

AN ANALYSIS OF THE ROLES AND ATTITUDES OF MEDICAL SCHOOL
PSYCHOLOGISTS WITH RESPECT TO ADMINISTRATIVE AUTONOMY

A Dissertation
Presented to
the Faculty of the Department of Psychology
University of Houston

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

By
Ronald G. Nathan
May, 1978

To Myra, my wife and my colleague.

ACKNOWLEDGMENTS

I would like to thank the many people who helped me with this dissertation. It is most difficult to express my appreciation for the interest, encouragement, and friendship of Bernie Lubin and Jim Millham, my co-chairmen. Both of them gave so freely of their time, energy, and guidance both during this project and during my years as a graduate student. I am grateful also to the members of my committee, Dr. Kopel, Dr. Persely, Dr. Sheer, and Dr. Zuckerman for their continual support of a somewhat unconventional dissertation. The very helpful and generous advice of prominent medical school psychologists, Dr. Wagner, Dr. Witkins, Dr. Daniel , Dr. Cohen, and, in particular, Dr. Matarazzo is also appreciated.

In addition, I wish to thank Sondra Gildenberg who was a most conscientious research assistant and helped at every stage of this survey. Her enthusiasm and interest was matched only by her ability to encourage myself and other undergraduate assistants when things went wrong. I am indebted to two other outstanding research assistants, Joyce Griste and David Sharp, as well as to Peggy Leonard for her careful keypunching. Other members of the team who worked very long and tedious hours coding the responses included Meredith Williams, Scott Friele, Heather Giancardo, Katherine Konklin, Tom Simons, and John Sellers. I also wish to thank Rochelle Boch who generously proofread the manuscript for

grammatical accuracy without remuneration. In addition, Mrs. Evelyn Jones' willingness to type my dissertation even though she has been forced to retire, is, to me, a clear reflection of the excellent service she has performed so cheerfully for countless graduates of the universities in Houston.

Finally, I wish to thank the hundreds of psychologists who work in schools of medicine and took the time to fill out the survey in spite of questions which did not apply to each of them, and in spite of at least one hungry puppy who reportedly ate the first copy we sent to his owner.

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ABSTRACT

The history of psychology in medical education was reviewed emphasizing the period of formal proposals beginning in 1910, and the rapid growth after World War II. The number of psychologists has grown from a few dozen to 2336 in 1976. Several philosophical, economic, and political barriers between medicine and psychology were outlined. The importance of administrative autonomy for psychology's effectiveness and even survival has been pointed out by many and close to 90% of the chief psychologists in 1972 favored some form of an independent department. Several administrative models exist for psychologists in medical schools including 1) a division of psychology with psychiatry, 2) individual appointment, 3) department of psychology, 4) department of behavioral science, and the most recent, 5) single faculty model in which the department of psychology of the university provides training to all the colleges including medicine. The last three models have been assumed to provide greater autonomy and job satisfaction than the two more traditional models.

The purpose of the present investigation was to test the assumption regarding autonomy and to document the development of the single faculty model. A national survey of 41% of the psychologists in schools of medicine was conducted. The questionnaire was fashioned after earlier surveys (Matarazzo & Daniel, 1957; Wagner & Stegeman, 1964). A total of 962 psychologists were randomly selected, surveyed, and

followed-up. The overall response rate was 48%. Fifty-four percent were members in divisions, 30% were individually appointed, 9% were in departments of behavioral science, 6% in departments of psychology, and less than 2% in a single faculty model. Only one chief designated his school as single faculty.

Comparing themselves to psychologists in other settings, those surveyed rated their freedoms as significantly greater, but there were no significant differences between psychologists in different models. While there was a significant relationship between model and academic rank, it suggested that individual power was enhanced within interdisciplinary models rather than autonomous ones. Thus, autonomous administrative structures do not insure greater freedom or power. In addition, the administratively autonomous models demonstrated the greatest variability in actual operational practices and seem, therefore, to be the least organizationally meaningful models.

Unexpectedly, psychologists in departments of psychology choose to do more diagnosis and report underutilizing their therapy skills more than others. Those in divisions do the most supervision. Respondents indicated that their experiences in medical schools has significantly increased their personal satisfaction, career commitment, and vocational interest, but their model of organization was unrelated to the increases. No other variable studied was significantly

related to organizational model. Nevertheless, close to 80% of the psychologists favored a model other than the one which exists at their medical school.

The rarity of the single faculty model was considered in relationship to maxims in organization psychology and was conceptualized as a transitional administrative structure. The concept of "stature" (Bucher, 1970) provided a way of understanding the greater power reported by psychologists in multidisciplinary models of organization. The unexpected differences in functions psychologists choose to perform under different models, particularly the greater diagnostic work of psychologists in departments of psychology, may serve as necessary means of entree and interprofessional linkage for more isolated psychologists. Given the high job satisfaction and the strong tendency to favor a model other than the one they are under, it was concluded that the grass is, in fact, green, and that the concern with administrative models may be a function of the grass appearing greener on the other side.

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CHAPTER I

INTRODUCTION

To deny either (mental and physical life) is to defy nature,
to be content to recognize much less than the entire man...
Jastrow (1929, p. 721)

A psychiatry without psychology is pathology without a
philosophy.

Bleuler (Quoted in Alberti, 1929)

...the structuring of psychology and other behavioral
sciences in the medical school...may or may not involve
establishing a separate department, depending on the local
academic situation; but some kind of structural and func-
tional autonomy is mandatory, especially in terms of our
survival in the future.

Pattishall (Note 1, p. 6)

During the present century, medicine has come to appre-
ciate the need to treat the whole patient in an approach that
has been called "comprehensive medicine" (Greenfield, 1960;
Straus, 1959; Matarazzo & Daniel, 1957). In order to prepare
students for such an approach, medical schools have expanded
the role of psychiatry (Dacey & Wintrob, 1973) and elicited
the aid of various disciplines in the behavioral sciences.
Psychology was one of the first of such disciplines to
respond to this need, and as early as 1910, the American
Psychological Association (APA) recommended the introduction
of psychology into medical school curricula. There was a
long period of more proposals than accomplishments, but World
War II and emerging social, as well as scientific trends
brought many changes.

These post-war changes included the development of behavioral science departments, the growth of psychology as a discipline, and the increasing visibility of psychologists in medical schools. Between 1955 and 1964 APA membership had a substantial increase of 65% (from 13,475 to 22,174), but surveys (Matarazzo & Daniel, 1957; Wagner & Stegeman, 1968) indicated that during the same time, the number of medical psychologists increased 187% (from 346 to 993). Many medical educators now consider psychology, along with other behavioral sciences basic, not only to psychiatry (Greenfield, 1960), but to general medicine as well (Pattishall, Note 1).

The major reasons for the long period of unsuccessful attempts to introduce psychology into medical school curricula can probably be traced to several philosophical, historical, and practical barriers between medicine and psychology.

For example, medicine is very much of an applied profession with a long prestigious tradition, while psychology is more of an academic science without the "respectability of age." In addition, within medical schools, psychiatry and psychology have competing ambitions, particularly for psychotherapy, but also for the more general title of "behavioral scientist." Nevertheless, close to three-quarters of the 1300 or more psychologists identified in a 1964 survey (Wagner & Stegeman, 1968) hold appointments in the departments of psychiatry and neuropsychiatry.

The most recent survey of senior psychologists in medical schools (Witkin, Mensh, & Cates, 1972), indicated that their concerns and recommendations generally focused on departmental autonomy. Close to 90% favored some form of an independent department. Pattishall, who is both a physician and a psychologist, has been one of the strongest proponents of structural autonomy. Recently, he wrote (Note 1):

...the structuring of psychology and the other behavioral sciences in the medical school must be accompanied with a maximum of administrative, budgetary and educational equality with other medical school departments and programs. The eventual impact and relevance of behavioral science teaching will be determined largely by the kind and extent of support provided. This may or may not involve establishing a separate department, depending on the local academic situation; but some kind of structural and functional autonomy is mandatory, especially in terms of our survival in the future.
(p. 6)

During the last ten years (Cheifetz, 1972; Witkin, Mensh, & Cates, 1972), it has been apparent that quite a number of schools have adopted an administrative arrangement giving psychology more autonomy. Some of these include departments of psychology, medical psychology, clinical psychology and behavioral sciences. Research is needed to document these developments and to determine more objectively how psychologists in medical schools fare under the newer, more autonomous arrangements as compared to how psychologists fare under more traditional, less autonomous arrangements. If properly conducted, a survey might fulfill this need. In addition, such research might have implications for other behavioral

sciences in medical schools, and for the more general problem of how organizational structure affect the work of professionals.

CHAPTER II

REVIEW OF THE LITERATURE

The History of Psychology in Medical Schools

"In respect to everything there must be a period of much talk."

Woodrow Wilson in Old Political Masters

The Beginnings

In 1910, after twenty-three hundred years of the apprenticeship approach to medical education, the Flexner report heralded the beginning of the faculty model known today. A year later, the APA recommended that medical schools introduce some aspects of normal psychology into their curricula. Considered by some as a "momentous step in American medical education" (Commonwealth Fund, 1952), the recommendation was the beginning of many more promises and proposals than accomplishments.

In 1912, Watson reported the conclusions of a symposium on the status of psychology in medical education, as well as in medical practice, and outlined the content of a course in psychology for medical students. Stressing the importance of intellectual interchange between psychoanalysts and "normal" psychologists, he proposed a course including experimental methods in sensation, Binet-Simon Tests, Thorndike's work curves, learning skills, association, memory, retention, and reaction time. He recommended that pathology and psychoanalysis proper be left to the clinic. Watson had a further

suggestion that would be surprising if it were made today. He wrote that the nervous system is poorly taught by psychologists and "that in the future it would be well for him [the psychologist] not to have less knowledge of the nervous system, but to try to teach it less and to confine his teachings more to the psychologic material" (Watson, 1912, p. 917)!

This symposium appointed a committee to investigate the status of psychology in medical school. The committee (Franz, 1913) sent inquiries to the 116 schools with "known names and addresses" and reported the results from the 71 replies. Some answers evidenced "a very narrow conception of psychology...this, too, by men, well known in their own special fields, who were apparently laboring under the belief that psychology is the equivalent of 'psychoanalysis' or some other equally restricted part of the whole" (p. 557). About 52 schools had affiliations with academic departments, but less than a third of these reported any form of cooperation with the department of psychology. Some of these had "none except to borrow apparatus" (p. 561). Only two schools reported courses dealing with the relations between psychiatry, neurology, and psychology. This led the committee to conclude that:

At present the teaching of psychiatry appears to be in an earlier stage than surgery was in the two- or three-year course in medicine twenty years ago. How much longer will the medical schools keep psychiatry, neurology and psychology in these dark ages? (p. 561)

One of the committee's questions concerned the advisability

of offering students special instruction in psychology. Seventy-five percent of the schools gave affirmative answers and only 10% gave negative answers. The objections included doubts about the usefulness and validity of the material as well as the availability of time for such instruction in the medical curriculum. Only seven of the schools (10%) actually offered a course in psychology and only one planned to introduce it the next year. One school advised students to take an undergraduate course and another required it for admissions. The committee recommended that courses be given "jointly and cooperatively by the departments of psychology and psychiatry or neurology," but that psychology courses should be "laboratory or experimental as far as possible" (p. 566).

In 1928, Bott reviewed this committee's survey and pointed out that the teaching of psychology during the first quarter of the century was influenced largely by "personal attitude rather than any serious spirit of investigation" (p. 290). The teaching had been inspired by three things: the needs of the general practitioner, the concept that psychological factors are important in physical illness, and the possibility that courses in psychology might provide an additional source of preventive medicine. Bott stressed an experimental approach to pedagogy and coursework that would integrate a wide range of psychological applications. She recommended that an M.D.-Ph.D. teach the introduction to

psychology and that the course include a developmental emphasis. In the same year, Bridges (1928), a Canadian psychologist, wrote similar recommendations. Although he saw psychology in medical school as a basic science and wanted to leave its applications to the psychiatrist, he also stressed the holistic approach. In the next year, Jastrow (1929) offered another holistic viewpoint, but stressed a multidisciplinary approach to treatment in what he called "misery clinics." Rather than educating the physician in psychology his model stressed the use of psychologists, social workers and laymen in a team approach to patient care. Likewise, Goudge (1931) recommended closer professional cooperation between psychologist and physician rather than specialized training in psychology for the physician.

In 1935, the general problem of how to provide holistic patient care resurfaced and was dramatically restated in the literature by Abrahams. He pointed out that the conscientious general practitioner was "at cross-roads, bewildered and undecided when dealing with a certain type of patient--send her stools to be analyzed by a pathologist or her mind to be analyzed by a psychologist" (p. 476). The solutions to the problem, however, continued to be inspired by personal attitude and argument rather than research and evidence.

In 1929, during this stream of propositions, Yale University appointed one of the first psychologists (part-time)

to an American medical school faculty.¹ By 1940, at least three other universities had appointed psychologists to their faculties (Mensh, 1962). It was not until 1949, however, that Page and Passey reported the results of the first survey of medical school psychology since the 1913 investigation by Franz, Southard and Watson. Using a series of follow-ups, Page and Passey contacted 59 of the 70 existing medical schools. In 1949, 24, or over 40% of the 59 schools, offered courses in psychology. Over two-thirds (17) of these schools required that their course(s) be taken by their students. Note that in 1913 (Franz) only seven (or 10%) of the 71 schools surveyed offered psychology courses. Although the two surveys had less than perfect and somewhat different response rates, the figures suggest a four-fold increase in the teaching of psychology in medical schools from 1913 to 1949.

Thirty-nine, or 66% of the schools in the Page and Passey survey (1949) reported that they had psychologists on staff. This is impressive if one considers two other findings in the survey, namely that "many medical schools employ no psychiatrists on a full-time basis" (p. 405), and that 19,

¹Routh and Clarke (1976) reported an earlier full-time appointment of a psychologist to the faculty of North Carolina's medical school in 1919. However, as they pointed out, this resulted because Harry W. Chase, a psychologist, was then the president of the university and the medical school's catalogs of that time always included the president, as well as the regular faculty.

or close to a third of the 59 schools employed only part-time psychiatric personnel. This figure of 66%, however, is difficult to evaluate historically, since there is no comparable data prior to 1949.

A recent survey by Witkin, Mensh and Cates (1972) also used the informant approach and asked senior psychologists to answer a list of suggested topics including the history of psychology within their respective schools. The responses to this topic indicated that the development of psychology in medical schools has been quite idiographic. Witkin et al. (1972) wrote that the pathway of this development depended:

...specifically and discernibly on the local constellation of situational factors, for example: whether or not the medical school was affiliated with a university and, if so, whether the graduate school was geographically close or distant; the attitude of the chairman of psychiatry toward psychology and psychologists; the psychological orientation of chairmen other than of psychiatry, affecting their interest in bringing psychologists into their departments; the values, interests, and leadership qualities of the individual psychologist early present on the scene; the extent and nature of the clinical load; the size and growth potential of the medical school, as well as its location, particularly whether in an urban setting or not.
(p. 435)

It is clear, that the expansion from 1913 to 1949 was greatly accelerated after World War II. One reviewer went so far as to write that "Prior to World War II, psychologists were rarely employed by medical schools" (Anastasi, 1964, p. 523). Under the pressure of the war, psychologists and other social scientists went to work with medical personnel in unprecedented and successful ways. This was the "first

major joint effort between medicine and the social sciences and probably accounts in some measure for similar collaborative efforts after the war" (Dacey & Wintrob, 1973, p. 945).

The Page and Passey survey was followed by an investigation conducted by a subcommittee chaired by Mensh (1953) which was created by a committee of the Education and Training Board of the APA concerned with psychology and professional schools. Psychologists connected with 36 of 79 medical schools were sent a questionnaire and 20 other medical schools were investigated by sending the questionnaire to a psychologist in the vicinity of the school. The questionnaire and additional catalog data indicated that by 1953, 73% of the medical schools had psychologists on staff or faculty. A total of 255 psychologists were identified at these schools. Although both of these surveys suggest significant gains from 1913, psychology continued to lag well behind the advent of other basic sciences into the medical curriculum.

In the early 1950's, papers calling for the inclusion of psychology in medical education continued to appear in the literature, but more practical and more specific recommendations also began to surface. For instance, Cameron (1953) argued forcefully for the integration of a science of human "interbehavior" and social dynamics in medical education, and he called it the neglected, but inescapable "other half" of medicine. He wrote encouraging words, pointing out that 75 years earlier not one major laboratory of medical bacteriology or physiology existed. Likewise conferences, such as

the 1951 Conference on Psychiatric Education, extolled that "the need is to get more of the knowledge of medical psychology into other aspects of medical teaching" (Mensh, 1957, p. 86). These exhortations functioned well as continual reminders of psychology's importance in medical education, but they did not provide the "How's" and "Who's" which other writers began to struggle with. For example, although Thorne (1952) argued the logic of psychology's inclusion in medical school as the basic science to clinical psychiatry, he outlined a curriculum for psychology, and annotated a list of available textbooks. Likewise, an APA symposium (Cohen, Mensh, & Yacorzynski, 1954) centered around four major questions: (1) Would offering a special psychology course for pre-med students in college be advisable? (2) Should pre-clinical coursework in medical school give facts or research methods? (3) Is instruction in how to conduct a psychological examination appropriate for medical students? and (4) How applicable is psychology to graduate specialties such as internal medicine, dermatology, and surgery? The symposium emphasized the need for research to answer not only these questions, but interactive ones, such as, which types of medical students and medical schools are most receptive to which aspects of psychology?

In the same way, when a group of psychologists (Horowitz, Rosenwald, Heine, Rosenthal, Richards, Yacorzynski, & Knopf, 1959) reviewed a 1956 conference, the topics were clearly

"what" and "when" rather than "whether" to teach psychology in medical school. In the article, Horowitz pointed out, "Of all the topics covered, the subject of teaching aroused the greatest interest" (p. 44). Rosenwald's contribution reviewed the results of a survey of general practitioners in North Carolina showing that there was a greater need for clinical courses than basic science courses. Heine concurred with Rosenwald's discussion, but suggested that the psychologist was a healthy doubter whose instruction was most useful only after the basic years during which the security and competency needs of professionally oriented M.D.'s are satisfied by psychiatrists and other physicians. Later in the article, Knopf objected to Heine's formulation indicating that there was no evidence for such debilitating anxiety and security needs but a definite need for medical students to have a critical regard for their knowledge and its limitations. Rosenthal submitted that the pathological orientation of psychiatry must be balanced earlier by the normal orientation of psychology. Finally, Yacorzynski stressed the need for integrated teaching and the need for information concerning new stress-related diseases.

Psychology and Comprehensive Medicine

During the 1950's, "comprehensive medicine" became the watchwords of the medical community. Such medicine was to be concerned with "the total health of the patient, incorporating prevention, rehabilitation, and long-term care as well as

diagnosis and treatment of specific symptoms" (Straus, 1959, p. 663). The concept of a department of behavioral sciences in medical schools emerged as a response to the need for comprehensive medical care. Beginning around 1950, the core behavioral sciences were defined as sociology; cultural anthropology; and both social, as well as experimental, psychology (Straus, 1959). These sciences also drew from economics, geography, history, and political science. The goals of the department of behavioral sciences were outlined by Straus (1959) and included both the study and the teaching of (1) behavior in relation to the natural course of disease, (2) the health needs of society, and (3) the relationships between society and medicine.

In 1956, Stainbrook and Wexler (1956) made the telling analogy that having psychiatry teach psychology was as unreasonable as having internal medicine teach biochemistry. This underlined the importance of role specification and clarity for the behavioral sciences. Calling for the creation of a department of behavioral sciences, which was still a "highly novel conception" to many medical educators, Stainbrook and Wexler (1956) formulated the following choice:

Either we can allow this important innovation to occur haphazardly and without explicit organizational and administrative definition, or we can use some behavioral science knowledge itself in effectively integrating the sciences and the scientists of social man within the medical school. (p. 269)

They further argued that if departments of psychiatry surrendered the tasks of teaching basic behavioral sciences to such

a department of behavioral sciences, psychiatry could collaborate more effectively with other applied departments in clinical application of the basic sciences. They suggested a "whole man" concept wherein the basic sciences would take man from infancy to old age in all the languages of basic science. In addition, they provided data from medical students in their own courses, demonstrating that the students regarded basic behavioral sciences as a "desirable and important part of medical education" (as opposed to pre-med work), and one which "is not being over stressed" (Stainbrook & Wexler, 1956, p. 268).

These views and arguments were repeated by many others within the behavioral science movement (Pellegrino, 1974; Straus, 1959; West, 1959). Reviewing the published literature, one finds less written opposition than one might expect. Furthermore, what opponents did write, was rather general and pejorative. For example: Loeb (1955) proposed that the social sciences, in their immaturity, had few tangible products to apply to medicine; Atchley (1957) feared that the attempts to "inculcate social responsibility" would dilute the curriculum; and Chapman (1956) called the movement "Back-to-Nature" and anti-scientific. Unwritten opposition was also apparent. Psychiatry was reluctant to give up its role as behavioral scientist or to be associated with anything less exacting than the physical sciences and as unscientific as "metastases from the humanities" (West, 1959). These

written and unwritten reactions reflect some of the important barriers between medicine and psychology which will be discussed in the next section.

The cry for comprehensive health care and the response of the behavioral sciences gradually overcame some of the opposition, and catalyzed the very rapid growth of psychology in medical schools. In 1955 (Matarazzo & Daniel, 1957) there were 346 psychologists in American medical schools. By 1959, 583 medical school psychologists could be identified (Buck, 1961). In 1960 when Greenfield made a brief appraisal of the clinical psychologist in medical school, he was able to state that, "...slowly, but surely we are beginning to accept the fact that we belong, that we have a real contribution to make and that we have some idea of the directions we wish to take" (p. 624). At the same time, however, Greenfield reported that the psychologist, as virtually the only Ph.D. in the medical school engaged in clinical work, was still a salesman and a salesman still unsure of the specific values of his product. Greenfield also indicated that the educational debate over what to teach was quite strong and stressed that "The proposition that psychology is the basic science of psychiatry is more a statement of faith than of fact, more a future hope than a present reality" (p. 625). He made it equally clear, on the other hand, that "there are few inter-professional relationships which are more cordial and mutually profitable than those which exist in medical schools" (p. 625).

In 1964, a survey by Wagner and Stegeman (1968) reported that there were 993 psychologists in medical schools. Their numbers had increased 187 percent from 1955 to 1964, and psychologists in American medical schools were finally an established and growing species.

While it was clear psychologists had "arrived," certain important issues remained unclear. Stainbrook and Wexler had called for explicit organizational and administrative definition for behavioral sciences in 1956, but only limited progress had been made by 1959.

Although there were over 150 sociologists and anthropologists in medical schools at this time (Buck, 1961), only the University of Kentucky had a Department of Behavioral Sciences (Straus, 1959) and the administrative linkage of most of these behavioral scientists continued to be within the departments of psychiatry or preventive health. Psychologists also remained in the department of psychiatry. In fact, in 1964 (Wagner, 1968), close to three-quarters of the psychologists in medical schools were in departments of psychiatry and neuropsychiatry. This was an increase of about 5% since 1955. Administrative autonomy was clearly a future hope.

Barriers Between Psychology and Medicine

"The care of the human mind is the most noble branch of medicine."

Aloysius Sieffert, American Playwright

The relationship between academic psychology and medicine can be characterized by a number of historical, philosophical, and practical barriers. Hunt (1974) recently described the history of the relationship in an article concerned, in part, with the development of some of these barriers. Man first treated the mind and the body as one. Pre-literate shamans, sorcerers, and medicine men were both healers and priests paying close attention to the role of suggestion and emotional dynamics in their work. Mesopotamian healers did not distinguish between physical and emotional disorders, and Greco-Roman writers like Hippocrates emphasized the interaction between psyche and soma. In the middle ages medicine was the province of atheoretical monks. Thirteenth century thinkers divorced medicine from theology, but left psychological matters to philosophical theology. This mind-body dichotomy was further differentiated by Thomas Aquinas and Rene Descartes. This conception of man led to the assumption that "the mental sphere is subjective, purposive, holistic and intentional...and...that the physical sphere is objective, mechanical, non-intentional and atomistic" (Hunt, 1974, p. 106). Psychiatry was a product of the seventeen-hundreds and reflected this rational-materialistic view of physical man by emphasizing brain function. When

experimental psychology emerged in the next century, it "also gave up the chance to study Man as an holistic entity" (p. 106) by choosing to study perception and thought. A good deal of the work in our own century of psychology in medicine has centered on abnormal psychology and psychosomatic medicine, leaving some doctors with the misconception that academic psychology is like psychiatry and largely concerned with brain abnormalities. This mind-body dichotomy has become a conceptual barrier inhibiting communication between psychology and medicine.

Another relevant barrier to the working relationship between psychology and medicine is their differing developmental stages as academic subjects. As Hunt (1974) points out, medicine is solidly grounded in the more established physical and biological sciences and is the product of a long as well as respectable scientific tradition. It has a language of its own. Even more importantly, it has some wisdom which, even if translated, is beyond the layman. Psychology, in contrast, is a science in its first century and has "not yet attained the respectability of age" (p. 106). Its ideas are much more comprehensible to the layman and it is hard to imagine a medical publication with a readership like that of Psychology Today. The humanistic movement has even suggested that psychology's "inferiority complex" with respect to science has been so strong that we are unable to explore much of human experience (Maslow, 1957).

The professionalization process differs for the two disciplines. In general, graduate students in psychology come from more diverse undergraduate experiences and are trained to be skeptical, so as to answer questions through research and reflection. Medical students, on the other hand, are asked to absorb facts and techniques, so as to bring them to bear in life and death situations. Likewise, "whilst psychologists rarely discriminate between means and ends, doctors have clearly defined ends--the health of the patient--or the community--and a number of well-defined means for achieving them" (p. 107).

Consider the complex interaction of these differences in the professionalization of the students and the developmental stages of the fields. As is often pointed out (Dacey & Wintrob, 1973; Hunt, 1974; Tait, 1973), the overflowing medical curriculum leaves little time for reassessment, and the pressure for omnipotence in applied settings is quite formidable. These conditions can lead both the doctor and the patient to the belief that a physician is competent in all psychological matters. Popular television shows portraying family doctors or surgeons who have success with "instant psychotherapy" add to this belief. On the other hand, the psychologist teaching in the medical school may defensively teach methodology or theory in order to avoid more relevant, but controversial, applied areas. As a consequence, it would not be unusual for a medical student to shun psychology because of the interaction of these barriers.

Many of these barriers are highlighted in the relationship between clinical psychology and psychiatry. This relationship, in itself, constitutes a barrier to the alliance of psychology and medicine. There are some rather basic philosophical differences between clinical psychology and psychiatry that are expressed in the now fuzzy concepts of "mental illness" and the "medical model." These concepts are reflected in the contrasting training emphases on drugs and psychotherapy, as well as the contrasting approaches to dogma and research.

Historically, the clinical psychologist was purely a psychometrician asked by psychiatry to apply his limited knowledge in the overwhelming post World War II "mental health" crisis. Although physicians have generally revered diagnosticians, and many have chosen to specialize in diagnostic work; psychologists have never found the diagnostician's role entirely fulfilling, nor have they completely understood medicine's strong regard for it. In addition, as clinical psychologists began providing therapeutic as well as assessment services, it became clear that psychiatry was somewhat threatened. Still struggling for respect in medicine because of its failure to find physiological explanations and cures for psychopathology, psychiatry was in a precarious position. Psychologists, especially in medical situations, became cautious regarding the issue of psychotherapy. Reporting a 1956 conference concerning psychology in medical schools, Knott

(1957) wrote, "The aggregate opinion of the Conference, however, certainly expressed no desire to challenge the psychiatrist at therapy" (p. 147).

As the relationship between psychology and psychiatry developed, these and other "hidden issues" became apparent. Ausubel (1956) who was trained in both psychiatry and psychology, and had played both professional roles, outlined some of these issues in 1956. He wrote that beyond the omniscience and degree worship of both professions, the psychiatry establishment was defending the pecking order, their "dollar sign," and a dogmatic approach to theory. On the other hand, Ausubel pointed out that the psychological establishment had become clinicians by fiat, rather than training, and evidenced a strong defensiveness in relationship to psychiatrists. Brody (1956) pointed out that psychiatric residents tend to take the responsibilities of client welfare better and are more involved with their patients, while as researchers they tend to float in and out of a project creating a lot of friction with psychologists. At the same time, psychology interns tend to be more detached from their patients and more iconoclastic. The ability and willingness of psychologists to take what psychiatrists consider "full" patient responsibility is a barrier illuminated in the present struggle for the inclusion of psychology in national health insurance. It is clear that these and other barriers play an important part in determining the status of psychologists in

medical schools, and are often hidden issues in the struggle for power and administrative autonomy.

Recent Status of Psychologists in Medical Schools

"Psychology is at last wearing long pants in the medical school setting."

Greenfield (1960, p. 624)

According to the most recent survey, there are over 1300 psychologists employed in the medical school setting (Witkin, Mensh, & Cates, 1972). Ninety percent of these psychologists hold the doctorate degree. Psychologists are most often located in the department of psychiatry and 70% are clinical psychologists. The activities of the psychologists in the medical schools include research, teaching, service, and administration.

The same survey of psychologists in medical schools (Witkin et al., 1972) introduces the functions of psychologists with the following statistics:

Teaching is an activity performed by psychologists in over 90% of the schools; research and service activities were each mentioned by nearly 85%; and administration, by less than 40%. (p. 435)

The survey further emphasizes teaching by devoting almost twice the space to its description before introducing research as "another major function of medical school psychologists" (p. 436). Three earlier surveys (Buck, 1961; Matarazzo & Daniel, 1957; Wagner, 1968) indicate, however, that psychologists, in fact, spend about two to three times as much time

researching as they do teaching. In 1964 (Wagner, 1968), full time doctorate psychologists were devoting 45% of their time to research and only 16% to teaching; part time doctorates were devoting 38% to research and 20% to teaching; and M.A. psychologists 33% and 9%, respectively. Part of the problem in emphasis stems from the incomparability of the most recent survey's data (Witkin et al., 1972) and those of the three previous surveys (Buck, 1961; Matarazzo & Daniel, 1957; Wagner, 1968).

The recent survey used an informant approach which Mensh had used in his 1953 survey, whereby a senior psychologist at each medical school (or in the vicinity) was asked to write a case study of psychology in their medical school. In 1961, Buck also used an informant approach by sending a set of questionnaires about behavioral scientists in medical schools to the dean of every American medical school and asking the deans to distribute them to the head of each department in their schools. In addition, Buck visited 27 of these schools to obtain case studies about these scientists and how they function in their schools. The two other surveys (Matarazzo & Daniel, 1957; Wagner, 1968) used a direct survey approach and sent the same structured questionnaire to all psychologists identified by an informant. It appears that all medical school psychologists are devoting progressively more time to research. Only the full time Ph.D. is increasing his teaching load and even then, the increase is only 4% compared

to 11% in his research load (Wagner, 1968). The following is an evaluation of various functions performed by medical school psychologists.

Research

According to the 1964 survey (Wagner, 1968), psychologists spend over a third of their time in research. In the same survey, 55 of the respondents devoted 91 to 100 percent of their time to research and their number was growing. The research "covers the full range of psychological interests" (Witkin et al., 1972) from classical basic research in sensation or perception, to applied work in psychosomatic disease or clinical judgment. A brief survey of recent studies in medical psychology by Kahana (1972) demonstrates the sheer diversity and explosion of the research. In the four years prior to the review, over 2,500 articles, a great number authored or co-authored by psychologists, were primarily concerned with the relationships between illnesses and personality. In addition to the varied research interests, the range and extent of contexts, from laboratory to community; as well as of facilities, from behavior labs to neurocommunications labs, is also emphasized (Witkin et al., 1972).

One of the strongest concentrations of research efforts by psychologists has been in the area of medical education. During the first half of the 1900's most of the work in this area was directed toward assessing and describing the personality traits, general aptitudes, and intellectual prerequisites

of medical students. Although these can be considered landmark studies, they were also rather isolated, pragmatic, and nonsystematic (Levine, Barsky, Fox, Freidin, Williams, & Wysong, 1974). The research after the 1950's reflects an awareness of the medical school as a learning environment and concerns itself largely with selection factors, behavior of the student-physician, the socialization process, and the differences in career development of each new "generation" of doctors. The trend after 1970 (Levine et al., 1974) has been toward a consideration of the student beyond medical school (e.g., house officership) and a reconsideration of selection process, socialization, and personal characteristics with regard to actual physician performance as well as to student performance. In addition, researchers have begun to investigate the medical school as a social structure, particularly in relation to other institutions.

Medical schools offer many advantages for research. Several of these were discussed in part of a 1957 conference summarized by Conger (1957). Medical schools provide non-student subject pools, offer interdisciplinary stimulation for hypothesis formation, lend strong financial support, and respect scientific methodology. These advantages, however, are also potential disadvantages for psychologists. Psychologists can be treated as technicians and asked to join a project after it is underway. They may not be given sufficient power or credit in certain large and heavily funded projects.

Finding healthy subjects may also become a problem.

The opportunity for interdisciplinary research is great, but more than half the research projects reported by medical school psychologists in 1964 (Wagner, 1968) were individual efforts or collaborations with another psychologist. As Wagner points out, "Clearly the fact of employment of a psychologist in a medical school is no insurance that interdisciplinary research will be undertaken" (Wagner, 1968, p. 86). Collaborators in decreasing order of frequency included psychiatrists, internists, neurologists, social workers, and pediatricians. Since almost a quarter of all research is conducted with a psychiatrist and psychiatrists often control the flow of funding as well as patients for social science research, there may well be evidence for the view that psychiatry is limiting the type of research psychologists do.

Alternatively, this tendency to collaborate with psychiatrists may be attributed to greater proximity to psychiatry, the department in which seventy-five percent of the psychologists are located. Another potential problem psychologists face as researchers in medical schools is a perceived loss of status when they publish in non-APA journals. Other psychologists in medical settings, however, see this as an advantage in terms of being better able to communicate their ideas and findings to the people who can use them.

Other than in the surveys mentioned above, the literature concerning research by psychologists in medical school

is very sparse and it is difficult to evaluate its trends, its deficiencies, and its strengths. A great deal more is written about the psychologist's role in medical school teaching.

Teaching

As educators in the medical school setting, psychologists join other behavioral scientists in teaching courses which are conspicuous in their sheer diversity of titles and contents (Fletcher, 1974; Horowitz, 1957). Equally diverse and overwhelming are the expectations, expressed by both psychologists and medical educators, of what psychologists should contribute to the training of physicians. These expectations for an historically young role, and the barriers of the medical school system, produce a pedagogical identity crisis. This crisis is reflected in the repeated finding that teaching is the major topic at most of the symposiums and conferences which are held concerning psychologists in medical schools.

Let us consider some of the expectations just referred to. Considering the fact that about 70 percent of medical patients have no demonstrable physical illness, Shakow (1972) suggests that the psychologist can help prepare the doctor to deal with these patients by introducing him to the social-behavioral side of medicine. This might be enough of a goal, but Shakow hopes that psychologists can do more. Psychologists can help train the student in "general professionalization

with those factors that make a humanistic physician of him" (p. 175) and they can foster "the continuing development of the student as a human being" (p. 173). As Mowbray (1969) points out, "The fundamental error is to assume that a knowledge of human behavior is identified with a humanitarian attitude" (p. 46). Although Shakow tempers his expectations with a need to shift the entire educational system, these rather general and critical goals are the type of contributions psychologists are expected to offer. It is further hoped that the courses the psychologists teach are "relevant" (Fletcher, 1974) and applicable to the work the physician will face. At the same time, psychologists must create these courses without ever taking a course in medical psychology, for very few exist. In addition, the necessity of a multidisciplinary, thoroughly integrative approach demands that psychologists join smoothly with other harried behavioral scientists to face the inertia in the medical school system.

There are other important realities. Tait (1973) describes the relationship between behavioral science, students, and clinical departments as "triangular." He points out that "A medical school will produce not what it says it intends, but what it decides in its guts that it wants and demonstrates in its day-to-day behavior" (p. 1008). Tait outlines the major barriers to teaching and learning constructed by each of the three parts of the triangle. The pressured medical students, suffering information overload

often rationalize their rejection of behavioral sciences in the following ways: "It is not relevant," "That's just common sense," "Who are you to tell me that," and "How do I know you are right" (p. 1010). The behavioral scientists often respond by fleeing into their own fields of interest and de-emphasizing their teaching. The hospital clinical departments, on the other hand, defend their knowledge about the "art" of medicine, and resent the critical air which they claim students pick up from the behavioral scientists.

Some of these hostilities and resentments are reflected in training proposals written by psychiatrists in which psychology and psychologists are strikingly absent. Michels (1972) urges "Training for a pluralistic psychiatry," yet never mentions psychology; Brown (1972) educates the "general psychiatrist" without psychology; and Fried, Doherty and Coyne (1973) survey the training needs, satisfactions, and attitudes of 83 psychiatric residents at Menningers, but ask nothing about the training offered by their psychologists. Cleghorn (1974) considers the psychosocial care in a teaching hospital, but his organizational analysis only indicates the actual and potential presence of psychiatrists, general physicians, nurses, and social workers. If one asks why they should include psychology and psychologists, it could be argued that there are benefits in the psychological training model. Some of these benefits have been documented in an article by Burnstein, Adams, and Giffen (1973) which appeared

in the Archives of General Psychiatry. Burnstein, Adams, and Giffen found that psychology residents tended to outperform psychiatry residents in the assessment of suicidal risk. In the training literature reviewed, the only psychiatrist to suggest that psychiatry students need extensive coursework in psychology (a minimum of two years) was Ausubel (1956), but he has a Ph.D. in psychology!

Psychology fares better in models of psychiatry's place in undergraduate medical curricula. Here, a brief review of the area indicates two with (Reiser, 1973; Stokes, 1969) and two without psychology (Becker, Wintrob, Cancro, & Stabenau, 1973; Wittkower & Stauble, 1972).

The courses that psychologists do teach have not been surveyed for several years. In 1955, Matarazzo and Daniel (1957) were able to classify most of the teaching into five categories; (1) courses in psychodiagnostic techniques; (2) formal courses in introductory psychology, abnormal psychology, and personality; (3) orientations to the professional role of the psychologist in a medical setting; (4) demonstrations of the practice of clinical psychology in case conferences and the like; and (5) supervision of internship students. Participants in the 1956 Conference on Psychology in Medical Education (Horowitz, 1957; Knopf, 1957) were ambivalent concerning the balance and temporal sequence of basic and applied psychology for undergraduate medical students, but generally agreed that methodology should follow clinical material in

resident education. Although Wagner's (1968) 1964 follow-up comparison did not indicate any change in course content, the advent of behavior therapy and the creation of behavioral science departments, as well as their curricula, appear to have made some changes. These factors have increased psychologists' roles in psychiatric training and moved psychologists' formal teaching into interdisciplinary courses.

A recent survey by Brady (1973) of the departmental chairmen of 89 medical schools and the directors of 80 randomly chosen psychiatric residency programs, documents the current place of the theory and practice of behavior modification in medical education. Eighty-one of the schools responded. Four percent had a required and 68% an elective course, predominantly devoted to behavior therapy; 32% had a required and 56% an elective course with some material on behavior therapy; and only 14% of the schools offered none of the above courses. Psychiatrists taught 25% of these courses, psychologists 30%, and the remainder were taught by members of both professions. Ninety percent recommended at least some behavioral analysis and behavior treatment course material in the curriculum. When asked what might be limiting the amount taught, 38% indicated "limited faculty with sufficient knowledge." Eighty-nine percent of the 53 psychiatric residency training programs responding offered either didactic or practical experience in behavior therapy, or both. Very similar ratios of psychiatrists and psychologists taught

these courses. Ninety-eight percent of the directors recommended some coursework and 58% indicated faculty limitations as the reason limiting the amount taught. The majority of respondents in both surveys saw behavior therapy as a distinctive approach which "will gradually become part of the mainstream of American psychiatry where it will exert a lasting but moderate influence" (p. 23). Considering these survey reports of present activities, attitudes, and needs, as well as the behavior therapy skills of many psychologists, it would appear that psychologists are presently devoting substantial amounts of their medical school teaching to behavior therapy and that they will continue to do so to an increasing degree.

The types of courses that psychologists are now teaching as part of the behavioral science movement are difficult to document. A recent interdisciplinary committee (Fletcher, 1974) studied the catalogs of 112 medical schools and reported 1,294 behavioral science topic entries (11.6 per school). Over half of these could be categorized as courses dealing with psychosocial determinants of illness or human development. Those entries which could be considered "psychological concepts" ranked fifth. Considering that the departments of psychiatry teach the most behavioral science courses and that psychologists far outnumber sociologists and anthropologists in medical schools, these data may be used as indicators of current content concentrations in courses taught by psychologists. There appears to be very little standardization and a

great deal of experimentation with the content of these courses. This is reflected in the finding (Fletcher, 1974) that very few catalog descriptions had identical wordings. An assessment by Pattishall (1970) of the types of behavioral science courses being taught in medical schools outlined four categories. These included introductions to psychiatry, introductions to individual disciplines in the social sciences, multidisciplinary courses, and behavioral science courses. Pattishall's paper pointed out the actual or potential fragmentation of knowledge in all but the last type of course. Currently, the trend is toward a model stressing the interaction between the biological and the psychosocial factors in medicine (Dacey & Wintrob, 1973). In addition, one of the more recent developments in the role of psychologists as medical educators is that of providing innovations in the audiovisual technology of teaching (Witkin, Mensh, & Cates, 1972).

Psychologists teaching in medical schools educate not only residents, medical students, nurses, occupational therapists, social workers, physical therapists, and other health professionals; but all levels of psychology trainees from undergraduate to postdoctoral students. Five medical schools provide Ph.D. programs in psychology and a sixth offers an M.D.-Ph.D. program (Witkin et al., 1972). As might be expected, with most medical school psychologists spending over a third of their time in research, the Ph.D. programs have a

strong research orientation. Close to one out of every four APA approved internship programs, however, is found in medical schools. In addition, psychologists in medical schools offer supervision of introductory clinical experiences for undergraduates and practice for graduate students (Witkin et al., 1972).

Psychologists in medical schools have developed and evaluated several modes of teaching their students. Coppernell and Davies (1974), of the University of Tennessee Medical Units, had medical students and faculty evaluate teaching methods with a goal-oriented approach. They found that of the nine methods in use, clerkship, departmental rounds, and self-study were most effective; while lectures were considered one of the least effective methods of instruction. These general evaluations are strongly supported by ratings of satisfaction about five specific introductions to psychiatry which were reported a number of years before by two psychologists, W. Fey and E. Fey, and a psychiatrist, Thurrell (1961), at the University of Wisconsin. Before classes began, sessions of listening to psychiatric interviews were most favored followed by lectures, textbook group discussions, individual therapy, and group therapy. Following the classes, the most satisfied groups were in individual therapy, followed by tape-listening, group therapy, text discussion, and lecture. It is interesting to note that "no teaching group learned significantly more content than any other" (p. 125). Other

innovations have also been moving away from the lecture format (e.g., Kass & Richman, 1961). A very recent innovation (Ramsden, 1974) is a class in the behavioral sciences which moves progressively from lecture to live patient demonstrations, to videotaped instruction, to tapes of student interviews, etc. Finally, the development of Balint's (1964) self-awareness groups for psychiatrists on a graduate level are also experientially oriented and tend to be favorably received (Greco, 1972; Selvini, 1973).

Innovators in the teaching of psychology in medical school have long been aware of the need for behavioral objectives and evaluation of projects, but are now becoming increasingly aware of the expectations, barriers and attitudes of the setting in which they choose to innovate. As Gadd (1973) points out, successful curriculum planning must be cooperative, continuous, concrete, and comprehensive.

Clinical and Administrative Work

The clinical activities of psychologists in the medical school setting include assessment, participation in case conferences, and psychotherapy. For the most part, these activities are carried out in psychiatric facilities by clinical psychologists. The movement of both psychiatry and psychology into the community, however, has brought with it the opportunity for psychologists in medical schools to provide community services as well. In addition, a growing clinical specialty is pediatric psychology. A recent survey (Routh,

1970) reported that a majority of U.S. medical schools have at least one psychologist affiliated with the department of pediatrics.

Only 40% of the informants in the Witkin et al. (1972) study indicated that the psychologists in their schools were actively involved in administration. As heads of sections, units, laboratories, divisions, grants, and departments; psychologists are asked to devote time to administration. Psychologists serve on committees, as well, but these are apparently confined largely to admissions and research review.

Advantages and Disadvantages of the Medical School Setting

In carrying out research, teaching, service, and administrative functions in the medical school environment, psychologists enjoy several advantages and face several disadvantages. Most of these were identified by informers in a recent survey of senior psychologists (Witkin et al., 1972). Psychologists report that the wide range of disciplines, populations, treatment modalities, facilities, and opportunities for training are important advantages. An additional benefit is "the opportunity to chart one's own work destiny, in accordance with individual interests and preferred ways of working" (Witkin et al., 1972, p. 437). For researchers, the freedom and time to work with diverse collaborators who respect their experimental background is augmented by research facilities which are quite ample. For teachers, the medical school is a multidisciplinary and surprisingly innovative setting.

The major disadvantages of working in the medical school setting appear to be centered around the issues of autonomy and identity (Witkin et al., 1972). Since most psychologists are located administratively in the department of psychiatry, many psychologists contend that their purposes and those of psychology in medical education are being defined by psychiatry. It is claimed that psychiatry shelters psychology from the rest of the medical school because of the general competition between the two disciplines for the titles of behavioral scientist and psychotherapist in the medical school. As Witkin et al. (1972) describe these complaints, "plainly, psychologists feel that they are treated as second class citizens" (p. 437). Oddly enough, there are also some less frequent, but quite intense complaints of strained relations with neighboring graduate departments of psychology. These simply add to the failure to achieve autonomy.

As suggested by Witkin et al. (1972), the continued increase in the number of psychologists in medical schools and their comparatively low turn-over rate, indicate that (1) the attitudes that exist probably do not seriously interfere with the psychologist's work and (2) that the advantages of the setting appear to outweigh the disadvantages. There is also evidence that some of the newsworthy friction is regional and that there are many medical educators, including psychiatrists (Romano, 1970), who are quite appreciative of the psychologist's contributions.

At the same time, however, this review of the recent status of psychologists in medical schools has raised some major issues which may have powerful effects on the future status of psychologists in medical schools and inevitably on the very goals of such schools. The outcome of these issues are likely to be strongly related to administrative structure.

It does not seem unreasonable, that different administrative models might have different effects on the average percentage of time spent teaching. Furthermore, the freedom to choose the content and methods of teaching multidisciplinary behavioral science courses is of great importance, and it might also be affected by these models.

Another major issue concerns the research which is conducted. Perhaps more autonomous administrative models encourage more interdisciplinary research, and discourage the use of psychologists as consulting "technicians." Likewise, the quality of the services rendered by psychologists depends on the appropriate use of their skills. This may also be related to organizational models. Obviously, administrative power, such as the power to hire, promote, grant tenure, or dismiss, as well as the power to determine policy are, in some ways, a function of the departmental model. Finally, the structural organization of a school may have a strong relationship to the overall advantages and disadvantages it bears for its psychologists. Medical schools need to attract and hold the best psychologists they can to face the challenges of comprehensive health care.

The Present Study

A number of methodologies have been applied directly and indirectly to determine the relevance of administrative autonomy to the functioning of psychologists and other social scientists in medical schools. As noted earlier, the most recent published survey of psychologists in medical schools was conducted by Witkin, Mensh, and Cates (1972) and used an informant approach. They sent twelve relatively open-ended topics to senior psychologists at each of the 93 approved medical schools existing in 1967. In 1969 they synthesized the 84 reports they received. Two of the dozen topics were concerned with administrative arrangements.

The first of these administrative topics revealed that psychology was most often located within the psychiatry department. Earlier answers to the historical topic were used to determine that this arrangement, "was found in 88% of the schools in which psychology was established by 1950 and in only 58% of the schools in which it was established after that date" (p. 435). The other administrative arrangements were quite diverse. A somewhat original arrangement, called the single faculty model, was identified in a number of newly organized medical schools. In this model, a university's medical and graduate schools are in close enough physical proximity that departments within the university provide the training in their respective areas to all the schools of that university.

Excluding the many appointments to individual departments, Witkin et al. identified no less than seventeen labels for the arrangements given to this survey topic. All of these arrangements can be classified into five main models: The single faculty model, department of psychology (or medical or clinical psychology), department of behavioral sciences, division of psychology within psychiatry, and individual appointment without linkage. The first three models are considered often as providing more autonomy than the latter two.

The second topic in the Witkin et al. survey which was concerned with administrative arrangements read:

...From your experience, what advice would you give to an administrator about to set up a new medical school on how psychology should be represented both in the process of organizing the medical school and in its later functioning? (p. 438)

As might be expected in the light of the above discussion concerning the recent status of psychologists in medical schools, the answers generally focused on departmental autonomy. Nearly 90% favored some form of an independent department. It was suggested that this remedy would free psychology from psychiatry and from the hazards of psychiatry defining the roles of psychologists in medical schools, particularly with regard to psychotherapy.

The Witkin et al. (1972) survey revealed the attitudes of 84 informants. However, as in the earlier direct survey studies (Matarazzo & Daniel, 1954; Page & Passey, 1949;

Wagner & Stegeman, 1964), the investigators did not attempt to divide the schools into major administrative arrangements and examine differences in the responses. In addition, although four new schools had recently been organized into a single faculty model (e.g., Grobstein, 1970), the model was "...too new to have been evaluated in practice..." (Witkin et al., 1972, p. 439).

Another approach to the problem of determining the relevance of administrative autonomy to the roles of psychologists in medical schools has taken the form of suggestions made following brief or lengthy accounts of how psychologists fit into particular medical schools. For example, Routh and Clarke (1976) describe the history and current place of psychology at the University of North Carolina School of Medicine. One of the issues they raised concerned organizational structure. They contend that decentralization is more advantageous than centralization, because: (1) training must be multidisciplinary, (2) recruitment as well as orienting new staff must be a balanced function of the group and those recruiting in the specialized areas, (3) grand rounds and informal meetings provide a forum for broad and narrow research findings, respectively, (4) monitoring of professional practice is best done by those on the scene, and (5) negotiations for salaries, etc., are also of wider or narrower concern than the psychological guild. On the other hand, as we have seen, Pattishall (Note 1) finds centralization

"mandatory" for the future survival of psychology and other behavioral sciences in the College of Medicine of Pennsylvania State University and elsewhere.

In summary, administrative structure is a major issue for psychologists in medical schools. Although most senior psychologists favor independent departmentalization (Witkin et al., 1972), there are a number of strong dissenters who believe that greater autonomy will not fulfill the administrative needs of psychologists in medical schools. During the last ten years it appears that a sufficient number of schools have organized or reorganized under more autonomous administrative arrangements (Cheifetz, 1972; Grobstein, 1970; Wakeley & Lanphear, Note 2; Witkin et al., 1972) that opinion and hope can be replaced by empirical investigations of the actual concomitants of such organizational models.

Other social sciences are also concerned with these issues. Badgley and Bloom (1973) recently used a case study methodology to make an empirical investigation of such concomitants for sociologists in medical schools. Studying seven schools, Badgley and Bloom found that those sociologists working under more autonomous administrative linkages in medical schools produce more projects concerning basic social science issues, offer more instruction on social issues in both health and its organization, and obtain more power on committees. The departments evidencing less autonomy had research goals which were more in the psychiatrically

defined areas of human growth and individual disease. These "conditions appear to reduce personal satisfaction, vocational interest, and career commitment" (p. 936). These results support a prior hypothesis that there will be differences between various models of administration and that these differences will favor the more autonomous models. However, the results may be artifacts of the investigators' biases and/or of small and non-random sampling. Furthermore, they do not necessarily reflect the situation in psychology with its unique service functions. Clearly research is needed to support the assumptions psychologists hold concerning administrative models.

To investigate administrative models in medical school psychology, a random sample of medical school psychologists were surveyed. The questionnaire was fashioned after earlier surveys (Matarazzo & Daniel, 1957; Wagner & Stegeman, 1964) so as to provide somewhat unobtrusive data (Webb, Campbell, Schwartz, & Sechrest, 1973) for analyses by administration.

Earlier work in this area (Witkin et al., 1972) identified five basic administrative arrangements of psychologists in medical schools. Three of these arrangements were conceptualized as autonomous and were ranked from the most to the least autonomous, in the following way: Single faculty model, department of psychology, and department of behavioral sciences. The first offers the authority of a well-established university-wide department, the most independence from the

politics of a medical school, and the potential for unity; the second offers the power and the unity of a department; and the third offers the departmental authority for research and teaching, but not as much authority for clinical services. Two other administrative models were conceptualized as non-autonomous or less autonomous. These are the more traditional arrangements, namely, the division of psychology in psychiatry, and individual appointments to psychiatry or other departments. The divisional status offers more unity and power than the individual appointments.

These conceptualizations led directly to several hypotheses about autonomy.

1. Single faculty, department of psychology, and department of behavioral sciences represent more autonomous administrative models where psychologists have more freedom to choose their areas of research, service, and teaching than psychologists under the less autonomous models including the division of psychology in psychiatry and individual appointment.
2. Psychologists under more "autonomous" administrative models have greater extended power and influence as reflected in higher academic rank than psychologists under less "autonomous" models.
3. Psychologists under more "autonomous" administrative models have greater extended power and influence as voting clinicians of more medical school hospitals

than psychologists under less "autonomous" models.

4. Psychologists under more "autonomous" administrative models have greater extended power and influence as voting members of more academic committees than psychologists under less "autonomous" models.

If degree of administrative autonomy affects the medical school psychologist's freedom and power, and if psychologists have preferences for certain professional activities, it followed that psychologists under one type of organizational structure should engage in different activities than psychologists under another organizational structure. It has been shown (Thelen & Ewing, 1973) that both applied and academic clinical psychologists prefer psychotherapeutic to psychodiagnostic work. Thus, it was hypothesized that:

5. Psychologists under more "autonomous" administrative models do not spend the same proportions of time in various activities that psychologists under less "autonomous" models spend. Specifically, the former spend more time doing therapy and less time doing psychodiagnostic work than do the latter.

Hypotheses five through nine were stated in terms of the generally accepted assumptive relationship between performing universally preferred functions under universally preferred administrative arrangements and job satisfaction. Basically, psychologists under more "autonomous" models were expected to have greater job satisfaction. The alternative hypothesis

for each predicted no differences between psychologists under the two types of arrangements and supported the person-situation congruency assumption in which a person (particularly a psychologist) tends to choose and accept personally satisfying work under personally satisfying job conditions. It was hypothesized that:

6. Psychologists under more "autonomous" administrative models feel that they are able to more appropriately utilize their skills than psychologists under less "autonomous" models. Specifically, the latter feel that they underutilize their therapeutic skills.
7. A greater number of psychologists under more "autonomous" administrative models than of psychologists under less "autonomous" models feel that the advantages are accruing faster than the disadvantages of working in a medical school.
8. A greater number of psychologists under more "autonomous" administrative models than of psychologists under less "autonomous" administrative models feel that their work in a medical setting has progressively increased their personal satisfaction, vocational interest, and career commitment.
9. A greater number of psychologists under "autonomous" administrative models than of psychologists under less "autonomous" models feel that the administrative model in use at their school is the ideal one.

CHAPTER III

METHOD

Subjects

A sample of medical school psychologists was taken from each of the 115 schools in the 1975 AAMC Directory of American Medical Education. Lists of these psychologists were obtained from a chief or senior psychologist at each school. Approximately 20% of these psychologists were surveyed in an earlier study (Lubin, Nathan, & Matarazzo, Note 3; Lubin, Nathan, Persely, & Matarazzo, Note 4). About 40% of the remaining psychologists were chosen for inclusion in the present study by rules provided in greater detail in the procedure section. Since the psychologists in both studies were selected randomly and in the same fashion, data from identical survey items were combined in the present study.

Survey and Follow-up Materials

The survey materials consisted of a letter (see Appendix A), a three page questionnaire (see Appendix B) and a stamped return envelope addressed to the author. The follow-up materials included a letter (see Appendix C) and a copy of the questionnaire.

Scales

Administrative Models

The survey provided information which allowed the organizational structure under which the psychologists functioned formally to be classified into one of the five major models: single faculty, department of psychology, division of psychology within psychiatry (or within psychiatry and behavioral science), or individual appointment (question #7a). The survey also allowed the major model under which psychologists functioned informally and the ones they considered ideal to be classified (question #7b, 7c). The strengths with which the respondents favored alternative models were provided on a four point scale from "very strongly" to "a little" (question #8).

Attributes, Activities and Attitudes

Questions on the survey provided demographic information regarding respondents' academic ranks, full-time versus part-time status (question #1), ages (#2), sexes (#3), ethnic backgrounds (#4), departmental appointments (#5), and salaries, as well as potential salaries (optional questions #21 and 22). Other questions provided information regarding the respondents' activities in the medical school: the percentages of time spent in eleven specific activities from psychodiagnosis to conferences (#9), their attending staff voting privileges (#13), their committee involvements (#14), and their publishing behaviors as reflected in the number of articles published

and with whom (#19). Their attitudes towards working in a medical school setting were measured by their rank order of the advantages and disadvantages of such work from one (most) to n (least) (#10 and 11), and by their indications that either the advantages are accruing faster than the disadvantages or that the disadvantages are accruing faster than the advantages (#12). Additional attitudes were measured by their circle of either yes or no to a question about appropriate skill utilization (#15), as well as their checks next to areas where they felt their skills were being underutilized (#16). Furthermore, the survey provided information regarding professional freedom from the respondents' ratings of the independence they felt they had compared to psychologists in other settings with respect to choice of research, service and course content (#17) on a five point scale from much more to much less. Information regarding job satisfaction was provided in the form of individual ratings of personal satisfaction, vocational interest, and career commitment as increased, left unchanged, or decreased.

Of these twenty questions, seven questions (#1, 2, 3, 5, 6, 9, and 19) were derived from earlier direct surveys (Matarazzo & Daniel, 1957; Wagner & Stegeman, 1964); five questions (#7, 8, 10, 11, and 12) were derived from the responses to the recent and less structured informant survey (Witkin et al., 1972); and two questions (#17 and 18) were derived from the Badgley and Bloom (1973) case study of sociologists.

Procedure

The lists of medical school psychologists from each of the 115 medical colleges were obtained using a two part procedure. "Chiefs" or senior psychologists could be identified from the Biographical Directory of the American Psychological Association (1975) for only 29 schools. For this reason, in December 1975 a letter (see Appendix D) requesting the name(s) of the chief psychologist(s) was sent to a psychologist listed in the Biographical Directory of the American Psychological Association (1975) or to the chairperson of the department of psychiatry at each of the remaining 86 schools. By February of 1976, one or more chief or senior psychologists were identified for each of the 113 schools employing psychologists.

A letter (see Appendix E) and a brief questionnaire (see Appendix F) were then sent to each of the chiefs. They were asked to list (see Appendix G) all the psychologists who held formal academic appointments within any department in their medical school. As in the earlier studies (Matarazzo & Daniel, 1957; Wagner & Stegeman, 1964) the instructions stipulated that "this list should not include psychology interns or practicum students as these people are temporary and will be gone in one year. It should include, however, those graduate students and others who are part of your more-or-less permanent staff; i.e., a person who has been working for his degree, but who has been on your staff for two years."

Follow-up letters and telephone calls were made until a list was obtained from each school in January, 1977. The 40% sample was randomly selected in the following way. Two of every five psychologists on each list were chosen. If the number of psychologists on the list was less than five or greater than a multiple of five, the number chosen depended on the number remaining. If three or four remained, two were chosen; if two remained, one was chosen; and if one remained, that psychologist was sent a survey. Twenty percent of the psychologists on the lists were sampled in the earlier survey (Lubin et al., Note 4) and if their names were chosen, they were randomly replaced by an alternate.

Survey materials were coded by school under the staple in the upper left hand corner and mailed to the subjects as the lists of subjects became available. The final survey was mailed January 1, 1977. If there was no response approximately two months after a survey was mailed, a follow-up letter was sent. If a survey was returned "addressee unknown" a substitute subject was randomly chosen and sent the survey materials. The survey was closed five months later on May 1, 1977.

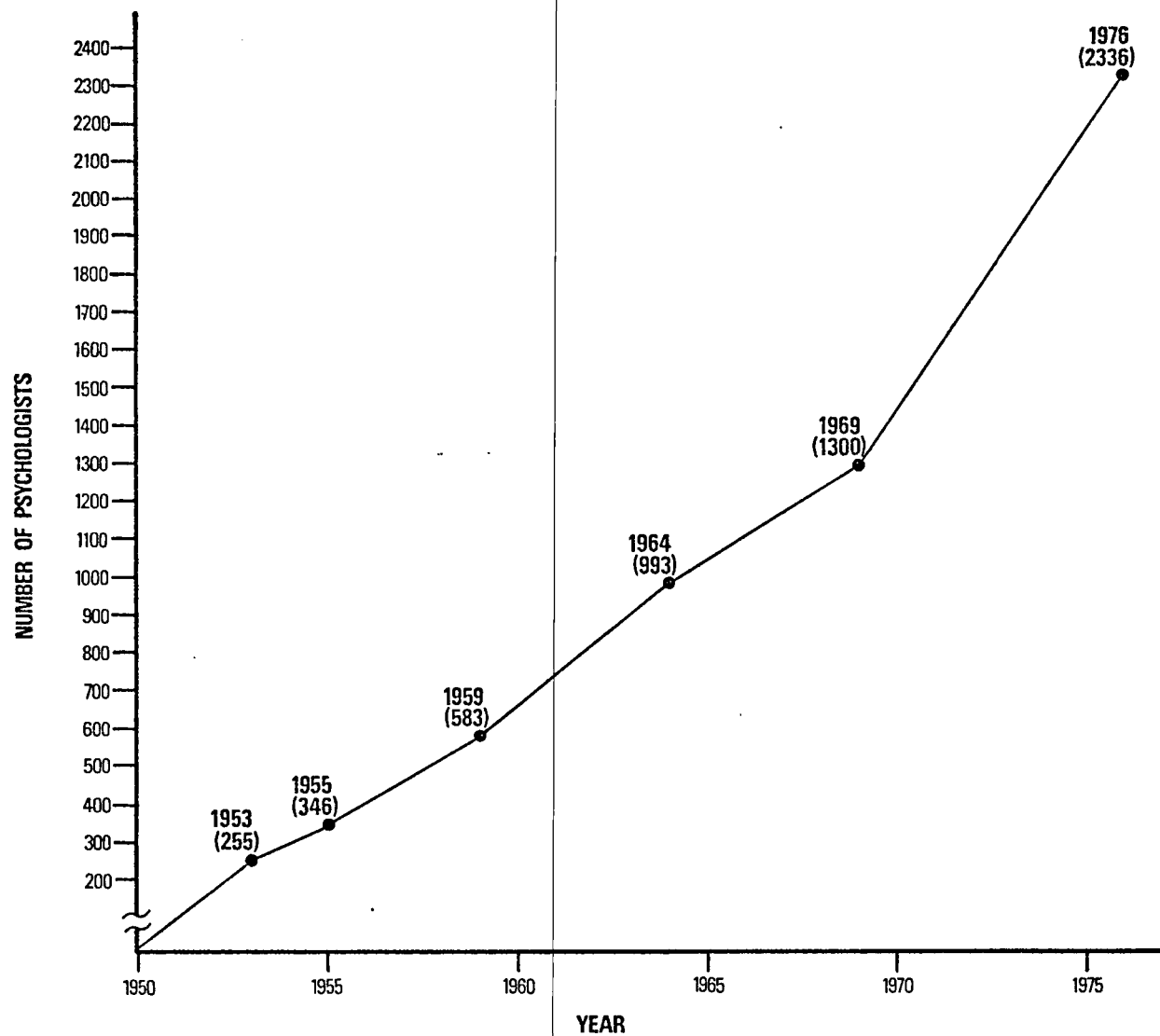


FIGURE 1. THE TOTAL NUMBER OF PSYCHOLOGISTS IN AMERICAN MEDICAL SCHOOLS FROM 1950 TO 1976

CHAPTER IV

RESULTS

Response Rates

The lists provided by the chief psychologists revealed a total of 2336 psychologists employed in medical schools. This total indicates an increase of about 11% per year in the number of psychologists in schools of medicine since 1964. It is compared to the results of earlier surveys (Buck, 1959; Matarazzo & Daniel, 1957; Mensh, 1953; Wagner & Stegeman, 1964) in Figure 1.

A total of 962 psychologists (41%) were selected and surveyed. Five hundred and ninety-six (62%) were sent follow-up letters and 20 (2%) were replaced when the original survey was returned unanswered. Two surveys were returned addressee unknown. Two respondents wrote that they were not psychologists; four that they were retired on sabbatical leave, or no longer at the medical school; 10 that they did not consider the questionnaire relevant to their association with the medical school; and one returned the survey with no explanation or response at all.

Of the 962 surveyed, 366 (38%) were completed and returned without follow-up and 98 (10%) were completed and returned after the follow-up. While the overall response rate of 48% compares favorably with response rates of earlier surveys of 50% (Matarazzo & Daniel, 1957) and 42% (Wagner,

1968), the earlier surveys did not use a follow-up procedure. The return rates for the present survey, the survey conducted on 20% of the same sample (Lubin et al., Note 4), and the combined totals are presented in Table 1. The smaller and shorter survey yielded a somewhat higher initial response rate.

The Number of Schools with each Organizational Model

It was decided that the present survey would be analyzed with individuals rather than schools as the primary units of measurement because, regardless of the formal organizational structure defining psychology as a discipline in a medical school, many and occasionally the majority of individual psychologists might find themselves in an alternative model. This would occur, for example, when psychology was organized as a division within psychiatry, but four or five psychologists might be individually appointed to other departments or teaching hospitals. In addition, there were large numbers of discrepancies between the administrative model indicated by the chief and those indicated by individual psychologists. These differences may be seen as reflecting confusion on the part of individual respondents as to whether they were to indicate how they as psychologists were organized administratively or how psychology as a discipline was organized. In any case, it might be useful to present a breakdown of the organizational structures within which psychology is formally organized within American medical schools. The structural

TABLE 1

Initial and Follow-up Response Rates of the Two 1977 Surveys

	Survey	N	Returned (%)	Followed-up	Returned Follow-up (%)
	20%	489	281 (57%)	241	33 (14%)
	<u>41%</u>	<u>962</u>	<u>464 (48%)</u>	<u>596</u>	<u>98 (16%)</u>
Total	61	1451	745 (51%)	837	131 (16%)

model of each school was determined from the model indicated by the chief or the majority of chiefs at each medical school.

The data revealed that 60 schools (52%) had divisions of psychology within departments of psychiatry (or departments of psychiatry and behavioral sciences). Of the other schools, 40 (35%) had individual appointments, six (5%) had departments of behavioral sciences, and three had departments of psychology. Only the chief from the University of Missouri--Kansas City, a new six-year medical school, described his organizational structure as single faculty. The chief from Vanderbilt indicated that both the single faculty and individual appointment models existed there. The remaining four (4%) of the medical schools include the two schools without psychologists and the two for which no departmental model was given. Three schools had particularly unique structures. At the University of Florida, the Clinical Psychology Department is in the Health Related Professions College and is organizationally independent of both the Medical College and the university's Department of Psychology. Rush Medical College is in transition. Although both what it is now and what it may become can be considered single faculty models in some respects, the fact that Rush University does not offer training in psychology to undergraduates makes it unique. Both University of Florida and Rush University were categorized as having department of psychology administrative models. The two psychologists responding from the Medical College of

Virginia are individually appointed to an Educational Planning and Development Program which serves all six schools in the college.

Sixteen chiefs reported changes in their administrative structure within the last ten years. In terms of the preferences of 90% of the senior psychologists surveyed in 1968 (Witkin et al., 1972), two of the sixteen changed to a preferred structure, one lost a preferred structure and thirteen were unchanged. None of the chiefs indicated that an administrative change was planned in the near future. According to the chief at the Medical College of Ohio at Toledo, a change from individual appointment to one of the other three major models is presently "under discussion."

The Number of Psychologists in the Organizational Models

The survey revealed that 54% of the psychologists were faculty members in divisions of psychology within departments of psychiatry, 30% were individually appointed, 9% were in departments of behavioral sciences, and 6% were in departments of psychology. Less than 2% of the psychologists indicated that their administrative structure was a single faculty model.

It is clear that most psychologists report themselves as working under the two traditional organizational models, namely a division of psychology in psychiatry or an individual appointment. While the number of psychologists in single faculty models are too few to make statistical analysis

feasible or meaningful, the number of psychologists currently under the other four models are large enough to test the hypotheses of the present study on these models.

Individual Power and Freedom Within Organizational Models

Overall, when the respondents were asked to compare themselves to psychologists in other settings they rated the freedom in the medical school as significantly greater. Modified percentile scores tests (Darlington & Nathan, 1975) showed that the respondents rated their freedom to be significantly greater than other psychologists in choosing their areas of research ($\chi^2(149)=14$, $p<.001$), service ($\chi^2(288)=35$, $p<.001$), and teaching ($\chi^2(258)=44$, $p<.001$). There were no significant relationships between models and research ($\chi^2(12)=16.0$, $p>.19$), service ($\chi^2(15)=9.2$, $p>.86$) or teaching ($\chi^2(12)=15.7$, $p>.20$). To determine if the psychologists from the four models differed significantly on the three measures of freedom, a test of the equality of group centroids was performed using the Wilks' lambda statistic. Wilks' λ on the first discriminant function was calculated to be .97 which is equivalent to a nonsignificant $\chi^2(9)=9.2$, $p>.40$.

With regard to proposed indices of power, there appears to be a significant relationship between organizational model and academic rank, $\chi^2(15)=28.6$, $p<.02$. As shown in Table 2, there are higher percentages of professors and associate professors among those psychologists who are working in departments of behavioral sciences or are individually appointed

TABLE 2

Percentage of Academic Ranks by Different Organizational Model

Organizational Model	Professor or Associate	Rank			
		Assistant	Instructor	Research	Other
Department of Psychology	33	40	16	7	4
Department of Behavioral Sciences	42	35	14	0	9
Division of Psychology in Psychiatry	35	50	10	1	4
Individual Appointment	43	36	15	2	3

than those in departments of psychology or divisions of psychology in psychiatry. Thus, to the extent that rank influences power, those powers may be seen as enhanced within interdisciplinary organizational models.

Only 32% of the respondents indicated that they were voting clinicians of their medical hospital and only 45% indicated that they had ever served on a committee in the medical school. Chi-square tests revealed that there were no significant relationships between hospital voting privileges, absence of committee service, or type of committee appointment and the respondent's administrative model. A significant relationship ($\chi^2(15)=31.7, p<.01$) between organizational model and number of committees is shown in Table 3. It is difficult to interpret, but it appears to indicate that those under the multidisciplinary administrations, that is, those under behavioral sciences and individual appointment models have somewhat greater power than those in departments or divisions of psychology. The majority of these indices of power and freedom indicate a general lack of difference between models. In those cases where a difference is supported, namely rank and number of committees, the multidisciplinary models appear to have more power.

Professional Activities and Organizational Model

Using the percentage of time spent in various activities, a discriminant function analysis revealed significant differences between the groups, $\chi^2(36)=59, p<.01$, but the function

TABLE 3
Number of Committees Checked by Those
in Different Organizational Models

Organizational Model	Number of Committees Checked					
	0	1	2	3	4	5
Dept. of Psychology	67	7	15	11	0	0
Dept. of Behavioral Sciences	61	12	7	7	5	7
Div. of Psy. in Psychiatry	58	22	15	3	1	1
Individual Appointment	55	17	10	11	4	3

Note. All figures are percentages.

it produced only predicted 9% better than chance (34% accuracy versus 25%). With respect to the specific activities of therapy and psychodiagnostics, Table 4 indicates that psychologists in departments of psychology provide significantly more diagnostic work than those in other models ($F(3,730)=4.5$, $p<.005$). Another statistically significant difference ($F(3,730)=4.0$, $p<.01$) indicates that those psychologists in divisions of psychology within psychiatry tend to do the most supervision. There appears to be little difference between models with respect to therapy. Those psychologists under the multidisciplinary models do significantly more committee work than those in departments or divisions of psychology ($F(3,730)=5.6$, $p<.005$). Thus, with respect to diagnosis and therapy, psychologists under less traditional models spend about the same amount of time doing therapy and significantly more time doing psychodiagnostic work than those in the more traditional models.

Job Satisfaction and Administrative Model

Over 70% of the respondents in each model feel they are able to utilize their skills appropriately as psychologists in their present medical school position and the respondents from different models did not differ significantly in this regard ($\chi^2(3)=6.0$, $p>.11$). For psychologists ($N=141$) who did not feel able to utilize their skills fully, only underutilized therapy skills were consistently related to the organizational structure within which they functioned. Over

TABLE 4

Mean Percentage Time in Activities by Different Organizational Models

Activity	Organizational Model				F
	Dept. of Psy.	Dept. of B.S.	Div. of Psy. in Psychiatry	Individual Appointment	
Psychodiagnosis	13	4	8	8	4.5**
Supervision	13	11	16	12	4.0**
Formal Teaching	12	13	10	12	2.2
Informal Teaching	9	10	9	9	0.2
Research	24	26	25	25	0.0
Therapy	11	10	12	11	0.5
Administration	7	12	11	10	1.4
Admissions	1	1	1	1	0.6
Committees	4	7	4	6	5.6**
Conferences	3	4	4	4	0.2
Consulting	0	0	1	1	1.1
Others	2	3	1	1	1.7

** $p < .01$

60% of those in departments of psychology or behavioral science felt they underutilized their therapeutic skills while less than 33% of those in the two traditional models expressed this discontent ($\chi^2(3)=8.2$, $p<.05$).

Over 75% of the respondents indicated that the current advantages of working in a medical school are accruing faster than the disadvantages, but, once again, there were no significant differences between organizational models.

Overall, respondents indicated that their experience in medical school has significantly increased their personal satisfaction ($\chi^2(342)=123$, $p<.001$), vocational interest ($\chi^2(270)=165$, $p<.001$), and career commitment ($\chi^2(261)=111$, $p<.001$). There were no significant relationships between models and personal satisfaction ($\chi^2(6)=6.4$, $p>.38$), vocational interest ($\chi^2(6)=8.1$, $p>.23$), and career commitment ($\chi^2(6)=6.6$, $p>.35$). To determine if the psychologists from the four models differed significantly on the three measures of job satisfaction, a test of the equality of group centroids was performed using the Wilks' lambda statistic. Wilks' λ on the first two discriminant functions were .95 and .98 which are equivalent to a $\chi^2(9)=23.3$, $p<.01$ and $\chi^2(9)=10.2$, $p<.04$, respectively. However, these discriminant functions, even when combined, were very weak (correctly classifying only 30% of the cases with 25% being expected by chance alone) and were conceptually uninterpretable.

Close to 80% of the psychologists sampled favor a model

other than the one which exists at their medical school. Most of these (71%) feel either strongly or very strongly about their preference. However, when asked to choose among all the available models, only the majority of psychologists in departments of behavioral sciences preferred the model under which they currently functioned (63%). In all the other models, the majority preferred to be under a different organizational model. That included 59% of psychologists in departments of psychology, 87% of those in divisions of psychology in psychiatry, and 77% of those individually appointed. Thus, respondents under the models providing allegedly more autonomy chose their present model as their ideal model significantly more than those under the traditional models ($\chi^2(3)=83.1, p<.01$).

Table 5 shows the preferences of those psychologists who prefer an organizational model other than the one presently existing at their school. Those who did not favor their present organizational arrangement tended to choose either a department of psychology or a department of behavioral sciences. Those individually appointed favored the department of behavioral sciences while the department of psychology was more frequently the choice of those who were discontent with the departments of behavioral sciences or the divisions of psychology within psychiatry. As shown in Table 6, in which all the respondents are included, about a third of the psychologists preferred a department of psychology, a third

TABLE 5

Percentage of Organizational Preferences by Organizational Model
of Those Who Do Not Prefer Their Existing Structure

Organizational Model	Preferred Organization				
	Single Faculty	Department of Psychology	Dept. of Behavioral Sciences	Division of Psychology in Psychiatry	Individual Appointment
Department of Psychology	30	--	61	0	9
Department of Behavioral Sciences	26	57	--	9	9
Division of Psychology in Psychiatry	13	44	36	--	6
Individual Appointment	8	36	43	13	--

TABLE 6

Percentage of Organizational Preference by Organizational Model
of All Respondents

Organizational Model	Preferred Organization				
	Single Faculty	Department of Psychology	Dept. of Behavioral Sciences	Division of Psychology in Psychiatry	Individual Appointment
Department of Psychology	18	41	36	0	5
Department of Behavioral Sciences	10	21	63	3	3
Division of Psychology in Psychiatry	12	38	32	13	6
Individual Appointment	7	27	33	10	23
Total	10	34	36	10	11

preferred a department of behavioral sciences, and a third evenly split their preferences between the single faculty, divisional, and individual appointment models.

As shown in Table 7, the majority of psychologists in every model except those in the department of psychology function as they are structured. However, over 25% of the psychologists under each of the models feel that they function as if individually appointed. Table 8 shows that a significantly higher percentage of psychologists in the departments of psychology and behavioral sciences than in the traditional organizational models feel they function differently than they are structured ($\chi^2(3)=13.9$, $p<.01$). This strongly indicates that the newer structural models do not insure changes in function.

Organizational Structure and Other Variables

No significant differences were found between organizational models with respect to the percentage of M.A. to Ph.D. ($\chi^2(6)=3.4$, $p>.75$, see Appendix H), full time to part time ($\chi^2(3)=1.5$, $p>.67$, see Appendix I), male to female ($\chi^2(3)=4.0$, $p>.25$, see Appendix J), and Caucasian to non-Caucasian respondents ($\chi^2(3)=5.1$, $p>.95$, see Appendix K). Nor were there significant differences between models with respect to the age ($F(3)=.6$, $p>.90$), years at the school ($F(3)=2.0$, $p>.10$), salary ($\chi^2(27)=23.3$, $p>.66$, see Appendix L), projected salary ($\chi^2(27)=28.2$, $p>.40$, see Appendix M), the number of departmental appointments ($\chi^2(6)=5.4$, $p>.49$, see Appendix N), or

TABLE 7

Percentage Indicating Functioning Model by Organizational Model

Organizational Model	Functioning Model				
	Single Faculty	Department of Psychology	Dept. of Behavioral Sciences	Division of Psychology in Psychiatry	Individual Appointment
Department of Psychology	9	41	14	5	32
Department of Behavioral Sciences	0	0	58	16	26
Division of Psychology in Psychiatry	3	6	3	61	28
Individual Appointment	<u>1</u>	<u>2</u>	<u>2</u>	<u>20</u>	<u>76</u>
Total	2	6	9	42	42

TABLE 8

Percentage Indicating the Congruency of Their Functioning
with Their Organizational Model

Organizational Model	Function and Structure	
	Congruent	Incongruent
Department of Psychology	41	59
Department of Behavioral Sciences	56	44
Division of Psychology in Psychiatry	61	39
Individual Appointment	<u>76</u>	<u>24</u>
Total	64	36

publishing behavior of their members ($F(3,396) < 1.2$, $p > .25$). Likewise, first and second ranked advantages and disadvantages of working in a medical school were quite similar between organizational models ($\chi^2(9 \text{ to } 36) > 14.4$, $p > .10$).

CHAPTER V

DISCUSSION

The present study was designed to analyze the relationships between organizational models and the roles of psychologists in medical schools. An earlier survey (Witkin et al., 1972) identified five major administrative models including the single faculty, department of psychology, department of behavioral sciences, division of psychology within psychiatry, and the individual appointment model. The first three models had been referred to as autonomous and in 1972 90% of the senior psychologists favored one of these forms of an independent department. At the time, the single faculty model was seen as an emerging response to the need for administrative autonomy, but it was too early to properly evaluate its effectiveness. The present study which directly surveyed 41% of the psychologists in medical schools, found that the single faculty model had not developed within American medical schools. In addition, the remaining models differed in unexpected ways. Not only do multidisciplinary organizational structures appear to provide greater individual power than other models, but psychologists in departments of psychology do less therapy and supervision than other psychologists.

The Rarity of the Single Faculty Model

One of the more striking results regarding organizational structures had to do with the single faculty model. Unexpectedly, only the chief from the University of Missouri--Kansas City, a new six-year medical school, described his organizational structure as a single faculty model. The chief from Vanderbilt indicated that both the single faculty and individual appointment models existed at his school. None of the four schools reported to have emerging single faculty models in 1972 (i.e., Michigan State University, Brown University, University of California at San Diego, and University of Florida) designated their model as a single faculty in 1976. Further, the chiefs of these four schools reported they had not changed their administrative structure during the last ten years. Perhaps differences in methodology between the present direct survey and the informant approach of the previous study (Witkin et al., 1972) are responsible for the discrepancy. While the informant approach takes the opinion of one psychologist as representative of the other psychologists at the school, we found that psychologists functioning within the same model often describe its administrative structure differently. This indicates that organizational models are quite flexible and less rigid in the ways they actually function than any label would imply.

Follow-up telephone calls and communications from each of the chief psychologists at the four schools confirmed

their responses to the present survey in revealing ways. At Michigan State (Berkman, Note 5) a single faculty model had been planned as outlined by Wakeley and Lanphear (Note 2), but had to be changed to an individual appointment model in the course of operationalization. At Brown (Barlow, Note 6) it was learned that its first class was the class of 1975 and that the chief, who was the first psychologist at the medical school, was not aware of an earlier attempt at any model other than the individual appointment model. At the University of California at San Diego, where psychologists are also individually appointed, the chief (Storms, Note 7) was unsure, but thought that it might have changed from a single faculty model around 1970. The letter (see Appendix O) from the University of Florida indicated a rather unique model described in the results section.

The findings strongly suggest that the single faculty model in a pure form is a rarity in American medical schools. Thus, while in 1972 it was viewed as an emerging response to perceived lack of autonomy, the current survey revealed that the model has not developed or even truly survived within American medical education.

Wakeley and Lanphear (Note 2) discuss changes demanded by the new criteria for medicine in the 60's and 70's of social and public utility rather than that of academic and intellectual ones. They suggest there are three maxims in organization psychology that might apply to these changes.

The maxims were:

[First]...the structure and processes of an organization must be acceptable to the people within the organization and must also be efficient and effective in delivering the organization's service or product to the consumers.... Second, there is substantial agreement that there needs to be a high level of participation among those people who are a part of the organization and openness to the receivers of the organization's product or service in formulating what the structures and processes of the organization shall be. Third, it is not always easy to achieve change. (p. 2)

These concepts are helpful in offering some possible explanations for the failure of the single faculty model to survive. Although the model is acceptable to the psychologists within the organization, as it was shown in the present survey, it may not be an efficient and effective delivery system. Secondly, a high level of participation or openness among people in the organization of a department of psychology in a college of Arts and Sciences can hardly be expected given the divergent goals of the medical school students/faculty and those of their less applied and more numerous Arts colleagues. The third maxim has been confirmed throughout the history of psychology in medical schools and lends additional perspective to the failure of the single faculty model to take root. It may explain why the psychologists in the newer models have a greater discrepancy between structure and function than those in the traditional models. It should be noted, however, that the single faculty model has been an organization attempted, for the most part, by newly created medical schools and may be a transitional structure to be found in the early stages

of a medical school with a nearby, already established university.

Administrative Versus Individual Autonomy

Autonomy, defined as power and freedom, was operationalized as rank, committee involvement, voting privileges, program development, and freedom to choose areas of teaching, research and service. The departmental models are viewed often as providing more autonomy than the traditional models, but the present survey failed to demonstrate this autonomy on the level of the psychologists' individual functioning. Even when the models were shown to differ significantly as a function of rank or committee involvement, it appeared that multidisciplinary rather than departmental or divisional organization of psychology offers greater individual power. Perhaps the best explanation for this phenomenon comes from the concept of "stature" proposed by Bucher (1970) in a sociological study of a medical school.

Bucher found little heuristic value in the concept of authority when trying to understand power in a medical school. Department heads, for example, must determine the goals of the department and see that they are accomplished, yet they cannot abridge the faculty's autonomy. The lack of a bureaucracy makes even the main sources of power, namely decisions regarding funds, space, and promotions, somewhat limited. The processes of negotiation and persuasion are thus of great importance, both within and between departments. The assessed

stature of a faculty member affects his ability to negotiate and persuade successfully, and his appointment by the Committee on Committees to various committees. Although coalitions such as those that a division or department of psychology might form are important, Bucher (1970) did not find them to be as important as the stature of the people who formed them. Assessed stature is synergistically the sum of many qualities including the member's research, intelligence, social judgment, contributions to the department and reputation outside the department. It may be that a multidisciplinary setting favors the assessment of a psychologist's stature. For example, some of his professional skills may be seen as personal attributes or his expertise in experimental design may be seen as a more distinctive contribution to a multidisciplinary department.

A very favorable aspect of the multidisciplinary models which has been somewhat neglected in earlier writings (e.g., Witkin et al., 1972) is that psychologists may be able to compete with physicians more openly for many more positions of power than they can within a department of psychology or a division of psychology within psychiatry. This might be another reason for the consistently higher academic rank of psychologists in the multidisciplinary models. The neglect of this advantage in the literature may have been a function of who provided the data, e.g., chief or senior psychologists have the most immediate power to gain or lose by the creation

or dissolving of a department or division of psychology.

Administrative Versus Disciplinary Autonomy

While autonomy for individual psychologists may not differ significantly between organizational models, autonomy for psychology as a discipline may. Although the present study was not designed to investigate disciplinary autonomy, a number of the disadvantages the respondents were asked to rank order involved psychology as a discipline. One of the highest ranking disadvantages read, "Psychology's purposes are defined by another profession" (Lubin et al., Note 4), but there were no significant differences between the ranks given by psychologists under different models. An additional means of examining the relationship between administrative model and disciplinary autonomy is some data recently collected by Cohen (Note 8). A number of psychologists in previous surveys have commented on the importance of autonomy for the development of training programs in psychology at a medical school (Witkin et al., 1972). Cohen surveyed the chief psychologists to learn about these training programs. Table 9 shows the close association between the number of schools under each model and the number offering or planning such programs. Clearly, a departmental model of organization is not a necessary or sufficient condition for such programs. Thus, those organizational models which have been viewed as providing more autonomy than traditional models do not, in

TABLE 9

Number of Schools Offering and Planning Training Programs
in Psychology by Different Organizational Models

Organizational Model	Number of Schools	Training Programs	
		Offered ^a	Planning
Department of Psychology	3	1	0
Department of Behavioral Sciences	6	1	1
Division of Psychology in Psychiatry	60	4	8
Individual Appointment	40	2	4

^aUniversity of Florida also offers a Ph.D. in Clinical Psychology, but a unique structure (see text).

fact, appear to increase either individual or disciplinary autonomy.

Functions and Organizational Structures

The present study found no reported differences between models in the freedom the psychologists felt they had to choose their areas of applied or clinical services. Clinical psychologists have been found (Thelen & Ewing, 1973) to prefer to do less diagnosis and more therapy. It was therefore unexpected to find that psychologists in departments of psychology choose to do more diagnosis and reported underutilizing their therapy skills more often than those who are organized in other ways. This may result from local differences and/or preferences in professional function or it might indicate a tendency to ascribe the more traditional role of a psychologist to a person who works in such a department. As diagnostic procedures are central to medical role concepts, perhaps psychologists in departments of psychology encourage diagnostic referrals as a means of entre and interprofessional linkage. In addition, those in divisions of psychology in departments of psychiatry may have more direct access to patients seeking or referred for therapy than those psychologists in departments of psychology who may have to rely entirely on referrals from psychiatrists.

It might be possible to account for the finding that psychologists in divisions of psychology in psychiatry reported the most supervision by a similar form of conjecture. In a

divisional arrangement psychologists are more visible and more accessible to psychiatric colleagues. If this leads to greater cross-discipline trust, psychiatrists might be more inclined to ask psychologists to provide supervision for their residents or therapy for their patients. Unfortunately, the amount of supervision time was not broken down by type of supervisee in this investigation. This finding might also reflect the proximity and/or number of clinical and internship programs near or in the medical schools of the respective models.

The Relationship Between Job Satisfaction and Person-Situation Congruency

One of the purposes of the present study was to determine if some administrative models engendered greater job satisfaction than did others. The results indicated there were no consistent patterns in personal satisfaction, vocational interest, or career commitment that were related to organizational model. It had been speculated that in the absence of such a simple relationship between model and job satisfaction, we might find evidence for person situation congruency. In such a circumstance individuals would be largely self-selecting in their job situations, including organizational structure. Psychologists would essentially be choosing a position which matched their own personal and professional preferences and needs. While it is possible that such a principle may be operating on a very subtle and

perhaps unconscious level, the data indicated a tendency for all psychologists to believe (to hope?) that things would be better under a different administrative model.

Administrative structures are concrete, explicit and formal; the historical and philosophical barriers between psychology and medicine have been multidetermined (issues of power, economics, philosophical orientation, etc.) and somewhat semantic. This might explain, in part, why problems are so easily ascribed to administrative structure.

Organizational Structures and Areas of Expertise

In 1972, Witkin and his colleagues reported that 70% of the psychologists in medical schools were clinicians, 16% were experimental psychologists, and the remainder were from other areas of academic psychology. This variable was not measured in the present study and one cannot assume that any one of the models had a disproportionate number of clinicians. At the same time, this might explain some of the differences that were found. For example, if there are more clinicians in divisions of psychology within departments of psychiatry than in other models, it might account for medical school psychologists in such divisions doing more supervision than those in other organizational models. It is thus recommended that this variable be included in future questionnaires designed to help understand the roles and attitudes of psychologists in this setting.

Summary and Conclusions

The present survey found far fewer relationships between organizational models and the roles of psychologists in medical schools than were predicted from a review of the literature. Furthermore, in the case of the single faculty model, the relative administrative autonomy of the model did not insure the growth of its popularity or use. In addition, a model's administrative autonomy was not a major determinant of its psychologists' roles or attitudes. The survey found that psychologists in schools of medicine rated their individual freedom as significantly greater than the freedom of psychologists in other settings, although there are no significant differences between psychologists in different organizational models. While there is a significant relationship between model and distribution of academic rank, it appears that individual power is enhanced within interdisciplinary models rather than administratively autonomous ones. Even the power of the discipline, as reflected in the ability to develop psychology training programs at a medical school, is not associated with the organizational model. Thus, it appears that autonomous administrative structures do not insure greater freedom or power for individual psychologists or the discipline of psychology in medical schools. The only item on which administratively autonomous models seemed to receive superior ratings to other organizational arrangements was that question on which psychologists within the autonomous models expressed

a stronger preference for their present organizational structure over other alternatives. Even this finding must be qualified, however, since these same psychologists reported that the daily operation of their units differed significantly from their formal organizational structure.

Unexpectedly, psychologists in departments of psychology choose to do more diagnosis and to a greater extent than other psychologists, they reported underutilizing their therapy skills. Psychologists in divisional structures do the most supervision. Respondents indicated that their experiences in medical school have significantly increased their personal satisfaction, career commitment, and vocational interest, but their model of organization was unrelated to these increases. No other variable measured in the questionnaire was significantly related to organizational model.

Nevertheless, close to 80% of the psychologists favored a model other than the one which exists at their medical school.

Since most psychologists feel that the advantages are accruing faster than the disadvantages in medical schools; that they are as free or freer than other psychologists to choose their areas of research, teaching and service; and that their years in medical schools have tended to increase their vocational interest, career commitment, and personal satisfaction, one could say that the grass is in fact green, and that the concern with administrative models may be a function of the grass appearing greener on the other side.

These findings strongly suggest that attempts to relate organizational structure simply and directly to professional activities and satisfactions of psychologists in medical schools are not likely to yield meaningful results. It appears that each organizational model provides only a broad framework within which a rich variety of activities, roles and functions are potentially possible. It appears also that much previous thinking and conjecture has confused administrative autonomy for the discipline, with individual and personal freedom of choice by psychologists working within a particular framework. The current results indicate that a traditionally low status activity of psychologists in clinical settings, namely psychodiagnosis, is far more likely to be engaged in when psychologists must answer directly to other psychologists than to interdisciplinary administrative authorities. Time spent in such high status activities as therapy seem unrelated to the composition of direct administrative authority. The tremendous variety of functions, and roles engaged in by particular psychologists in medical settings, coupled with the very high reports of personal satisfaction, career commitment, and vocational interest, indicate that medical psychology is a highly open system with ample opportunity for personal choice and development. In some schools, the concern expressed over administrative autonomy may be related to interdisciplinary conflicts over status and the outcomes of these conflicts may not translate into actual

and meaningful distinctions in personal autonomy or functions. It is hoped that the present fluidity in individual functioning will not be jeopardized in premature and bureaucratizing jumps toward "administrative autonomy."

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FOOTNOTES

FOOTNOTES

(1) Pattishall, E. G. Arrival and survival of psychology in medicine. In G. C. Stone (Chair), Teaching psychology to health students: What? Where? How? Symposium presented at the meeting of the American Psychological Association, Chicago, 1975.

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APPENDIX A

Cover Letter for Survey of Staff

UNIVERSITY OF HOUSTON
CULLEN BOULEVARD
HOUSTON, TEXAS 77004

DEPARTMENT OF PSYCHOLOGY

June, 1976

Dear Colleague:

This is the second phase of a national survey of psychologists in medical schools. A questionnaire similar to the one enclosed was sent to a chief psychologist at your medical school. Your name was randomly selected from a list provided by this psychologist.

The present survey is designed to reveal current activities and attitudes of psychologists, as well as longitudinal trends in the role of psychologists in medical education. Your cooperation is essential to the success of this survey. Please complete the three page questionnaire enclosed. A return envelope is provided for your convenience. Although we know you are busy at this time, your early completion and return of the questionnaire will be appreciated.

Thanking you in advance, we are,

Sincerely yours,

Bernard Lubin, Ph.D.
University of Houston

George W. Persely, Ph.D.
University of Texas Medical
School at Houston

Joseph D. Mattarazzo, Ph.D.
University of Oregon Medical School

Ronald Nathan, M.A.
University of Houston

APPENDIX B

Survey Questionnaire

Academic Rank: _____ Highest Degree(s): _____
(Include M.D. if applicable)

Name of Medical School: _____

1. Are you employed by your medical school full time _____ or part-time _____? (Put an X in the appropriate blank)

2. Age: _____ years 3. Sex: (Circle one): Male Female

4. Ethnic background: _____

5. Write in the department(s) in which you hold academic appointments:

6. Number of years at present medical school: _____ years

7. Listed below are 5 administrative models for psychology in medical schools. Place a single check (X) in front of the model currently existing at your school, a circle (0) in front of the model which comes closest to the way you actually function in your job, and a double check (XX) in front of the model you favor or would find ideal.

_____ a. Department of psychology (or medical or clinical psychology)
Specify one of the three by underlining.

_____ b. Department of behavioral sciences

_____ c. Single faculty model (i.e., Department of Psychology of the university provides the training in its discipline to all schools of the university including the medical school)

_____ d. Division of psychology within psychiatry

_____ e. Individual appointments to existing departments and/or divisions with no administrative linkage among such psychologists

8. If all your X's in question #7 above are not next to the same model, how strongly do you favor or find ideal the model you indicated with a double check (XX)?

very strongly

strongly

somewhat

a little

Please feel free to expand your answers on the back of the survey, but please indicate that you have done so by putting a check (X) in this blank: _____

9. What percentage of your time as a medical school psychologist is spent in the following activities?

Psychodiagnosis _____	%	Administration _____	%
Supervision _____	%	Admissions _____	%
Teaching (Formal) _____	%	Committees _____	%
Teaching (Informal) _____	%	Conferences _____	%
Research _____	%	Other (please specify) _____	%
Therapy _____	%		
		Total =	100%

10. Rank order from one (most) to n (least) which of the following advantages of working in a medical school are, or potentially are, the most important to you.

Your
Rank:

- _____ a. Opportunity to chart one's own work destiny
- _____ b. Availability of time and/or facilities for research
- _____ c. Innovative and/or multidisciplinary contexts to teach in
- _____ d. Other (please specify) _____
- _____ e. Other (please specify) _____
- _____ f. Other (please specify) _____

11. Rank order from one (most disadvantageous) to n (least) which of the following disadvantages of working in a medical school are currently the most important to you.

- _____ a. Psychology's purposes are defined by another profession.
- _____ b. No opportunity for a full formal vote as a faculty member on important academic and institutional issues through my current administrative department.
- _____ c. Overlap of therapeutic ambitions with psychiatry.
- _____ d. Sheltering of psychology by psychiatry from other areas in the medical school environment.
- _____ e. Restrictions in access to academic committee(s) appointment(s).
- _____ f. Difficult relations with the university's department of psychology (if there is a related university department of psychology).
- _____ g. Psychologists do not have the same status as faculty in the basic and/or clinical sciences.
- _____ h. Other (please specify) _____
- _____ i. Other (please specify) _____

12. Do you think that the advantages to you as a medical school psychologist are accruing faster than the disadvantages (check here _____) or that the disadvantages are accruing faster than the advantages (check here _____)?

13. As you know, more and more psychologists around the country have been acquiring appointments as attending (medical) staff members in one or more general hospitals. In your own medical school

hospital(s), check at the left the item that best describes your own situation at your medical school hospital(s):

- ___ a. I am not a voting member of the hospital's medical (professional) staff.
 ___ b. I am a voting member of the hospital's medical (professional) staff.
 ___ c. I am an Associate Member without voting privilege of the hospital's medical (professional) staff.

14. If you have served on one or more of the following academic committees as a voting member, please use a check to indicate which one(s):

- ___ a. Search committee(s) for new chairperson of other department(s)
 ___ b. Committee(s) for new faculty
 ___ c. Committee(s) on promotion and tenure
 ___ d. Committee(s) for curriculum development
 ___ e. Committee(s) for examinations

15. Do you feel that you are able to appropriately utilize your skills as a psychologist in your present medical school position?

Circle one: Yes No

16. If you feel you are not able to appropriately utilize your skills, in which area(s) are they being under-utilized? Check under-utilized area(s).

___ Psychodiagnosis	___ Research
___ Therapy	___ Administration
___ Teaching	___ Other(s) _____

17. Compared to psychologists in other settings, how would you rate the freedom you have in the medical school setting to:

- | | | | | |
|-------------------------------------------------------|-----------|------|----------|---------------------------|
| a. choose your area of research? | | | | |
| | much more | more | the same | less much less |
| b. choose your areas of applied or clinical services? | | | | |
| | much more | more | the same | less much less |
| c. choose the course content you will teach? | | | | |
| | much more | more | the same | less much less |

18. Would you say that your work in a medical setting has progressively increased, left unchanged, or decreased your:

- | | | | |
|---------------------------|-----------|----------------|-----------|
| a. personal satisfaction? | increased | left unchanged | decreased |
| b. vocational interest? | increased | left unchanged | decreased |
| c. career commitment? | increased | left unchanged | decreased |

19. During your medical school employment, how many articles or projects: (a) have you actually published ____ (b) are in press ____ (c) are now in progress ____ (d) have you consulted

on without authorship ____? Please indicate the number of published articles you have authored alone ____ and with each of the following colleague(s):

- | | |
|--------------------------|---------------------------|
| a. Psychologist(s) _____ | e. Pediatrician(s) _____ |
| b. Psychiatrist(s) _____ | f. Surgeon(s) _____ |
| c. Internist(s) _____ | g. Social Worker(s) _____ |
| d. Neurologist(s) _____ | h. Other(s) _____ |

20. Do you have sufficient space and facilities for your job?
 Yes No

We are most appreciative of your contribution to the success of our survey to this point. The next and last two questions are asked in the same spirit of objective and confidential inquiry. We would like to make their optional nature explicit and also point out the very limited ways in which we will use the results. We plan to make comparisons between males and females, and between groups of schools which vary on a particular variable. No names of schools or persons will be used or released at any time, for any purpose.

-OPTIONAL-

21. Please circle your present salary plus any income derived from medical school arrangements for salary augmentation.
 In thousands of dollars:
- | | | | | |
|------------|------------|------------|------------|------------|
| a. 0-11.9 | b. 12-13.9 | c. 14-15.9 | d. 16-17.9 | e. 18-19.9 |
| f. 20-24.9 | g. 25-29.9 | h. 30-39.9 | i. 40-49.9 | j. 50+ |
22. Please circle your potential (maximum) four years from now.
 In thousands of dollars:
- | | | | | |
|------------|------------|------------|------------|------------|
| a. 0-11.9 | b. 12-13.9 | c. 14-15.9 | d. 16-17.9 | e. 18-19.9 |
| f. 20-24.9 | g. 25-29.9 | h. 30-39.9 | i. 40-49.9 | j. 50+ |

Thank you for your assistance. If you would like to receive a summary report of this survey, please put your name and address in the space provided below:

Name: _____

Address: _____

Please return this survey in the enclosed envelope to:

Ronald Nathan
 Department of Psychology
 University of Houston
 Houston, Texas 77004

APPENDIX C

Follow-up Letter for Staff Survey



University of Houston

HOUSTON, TEXAS 77004

Department of Psychology

September, 1976

Dear Colleague:

Earlier this summer, a brief questionnaire was sent to you as an important part of a national survey of psychologists in schools of medicine.

More than 60% of the sample have returned the questionnaire and we are following up those who have not yet responded so as to get as close to a 100% response rate as possible.

Please complete the questionnaire today and return it in the envelope provided.

With many thanks for your assistance.

Cordially yours,

Bernard Lubin, Ph.D.
University of Houston

Ronald Nathan, M.A.
University of Houston

BL:bb

APPENDIX D

Letter Requesting the Name of the
Chief or Senior Psychologist



University of Houston

HOUSTON, TEXAS 77004

Department of Psychology

December 10, 1975

Dear Colleague:

We are conducting a two part survey of psychologists in medical schools and wish to send the first part of the survey to the "Chief of Psychology" or the senior psychologist at each medical school.

As we have been unable to identify this person at your school from the AAMC Directory, we are asking for your assistance. Please fill in the name of the official or unofficial "chief psychologist" at your school, as well as his or her title and department in the spaces provided below and return this letter in the enclosed envelope as soon as possible.

Thank you.

Sincerely yours,

Bernard Lubin, Ph.D.
Professor

BL:gjm

The name of the "chief" or senior psychologist:

His or her title and department:

APPENDIX E

Cover Letter to Chief or Senior Psychologist

UNIVERSITY OF HOUSTON

CULLEN BOULEVARD
HOUSTON, TEXAS 77004

DEPARTMENT OF PSYCHOLOGY

We are conducting a survey of psychologists in medical schools. The survey is patterned after earlier surveys by Matarazzo and Daniel in 1954, and Wagner and Stegeman in 1964, so as to reveal the present activities and attitudes of psychologists, as well as longitudinal trends in the role of the psychologist in medical education.

Your assistance with the following two items will be very much appreciated: (1) completion of the two-page questionnaire, and (2) completion of the list of psychologists at your medical school.

As soon as we receive your list, we will mail the survey to a random sample of the psychologists at your medical school. Attached to the list, you will find a copy of the survey which we would like you to fill out. A return envelope is provided for your convenience. Although we know you are busy at this time, your early completion and return of these three pages will be appreciated.

Thanking you in advance, we are,

Sincerely yours,

P.S. If there is more than one person at your institution who could be designated as "Chief Psychologist," please send their name(s).

Bernard Lubin, Ph.D.
Professor

Joseph D. Matarazzo, Ph.D.
Chairman, Department of
Psychology, University
of Oregon Medical School

Ronald Nathan, M.A.

BL:bb
Enclosures-3

APPENDIX F

Questionnaire Sent to Senior or Chief Psychologists

Name: _____ Highest Degree: _____

Academic Rank: _____

Name of Medical School: _____

1. Are you employed by your medical school full time _____
or part-time? _____ (put an X in the appropriate blank)
2. Age: _____ years
3. Sex: _____ Male _____ Female
4. Write in the department(s) in which you hold academic appointments:

5. Number of years at present medical school: _____ years

6. Listed below are 5 administrative models for psychology in medical schools. Place a single check (X) in front of the model currently existing at your school, and a double check (XX) in front of the model you favor or would find ideal.

- _____ a. Department of psychology (or medical or clinical psychology)
Specify one of the three by underlining.
- _____ b. Department of behavioral sciences
- _____ c. Single faculty model (i.e., Department of Psychology of the
university provides the training in its discipline to all
schools of the university including the medical school)
- _____ d. Division of psychology within psychiatry
- _____ e. Individual appointments to existing departments and/or
divisions with no administrative linkage among such psy-
chologists

7. If your departmental administrative structure has changed during the last ten years (e.g., from Division within Psychiatry to independent Department of Behavioral Science, or the reverse, etc.), please fill in.

Changed: From _____ To _____
Year of Change _____

Planning: From _____ To _____
Year of Change _____

8. What percentage of your time as a medical school psychologist is spent in the following activities?

Psychodiagnosis _____ %	Administration _____ %
Supervision _____ %	Admissions _____ %
Teaching Formal _____ %	Committees _____ %
Teaching Informal _____ %	Conferences _____ %
Research _____ %	Other (please specify) _____ %
Therapy _____ %	_____ %

Total = 100%

- ur
nk
9. Rank order from one (most) to n (least) which of the following advantages of working in a medical school are, or potentially are, the most important to you?
- Opportunity to chart one's own work destiny
 - Availability of time and/or facilities for research
 - Innovative and/or multidisciplinary contexts to teach in
 - Other (please specify) _____
 - Other (please specify) _____
 - Other (please specify) _____
- ur
nk
10. Rank order from one (most disadvantageous) to n (least) which of the following disadvantages of working in a medical school are currently the most important to you?
- Psychology's purposes are defined by another profession.
 - No opportunity for a full formal vote as a faculty member on important academic and institutional issues through my current administrative department.
 - Overlap of therapeutic ambitions with psychiatry.
 - Sheltering of psychology by psychiatry from other areas in the medical school environment.
 - Restrictions in access to academic committee(s) appointment(s).
 - Difficult relations with the university's department of psychology (if there is a related university department of psychology).
 - Psychologists do not have the same status as faculty in the basic and/or clinical sciences.
 - Other (please specify) _____
 - Other (please specify) _____
11. Do you think that the advantages to you as a medical school psychologist are accruing faster than the disadvantages (check here _____) or that the disadvantages are accruing faster than the advantages (check here _____)?
12. As you know, more and more psychologists around the country have been acquiring appointments as attending (medical) staff members in one or more general hospitals. In your own medical school hospital(s), check at the left the item that best describes your own situation at your medical school hospital(s):
- I am not a voting member of the hospital's medical (professional) staff.
 - I am a voting member of the hospital's medical (professional) staff.
 - I am an Associate Member without voting privilege of the hospital's medical (professional) staff.

Thank you for your assistance. A copy of the summary report will be sent to you.

APPENDIX G

List Sent to Chief or Senior Psychologist

Please give us the name and academic rank of all the psychologists, full or part-time, who hold formal academic positions within any department in your medical school. This list should not include psychology interns or practicum students as these people are temporary and will be gone in one year. It should include, however, those graduate students and others who are part of your more-or-less permanent staff; i.e., a person who has been working for his degree, but who has been on your staff for two years. Please circle FT (full time) or PT (part-time) and M (male) or F (female).

Sex (Circle one)		Full or Part-time (Circle one)		Name	Highest Degree	Academic Rank
M F	FT PT	1.				
M F	FT PT	2.				
M F	FT PT	3.				
M F	FT PT	4.				
M F	FT PT	5.				
M F	FT PT	6.				
M F	FT PT	7.				
M F	FT PT	8.				
M F	FT PT	9.				
M F	FT PT	10.				
M F	FT PT	11.				
M F	FT PT	12.				
M F	FT PT	13.				
M F	FT PT	14.				
M F	FT PT	15.				
M F	FT PT	16.				
M F	FT PT	17.				
M F	FT PT	18.				
M F	FT PT	19.				
M F	FT PT	20.				

(Please use other side if necessary)

					<u>Name</u>	<u>Highest Degree</u>	<u>Academic Rank</u>
M	F	FT	PT	21.			
M	F	FT	PT	22.			
M	F	FT	PT	23.			
M	F	FT	PT	24.			
M	F	FT	PT	25.			
M	F	FT	PT	26.			
M	F	FT	PT	27.			
M	F	FT	PT	28.			
M	F	FT	PT	29.			
M	F	FT	PT	30.			
M	F	FT	PT	31.			
M	F	FT	PT	32.			
M	F	FT	PT	33.			
M	F	FT	PT	34.			
M	F	FT	PT	35.			
M	F	FT	PT	36.			
M	F	FT	PT	37.			
M	F	FT	PT	38.			
M	F	FT	PT	39.			
M	F	FT	PT	40.			

Please return in the enclosed envelope to:

Bernard Lubin
 Department of Psychology
 University of Houston
 Houston, Texas 77004

APPENDIX H

A Table of the Percentage of Degree Holders by Different Organizational Models

Percentage of Degree Holders by Different
Organizational Models

Organizational Model	Degree	
	Ph.D. or Ed.D.	M.A. or M.S.
Department of Psychology	92	8
Department of Behavioral Sciences	91	9
Division of Psychology in Psychiatry	95	5
Individual Appointment	93	7
Total	94	6

APPENDIX I

A Table of the Percentage of Full and Part-Time
by Different Organizational Models

Percentage of Full and Part-Time by
Different Organizational Models

Organizational Model	Employment Status	
	Full-Time	Part-Time
Department of Psychology	75	25
Department of Behavioral Sciences	74	26
Division of Psychology in Psychiatry	75	25
Individual Appointment	79	21
Total	76	24

APPENDIX J

A Table of the Percentage of Males and Females by Different Organizational Models

Percentage of Males and Females by Different
Organizational Models

Organizational Model	Sex	
	Male	Female
Department of Psychology	64	36
Department of Behavioral Sciences	77	23
Division of Psychology in Psychiatry	77	23
Individual Appointment	77	23
Total	76	24

APPENDIX K

A Table of Ethnic Backgrounds by Different Organizational Models

Percentage of Ethnic Backgrounds by
Different Organizational Models

Organizational Model	Ethnic			
	Caucasian	Black	Spanish	Other
Department of Psychology	95	3	3	0
Department of Behavioral Sciences	96	2	2	0
Division of Psychology in Psychiatry	95	3	1	1
Individual Appointment	94	3	1	1
Total	95	3	1	1

APPENDIX L

A Table of the Percentage of Salary Ranges
by Different Organizational Models

Percentage of Salary Ranges by Different Organizational Models

Organizational Model	Salary Range									
	0-11.9	12-13.9	14-15.9	16-17.9	18-19.9	20-24.9	25-29.9	30-39.9	40-49.9	50+
Department of Psychology	14	0	14	9	14	9	23	18	0	0
Department of Behavioral Sciences	12	5	5	9	9	21	12	23	5	0
Division of Psychology in Psychiatry	8	2	6	8	12	28	17	14	5	1
Individual Appointment	<u>8</u>	<u>2</u>	<u>2</u>	<u>11</u>	<u>13</u>	<u>25</u>	<u>17</u>	<u>17</u>	<u>3</u>	<u>3</u>
Total	9	2	5	9	12	26	17	16	4	1

Note. Salary ranges are in thousands.

APPENDIX M

A Table of the Percentage of Projected Salary Ranges by Different Organizational Models

Percentage of Projected Salary Ranges by Different Organizational Models

Organizational Model	Projected Salary Range									
	0-11.9	12-13.9	14-15.9	16-17.9	18-19.9	20-24.9	25-29.9	30-39.9	40-49.9	50+
Department of Psychology	5	5	0	0	10	19	5	43	14	0
Department of Behavioral Sciences	8	0	0	5	5	15	13	35	10	10
Division of Psychology in Psychiatry	3	1	2	2	4	19	27	28	11	3
Individual Appointment	2	0	2	2	1	21	26	27	13	6
Total	4	1	2	2	4	19	24	30	12	5

Note. Projected salary ranges are in thousands.

APPENDIX N

A Table of the Percentage of Departmental Appointments by Different Organizational Models

Percentage of Departmental Appointments by
Different Organizational Models

Organizational Model	Number of Departments		
	1	2	3
Department of Psychology	77	23	0
Department of Behavioral Sciences	70	30	0
Division of Psychology in Psychiatry	79	19	2
Individual Appointment	78	21	1
Total	78	21	1

APPENDIX O

A Letter from Louis Cohen Describing the Organizational
Structure at the University of Florida

UNIVERSITY OF FLORIDA
COLLEGE OF HEALTH RELATED PROFESSIONS
GAINESVILLE, 32610

DEPARTMENT OF CLINICAL PSYCHOLOGY

14 April 1976

PHONE 904/392-4551

Bernard Lubin, Ph.D.
Department of Psychology
University of Houston
Houston, Texas 77004

Dear Bernie:

I need to identify further:

We have a Health Center: J. Hillis Miller Health Center

It has a number of Colleges:

Medical College
Dental College
Pharmacy College
Nursing College
Health Related Professions College (HRP College)
Veterinary College

Shands Hospital
VA Hospital

The Department of Clinical Psychology is in the HRP College and provides all clinical psychology teaching and service to the Health Center.

In the Department of Clinical Psychology there are persons numbered 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 as full time staff and (except for Molly Harrower - Emeritus) 14, 15, 16, 18, 21, 23 as adjunct staff in the Department of Clinical Psychology.

In the Department of Psychiatry #17, 40 - and in the College of Dentistry #19, 25, 35.

From College of Pharmacy #34.

From Department of Psychology, College of Arts & Sciences #20, 22, 24, 36.

From Department of Neuroscience, College of Medicine #26, 28, 33.

From Rehabilitation Counseling - College of HRP #29, 30, 31, 32.

From Department of Ophthalmology #37, 38, 39.

(Many of the above have joint appointments in
Clinical Psychology)

Louis D. Cohen, Ph.D.
Chairman and Professor