desirable but that no citizen now alive in Russia has ever experienced save as a tourist. Even in the countries to which Communism came only after the Russian conquests of less than twenty years ago there are perhaps only a few people, all in their fifties or older, who have ever been able to encounter freedom except in theoretical writing.

This quick political polemic must suggest at once that the problems of education for the free world cannot fruitfully be discussed in global terms. They are not the same for countries which are technologically backward as they are for countries which are technologically advanced. They are not the same for countries whose religious backgrounds impose no ideological limitations on population control as for those where it is hard even to discuss the problem. They are not the same for countries like India where there is evidence at every hand that there have been great earlier cultures, and a strong cultural tradition persists, as for countries like Ghana or Nigeria in which no cultural tradition of this sort has ever existed.

It is all very well to wish to take giant steps; it is certainly possible if educators are thoughtful and imaginative to do some educational leap-frogging. Especial-

BY
JOHN E. BURCHARD
*Dean of School of Humanities
and Social Science
Massachusetts Institute
of Technology*

ly one need not be bound by the way things have been done elsewhere. It is, for example, by no means self evident that it would be the best thing for the development of democracy in Africa to start with a program of primary education for all. Given the inevitable number of drop-outs, this might do no more than produce a massive semi-literate electorate. We can point to counties and parishes and mountain enclaves of our own country, not always black, not limited to one region, where this effect can be observed and they demonstrate that democracy does not thrive on half-literacy. It is possible for Africa that the first attack should be aimed at upgrading secondary education so that a larger population would be qualified to do the college and university work which is essential to expand the numbers of people capable of middle-leadership far beyond the present pitifully inadequate cadre.

It is even possible to imagine that the ability to read and write could under modern conditions become less important than the ability to talk and listen intelligently; television, movies, radio and other means of oral and visual communication have potential powers at least as great as, and in some ways greater than, those of the printed word although they do not encourage contemplation. That they are almost wholly employed for banal, trivial and even degraded purposes is not the fault of their technological potentials, as many examples of educational programs and isolated examples of commercial production show. It is instead due to our inability to organize the mass media for the public good.

Of course there is the same problem with the printed word—for example, there are few newspapers like the *New York Times*)—most words in print are also banal, trivial or even degraded. But the reader has choices which up to now it has been harder to exercise among the offerings of oral and visual communication. This does not mean it is impossible. It may well turn out for the Africans as it has more than once for others in history that at a given moment in time there are some advantages in being backward. For when nothing exists, there may be fewer resistances to beneficial change.

Nonetheless it will be unfortunate if, as we try to help advance the process of education in Africa, India, or wherenot, we cling too uncritically at home to what look like well-tested systems. For example, David Boroff has some right on his side when he says in *Campus USA*:

"There is little doubt that the teacher-student ratio has been a sacred cow. The former president of Fisk University once observed that without a superior teacher, 'The small class merely assures the transmission of mediocrity in an intimate environment.' Available evidence suggests that mere size of class has little influence on educational efficiency."

Not the least interesting aspect of the present situation is that a number of American educators may succeed in doing more imaginative things in India or Africa

than they can in their own country. Their problem abroad may be to persuade a few conservative Indian or African leaders to take a chance; but at home the forces of conservatism, even among admirals who in other fields have been apostles of innovation—these forces are strong and ubiquitous.

"The academic profession would do well to give up its guerilla warfare against change. (Academicians present the paradox of being liberals politically but diehard conservatives professionally.)"

Finally, at the end of our hopes there are the Russians and Chinese and here the educational problem will again be of a different order because in pragmatic matters these people have already achieved a high standard of performance while their penchant to discuss questions of politics, philosophy, morality or aesthetics has been so fully discouraged or structured that their ability to think freely about such matters seems to have atrophied. The problem will be to find a way through education to retread the souls of the Russians who follow Khrushchev. Since Russians are human beings and since they can still encounter such questions privately so long as they can read Dostoyevsky, this may be less hopeless than it seems. We thought once Germans could never recover from the indoctrination of the Hitlerjugend. The problem is not then one of how Russians can bury Americans, but rather of how Americans can resurrect Russians.

I think there are enough implications in the above as to the nature of American problems at home that I need not apologize for this world tour which is just an extended preamble to explain all the things I am not going to talk about. Now I must add a few further exclusions. I will talk only of the United States. I will not try for a distinction between lower level and advanced level education, between schools and colleges and graduate institutions. I will not distinguish between regions or races or between men and women. I will not try to relate this expressly to architects for if architects are not human beings and good citizens I suspect they cannot be architects (I didn't say pleasant human beings or conforming citizens). I will not say how any of my desiderata might be achieved. I will merely outline what I think our major purposes ought to be and let others apply the skin, the muscle and the viscera to this eccentric frame.

We should not duck the grim fact that if we are to be realistic we must now talk about education for survival as well as education for progress; and that there will be no progress if there is no survival. Survival in turn involves first the primitive but inescapably urgent preparation for physical survival and only after that survival as an influential force in the world and survival as a democracy.

The first line of defense we now accept so firmly, at least in principle, that I will not develop it here. This insists that our education shall continue to produce, and indeed produce in greater supply, scientists and

engineers who put science to use so that our weaponry is as advanced and as flexible as possible. This contest of the technologies is probably not one that we might expect to lose but it is also quite unlikely that we shall score a major and decisive victory in it. The safe and realistic thing is to hope that we can maintain an effective stalemate.

But such a stalemate does not guarantee an escape from catastrophe. All it says is that both sides may experience catastrophe. When great powers and grown-up leaders play games with tanks and rights of entry on the border of a city, there is always the chance for a mistake and the actual triggering mistake may easily enough pass from the power of the leaders to control.

If the war of the big bombs were to come, we have nothing to be complacent about. One could hope of our past education that it might have brought us to the position where we would demand and get more explanations from our politically selected leaders than we now demand or get. The *laissez faire* position of our shelter policy is nothing short of a national disgrace. Either we should hasten to a full communal fallout shelter program or we should stop talking about fallout shelters. If we are to have them, we should not have civil defense administrators in adjacent counties telling us exactly opposite things. We should not leave the solution of the problem to the choice of each individual. We should put a stop to the cheap cupidity of purveyors in many parts of our country, preying on the uninformed, selling things that will not work, merchandizing even pathetic cans of water with no indication of how long families might expect to have to stay in shelters, how they would maintain the ventilation, how they would cope with claustrophobia, how they would know when it was safe to come out, how they would know what to do when they got out in a country where the devastation and the hidden radiation was not local but general.

Our education should somehow protect us from what Norman Cousins in his recent eloquent articles on "Shelters, Survival, and Common Sense," has properly called "The transformation today of otherwise decent people into death-calculating machines." Has not our society suffered a loss when contractors who build private shelters camouflage their trucks, do the work furtively, and otherwise arrange so that your private domestic shelter can be classified top secret lest you incur the displeasure of your neighbors? What do you think of the Chicagoan suburbanite who plans to mount a machine gun at the entrance of his familiar shelter, of the many who regard shotguns and tear-gas devices as standard equipment of their new rumpus rooms, of religious leaders who pronounce a code of ethics which includes advice to Christians "to think twice before they rashly give their family shelter space to friends and neighbors or to the passing stranger"? What do you think of a civilian defense authority who is said to want to build a militia of 5,000 men to fend off an invasion

of survivors from Los Angeles who "would come to Nevada like a swarm of locusts"? Many people who see and are dismayed by all this seek all the answers in a new kind of moral force and this may of course be the only ultimate solution. But meanwhile the practical question of shelters remains and of this we can say that only a national and communal shelter policy has in it any possible elements of security, physical or moral. If the President wants to toughen American fibre, if he wants to induce useful American sweat, he could do no more valuable nor braver service than to grasp this nettle with both hands. It would take courage for the idea of a tough shelter policy remains politically unpalatable and so does the idea of none, so laggard has our education become. Only the other day the distinguished reporter, Mr. James Reston, who is generally in favor of the administration, wrote that our national administration was full of leaders who did not lead and educators who did not educate. I have no comment to make on the first allegation but the second one I think we must consider to be true. There has never been a time since the presidency of Herbert Hoover when the White House has been so slow to inform the public fully, and when it does inform the public it does it in heroic generalities and not in specifics. We are full of bravery but we do not have much information. But for this we should not blame President Kennedy and his advisers. When the public wants to be educated, it can demand to be, and then the administration is capable of it.

Returning to shelters, I have to say that we should not toy with these things. Every plan we make should be based on the assumption that the thermonuclear explosions will take place. They will not happen on a pleasant weekend when the whole family is home and can quickly be mobilized for a fortnight of togetherness in the basement. We should pay as much attention to the immediate recovery as to the first survival, for without the recovery the survival will be transient. We do not need to speculate in this connection about whether the American people can or will stand up to disaster psychologically. I think they will as well as any one else. But there is more reason to doubt whether enough of us are physically up to it, able to stand considerable exposure, inadequate food and clothing, dirt, bacteria, to learn how to root for edible food, to put something in the way of food, shelter, and sanitation back into order when bulldozers stand idle because there is no gasoline, when chain saws are useless because there is no electricity, when food sources must be local because there is no transportation. It is not at all clear that overweight or gently neurotic intellectuals or overly sensitive architects will in these circumstances prove satisfactory as our first resource; we may well need some physical types of good character, a fair amount of common sense, an equable disposition and a good deal of ability to work long hours without too much fatigue or discouragement. At least we will need them as well as the brainmen.



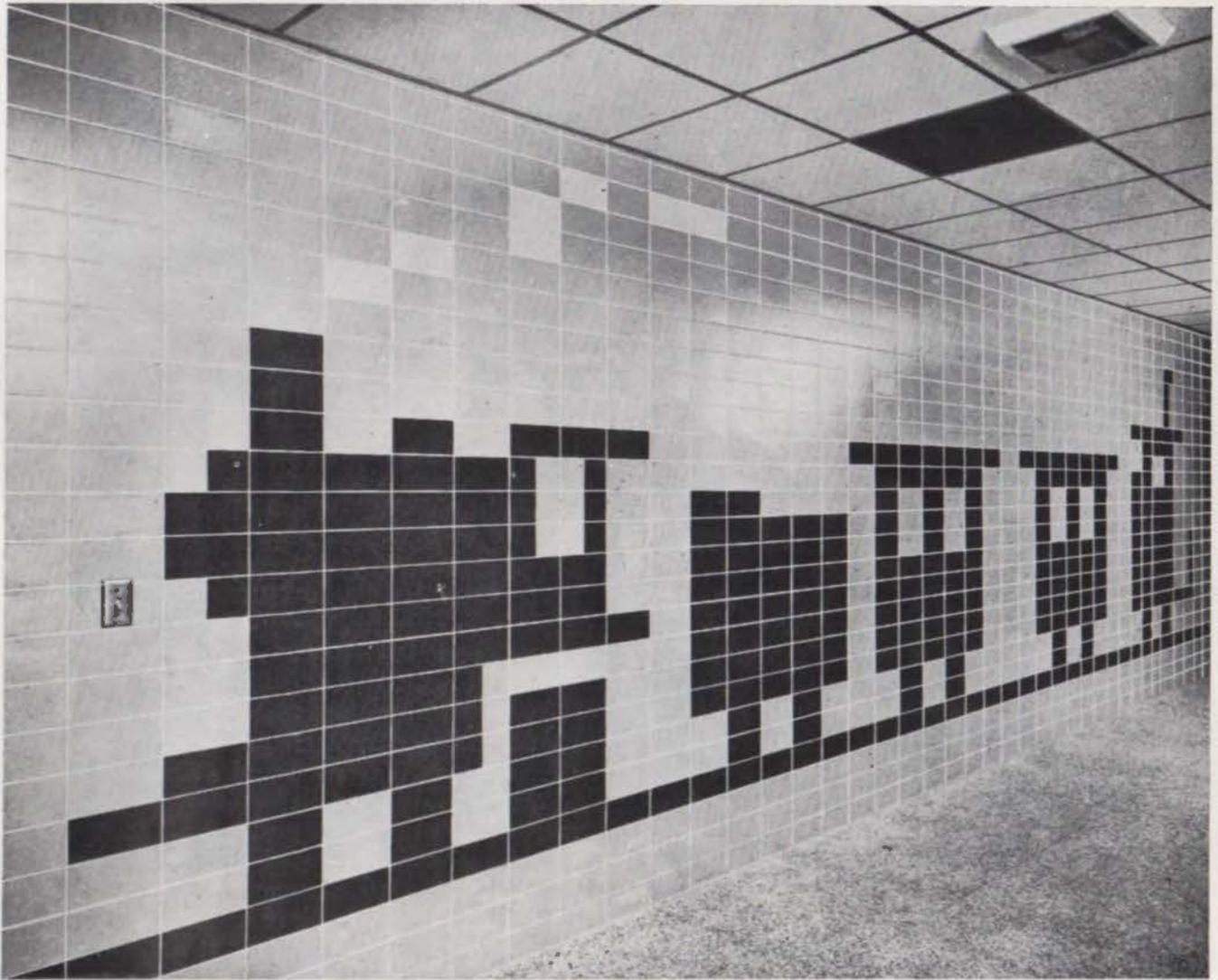
Architects in large numbers were in attendance at the TSA annual convention in Fort Worth last month. Photos on this and the following pages have preserved some of the highlights: business sessions, group conferences, costume parties, luncheons, banquets, dinners rounded out the program.

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