WE LIVE in a time when the professional ranks are more numerous than in previous years. Yet most professions are unequal to the demands from the public for action or advice. Correspondingly the elevation in public status has made the position of being a professional highly sought by many groups, and a goodly portion of time is devoted in annual conferences trying to establish the boundaries and requirements, or to justify being called a profession.

The conference antics which the thrust toward professionalism prompts offer considerable latitude for jest, and usually the group is trying to emulate the queens of the professions, law or medicine. Underlying these surface activities, however, is a serious response to a social demand, a demand for broader competency, better application of knowledge in every area of human affairs and the belief that experimental and theoretical knowledge is superior to lay advice founded upon myth and/or folklore.

It has been suggested that the professional trend is closely associated with the bureaucratic. In a bureaucracy, further differentiation of function encourages the building of specialization and amassing of the esoteric, developing separateness in the organization, but also provides more elaborated specialties with new knowledge on complex problems. Bureaucracy, which, contrary to a widely circulated public opinion, is not necessarily opprobrious, has characterized the larger school systems and become commonplace in public education. Consequently separate specializations within the field have instituted drives to upgrade their areas of inquiry to professional status.

In the December issue of Educational Leadership, Harold Shafer dealt with a dimension of the problem of professionalization in his brief review of the major steps involved in the rise of a recognized profession, that of medicine. It is the contention of this paper that the roots of many of the problems in preparatory programs reside in the major issues involved in professionalization. Since one of the dominant characteristics of a profession is the possession of a general and systematic knowledge not readily available to the public, preparation programs for the aspirants to the profession have received much attention.
The detailing of programs, insofar as selection of courses and their sequence is concerned, has been a major preoccupation in graduate programs of higher education. Seldom has so much faith been invested in so little empirical evidence. In a time when scientific investigation has moved far past the bits and pieces observation stage, the formulation of programs of professional preparation still resides in the realm of the occult. To cushion the lack of knowledge, an occasional euphemistic disguise is employed in pronouncements of programs, "expert opinion," but such pronouncements rarely define what constituent components served as the basis of the opinions.

A Systems Approach

In the past education has progressed in many areas through making applications from related disciplines. I would suggest that in the problem of building improved programs of preparation, we can gain substantially from similar application of theory from theoretical computer designs used in analyzing new problems.

At the present stage of development in preparatory programs for supervisors and curriculum workers, the programs can best be defined as combinations of idiosyncratic projections of staff and compromises generated by the exigencies of academic politics. The wide variation in programs bears out the lack of systematic foundations. Some curriculum and supervisory programs parallel almost exclusively the programs for school administrators; others do not define any specific program; some mandate specific courses, others outline broad experiences, or attempt to predicate programs on desired behavioral outcomes. In short, systematic approaches to investigating and defining suitable programs have been lacking and the landscape of preparatory programs viewed as a whole reflects the resultant chaos.

The lack of agreement on professional role is reflected in preparatory programs as they are mirrored in certification. Certification for supervisors alone ranges from fourteen states which have no certification to four states with four separate certificates. If added to these figures are certifications for curriculum workers the
number of certificates is further multiplied. The chaos is further compounded when the bases for certificate preparation programs are examined in further detail. In some cases the supervisory certificate is an ancillary licensure to the administrative certificate, requiring little or no preparation; in others it is an extension of the classroom teachers certificate.

Most commonly when a special certificate is awarded for supervision or curriculum it represents the taking of some courses, usually limited in numbers, and as an additive to some other program. At this time the preparation does not appear to be either specific to a function or specialized in program. Consequently the licensure of supervisors and curriculum workers, being vague and supplementary to other licenses and goals, frequently results in a serious imbalance of number of preparing institutions, and of number of licenses issued in relation to market demand. As examples underscoring this imbalance, one state has issued over 7,000 licenses and counts only a little over 260 positions; another state has twenty-eight institutions offering preparatory programs for supervisors, when in all likelihood one would produce a sufficient number. Even these normative figures do not disclose what is believed to be the most serious resultant, the quality of preparatory programs.

At this stage of development, programs of preparation present the black box problem which faces a systems researcher in beginning stages of exploration of a system. In systems research terms, a black box is a system wherein we can determine inputs and outputs but are unable to describe effectively or accurately the interactions which transpire among the inputs to produce the outputs.

The inputs, primarily students, faculty, material resources, are global knowns; the outputs, graduate students who assume responsibility in supervisory and curriculum positions, are identifiable. The ineluctable component of the system has been any accurate analysis and measurement of the interaction of the global variables in input, and the resultant changes in the output. The black box problem in programs of preparation may be diagrammed as follows:

\[
\text{Inputs} \quad \begin{cases} 
\text{Students} \\
\text{Faculty} \\
\text{Material resources}
\end{cases} \quad \text{(System)} \quad \begin{cases} 
\text{Supervisors} \\
\text{Curriculum workers}
\end{cases} \quad \text{Outputs}
\]

Typically the building of a program for preparation has proceeded from some assumption of desired outputs. Output descriptions have ranged from strictly normative job analysis of practitioners, to theoretical role formulation, and behavioral descriptions stemming from a philosophical basis. Output description, being a massive exercise, displays inherent weakness as the means (programs of

\[\text{A system has been defined as "complexes of elements in interaction to which certain system laws can be applied." (L. Von Berlanaffy. "Problems of General Systems Theory." }\]

\text{Human Biology 23:307; 1951.)}
preparation) are derived to execute the ends (output). The connections between inputs and outputs are exceedingly tenuous at best and not exposed to any sophisticated analysis which is a first step in evaluation. Methodological myopia has indeed been a major stumbling block in every profession, even the ones held up as exemplars and models. Except for rare examples the quality of product in practically all professions has exhibited the infinite variety of the human species.

Can progress be made in preparation programs through the rise of a systems approach? I believe it can. We have in a vague sense, without benefit of refinement or formalization, instituted partial use of a systems approach, especially with the great preoccupation with input variables. The past experience of other professions would tend to substantiate the worth of such efforts. For example, the medical profession has utilized a heavy emphasis with input variables as the way to improvement. Banking on highly intelligent students, rich material resources and a faculty tested through experience, medical practice has made giant strides forward.

**Attaining Identity**

In suggesting that programs of preparation move into the black box stage, I do not wish to imply that we stay there. Almost every research begun under the gross paradigm of the black box advances in knowledge and discloses internal subsystems which can indirectly yield more explicit data on specific problems. The literature on the study of the professions provides some inklings of subsystems within the total preparation program that may exist within the box.

One potential subsystem that has been studied and reported on is identification with an occupation. The scattered evidence from this, and from other studies, would suggest that the subsystem of graduate student, graduate professor interaction is quite crucial to attainment of professional identity and the professional attributes which accompany professional status. One example of a professional attribute which might be developed through identification, and one which is considered a characteristic of all professions, is the ability to think objectively and inquiringly about matter which, for the layman, may be subject to orthodoxy and sentiment. As an interesting aside on identification, one can speculate about the necessity for field experiences on the part of the graduate professor as well as the student during the program of preparation. This results because the university setting of the graduate program stands in rather sharp contrast to the field of practice of the student, assuming he will enter the public school system.

Further division of the black box into subsystems is a necessity. As suggested here, some of the research in sociology on professions indicates that organized experiences which place students in the position of working under conditions that correspond to the functional environment of the practitioner are crucial to professional development. Of subsequent interest to programs of preparation is the finding that student identification with a profession is influenced by working in a

---

close relationship with a practitioner, and in areas where the close relationship
does not exist identification is slow in developing, if at all.

An attendant problem in present programs of preparation organized around a
course or two in supervision and/or curriculum is that few staff members are in-
volved full time in the concerns of the area. Pursuing a divided responsibility is
not conducive to development of the specialty or identification of the graduate
professor with the area.

Utilizing the fragmentary clues from allied research in the behavioral sciences,
the black box could with further research become amenable to subsystem analysis.
Once this secondary stage is reached studies probing the interaction of the global
components of faculty, student, and physical materials could be designed.
Through evaluation of outcomes, subsystems could be manipulated and tested.

This is only one of the major problems in preparatory programs. Other types
of problems arise from the stresses which develop in a serious push for program
improvement as new areas of knowledge essential to a profession are researched,
organized and taught. The stress between the theoretician or academician and
the practitioner is a very common concern. The former, pulling and tugging, exer-
cising a critical, analytical approach, utilizing and developing new knowledge; and
the latter, consumed with the pressure of ever present duties, resenting the con-
stant urge for improvement and upgrading of practice. Yet from such stress is
progress fashioned. Since these are natural outcomes of the advancement to pro-
fessional status, the academician and practitioner must channel the conflict pro-
ductively, exercising care to avoid the enshrinement of dogma and the punishment
of the unorthodox. Under the present state of knowledge, a variety of patterns of
programs including knowledge from the allied behavioral sciences would seem to
be suggested as helpful. Until the time when the component variables can be more
accurately sorted and symbiotic influences carefully traced, the evaluation and
development of programs will need to rely on assessments of major input variables
and their organization.

Some sample questions for preparatory programs might be: On standard meas-
ures, what is the quality of the students being admitted to the program? Are there
periodic evaluations of student progress and on what basis? Are there follow-up
studies on graduates? What types of opportunities for experience are planned for
the students: courses? field work? Does the staff actively participate in research,
writing and professional organizations? Do physical facilities at the university
and in adjacent public schools exist for the program? How many graduate students
are assigned to a major professor, and what is the work load? These and other
similar questions on input variables will have to serve as a guide until resolution
of the more fundamental questions on professionalization is attained.