LANDSCAPE ARCHITECTURE: Two Professional Challenges

The Changing Direction of Graduate Education

By JOHN T. LYLE

Graduate education in landscape architecture has undergone a phenomenal growth in the United States since 1960 with a ten-fold increase in the number of students, a growth having profound implications for the future of the profession.

In 1960, eight universities offered the equivalent of a M.L.A. degree to just over 100 students. This year 24 graduate schools in North America have enrolled well over 1000 students. And programs are still expanding.

During the past three years I have been taking a careful look at these programs for the ASLA Council on Education, and it is quite clear that graduate programs are very different in character from undergraduate programs, even when they exist in the same institution.

Over the next decade or two, as these differences are carried out into professional practice, landscape architecture will become a different profession.

Students from a Diversity of Backgrounds

Immediately obvious is the difference in the backgrounds and attitudes of the students. A large majority of the applicants to every graduate program in the country have degrees in fields other than landscape architecture. A few come from completely unrelated backgrounds, while a considerable number have degrees in traditionally related fields like architecture, engineering, horticulture and geography. Growing numbers come from such emerging hybrid disciplines as environmental studies, environmental science and environmental design. Most graduate selection committees consider this diversity of backgrounds healthy and desirable, and for this reason try to achieve a broad cross-section of undergraduate majors in their graduate classes. To accommodate them, the majority of schools now have three-year programs leading to the M.L.A. for students from non-design backgrounds, while a two-year sequence is fairly standard for students with bachelor's degrees in architecture or landscape architecture.

Regardless of background, these students arrive well prepared in terms of general knowledge, commitment, and intellectual discipline and vigor, though not, in most cases, in terms of the basic skills of landscape architecture. From the beginning, they are able to function at a high intellectual level, though most have to begin developing drawing and technical skills at an elementary level.

Areas of Specialization

The schools respond to this challenge by offering various combinations of basic skill courses and specialized areas for intensive study. Whether they emphasize the former or the latter, most programs feature definite directions for specialization. Some concentrate on one specific area of concern, while others offer options.

Areas of specialization are defined in various ways. The University of Illinois, for example, offers a choice between resource planning and the behavioral basis for design, while the University of Massachusetts offers landscape design and landscape planning. The most common areas of specialization are project design, urban design and regional landscape planning. This last, also variously called resource planning, environmental planning and resource analysis, is the single specialized area offered by the largest number of schools.

The relatively few schools that concentrate on one area of concern tend to define their focus in terms of process rather than subject matter. Harvard, for example, addresses its program to "comprehensive problem solving skills," Syracuse to "design process and problem solving," and Cal Poly, Pomona, to "ecosystematic design." Each of these features a specific philosophical and methodological thrust, but covers a broad range of scales and project types.

The Growth of Research

Most of the schools directed their research efforts toward their stated areas of educational speciali-
log. The result is a sense of reality and immediacy shared by faculty and students that seems likely to inspire valuable contributions. But so far, only a few schools, most of them located in populous areas with pressing environmental issues, have achieved that blissful state.

Finally, there is the problem of communication. Few of the schools know what others are doing, and even fewer practicing professionals are aware of the activity in the schools. Landscape architects, in general, have not been trained to use research results in their work or to look to the schools for new ideas or directions. This is a serious problem. If the schools are to realize their great potential, they will have to find the media for making known their information and techniques, and, even more importantly, their expanded vision to the profession at large. Only when this has been achieved can they be put to practical use. For the next few years, then, the greatest challenge for each of the graduate programs will be to develop a strong sense of direction and to open the lines of communication with the practicing profession. The challenge for the profession is to learn to use what these schools and their graduates have to offer.

Research:
The New Necessity

By CLARE GUNN

For many, the term landscape architectural research is a contradiction. Landscape architecture is an art, not a science. Therefore, how can one link an art with the scientific method, the hallmark of research? And, why should he?

Perhaps it is timely, in the wake of the first (1978) ASLA Professional Awards Program with a research category, for the profession to reconsider how it relates to research. Is the concept of a research project clearly understood as quite different from the “research” step in a design project? Are there areas of landscape architecture that suffer from lack of facts? If so, what are they and what research approaches are appropriate? How can such a design benefit from research? Perhaps these questions and other issues raised here can provide the foundation for improved research in landscape architecture.

What is research?

A popular interpretation by the practicing landscape architect is that of “research and analysis” as a step in the design process. In most instances this refers to environmental analysis — searching out the needed characteristics of the land for a specific design program. The emphasis is on the design project, to employ a research tool for solving a specific problem for a client on a specific site. Several methods of land analysis have been proposed and put in practice in recent years.

Another way of speaking of research, and the challenge to landscape architecture described here, is as a process that provides new knowledge that can be shared by everyone. As a process, research follows rules and forms that have been demonstrated as useful in providing reliable answers. Such answers must go beyond the opinion of one individual, for many reasons. He may have experienced only a few variables. He may have been misled by success, believing that certain factors were causal when they may have been only coincidental. His sampling may have been biased and not truly representative. And, because of professional competition or ethics of proprietary work, he may not be able to reveal his findings to others. According to Hoover, in The Elements of Social Scientific Thinking, research knowledge must be both “transmissible and valid.” Although the several disciplines vary in their application of it, the scientific method remains the commonly accepted approach to research.

Simply stated, the scientific method utilizes five basic steps. According to Hoover, these steps are used “to test thoughts against reality in a disciplined manner, with each step in the process made explicit.”

1. **Problem Statement.** The first step is identification of the problem — the posing of the research question. This is the question you wish answered by the research.

2. **Hypotheses.** Statements of hypotheses identify possible relationships — relationships that are to be investigated. For example, the statement that condominium owners are not alike in their preference of landscape features could be an hypothesis. Hypotheses are guidelines and provide the roadmap for the research. They are based upon knowledge of the field and previous research.

3. **Procedure.** The scientific method demands certain rules in the field of inquiry. Because landscape architecture utilizes many disciplines, its research will utilize the method most appropriate to the topic. It is likely that for some research, a combination of methods will be used. For example, a park department may wish to experiment with several design approaches to a similar problem, requiring a combination of the experiment of the engineer and survey research of the social scientist.

4. **Results.** The rules require a direct reporting of results without distortion. Even a negative result may be valuable. For example, if the public responds no differently to two picnic area designs,
park users participate in the landscape as the designers anticipated?

Legislative Constraints
Landscape architecture is now under many legislative stimulants and constraints that demand answers from research. Probably no other legislative act of recent years has stimulated more interest in what a landscape architect does than the National Environmental Policy Act of 1970. The guarantees of “esthetically and culturally pleasing surroundings” and to “preserve important historic, cultural and natural aspects of our national heritage” and to “enhance the quality of renewable resources” are explicit in this act. These demand the very skills, intuition and creativity of the experienced landscape architect. Yet, is the landscape architect’s judgment on the sufficiency of his design enough, or should it be tested by objective research? Today’s clients, owners, developers, users, governments and other publics want to know how well certain designs have worked out. If landscape architects, with good scientific research, do not provide the answers, others will.

Many other acts impinge upon landscape architecture. Before designing in the coastal region a landscape architect must have some knowledge of the Coastal Zone Management Act and how the state is carrying out its role. For certain projects the Wild and Scenic Rivers Act may have much to do with design decisions. For the designer of vacation home complexes, there are many landscape implications within the Interstate Land Sales Full Disclosure Act of 1969 and the subsequent rulings and procedures of the Department of Housing and Urban Development. And, in addition to federal action, several states and local communities have land use regulations that influence the outcome of landscape design. Studies that show how owners and users react to the design impacts of legislative acts could be very helpful to landscape architects.

It seems that in landscape architecture, the professional today is expected to know much more than he can obtain solely from his own profession. He is forced to reach toward a landscape architectural knowledge bank that does not yet exist — primarily because research has not been part of his predilection or sphere of training and job specification. In order to perform his professional (artistic, creative, intuitive) role, the landscape architect of today needs results on a variety of topics essential to his task. And, these are not necessarily specific to each site. Many are of universal value. He needs the outcome of objective studies on landscape materials, land-forming techniques, owner objectives, user functions, user perceptions, environmental durabilities, effectiveness of various maintenance methods, and especially documented measures of the results of his landscape manipulation. Perhaps the profession now needs a journal of landscape architectural research comparable to other scholarly publica-

tions. The introduction of “Technik” in LANDSCAPE ARCHITECTURE (Jan. ’78) is a step in this direction.

Research in LA Education
Who is to do landscape architectural research? Can the traditional site designer be expected to develop the skills and scholarly objectivity required of a researcher? Can his prime purpose — creative design — be diluted into research channels? Probably not immediately but it may be possible in the future if we start now. We may need new tracks of professional training.

The profession may now be at a point where the traditional concept is too limited. Long ago the medical profession recognized the need for a variety of professionals from the skilled surgeon to the research scientist. As in other fields, the education of landscape architects may now need to be directed into several channels, one of which is research. Perhaps every curriculum in landscape architecture should have a course in research methods if for no other reason than to understand the difference between good and bad research.

Educators in landscape architecture may need to include researchers as well as teachers. This shift in policy could help greatly in elevating the esteem of the profession in the eyes of fellow academicians. While the profession relies upon inputs from many supporting disciplines, it is becoming clear that the studies by sociologists, psychologists, horticultural researchers, ecologists, engineers and economists are not always readily adaptable to landscape architecture. Specially trained landscape architects with research skills working with collaborators in these fields may be the ones best able to solve modern landscape problems.

In conclusion, research is an unavoidable, necessary and attainable dimension of landscape architecture. But it demands new commitment, new training and newly directed creativity. Skill and artistry in design are not enough. Only through research can the profession catch up with the rest of the world to fulfill its original and continuing mission of creating new landscapes for mankind. Created landscapes must meet broad social, economic and environmental needs in order to fulfill the structural, physical and cultural functions of a changing world. Hopefully, the research category in future professional awards programs of ASLA can attract an increasing number of studies meeting both the needs of the profession and the exacting criteria of traditional research.

REFERENCES

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