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First and fourth year medical students' responses to ethical dilemmas in medicine

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FIRST AND FOURTH YEAR MEDICAL STUDENTS'
RESPONSES TO ETHICAL DILEMMAS IN MEDICINE



RICHARD J. LOEWENSTEIN

1975

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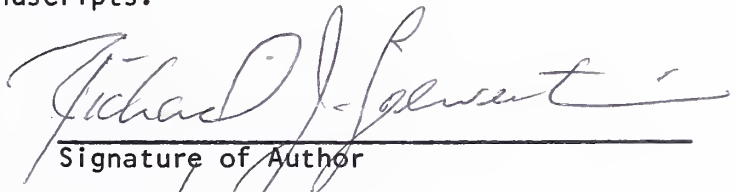
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YALE UNIVERSITY SCHOOL OF MEDICINE

FIRST AND FOURTH YEAR MEDICAL STUDENTS' RESPONSES
TO ETHICAL DILEMMAS IN MEDICINE

A THESIS SUBMITTED
IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF MEDICINE

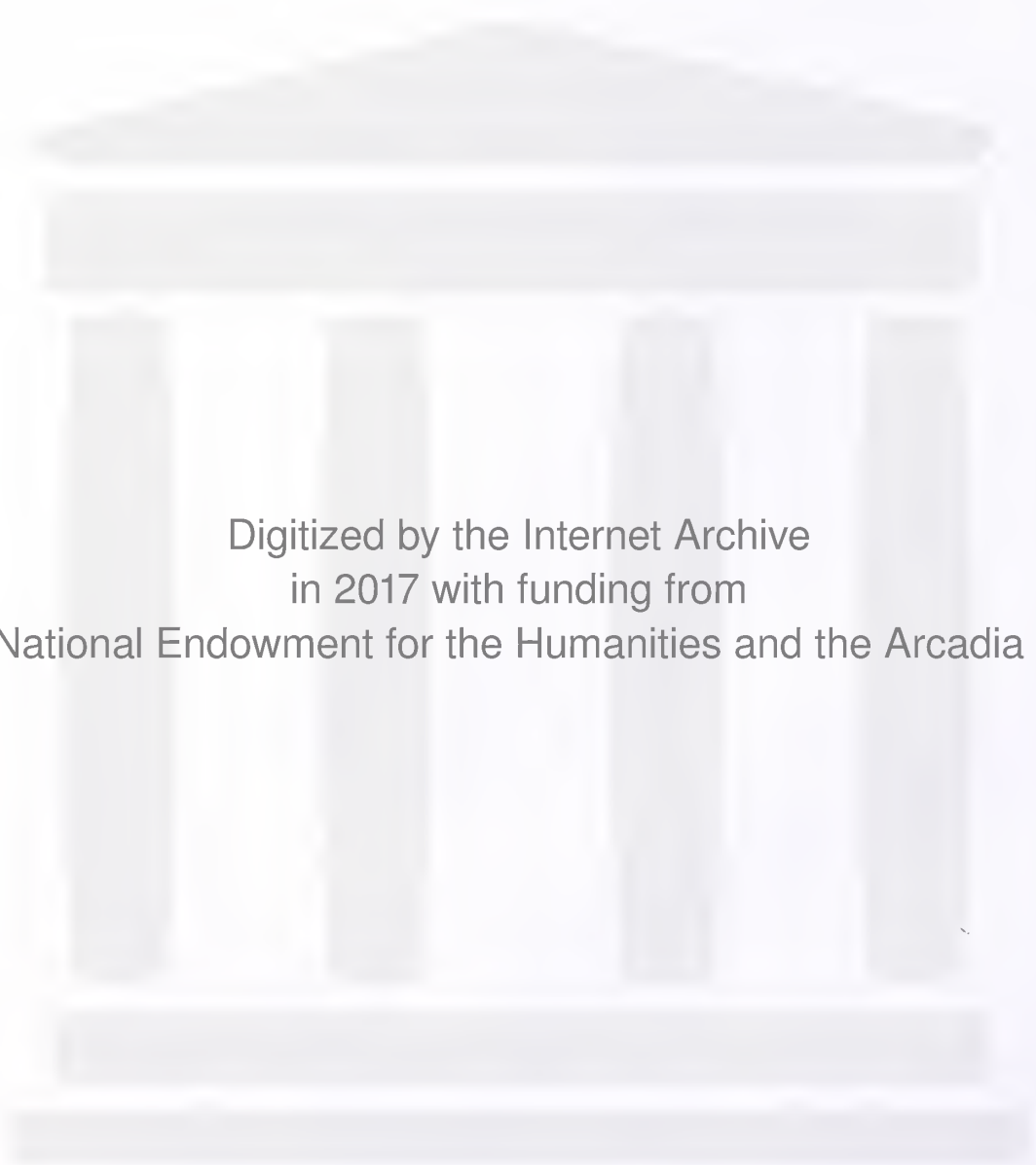
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MARCH 1975



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We thought about the blue flowers. Different people had different ideas about them. Henry wanted to turn them on. We brought wires and plugs and a screwdriver, and wired the green ends of the flowers (the bottom part, where they had been cut) to the electrical wire. We were sort of afraid to plug them in though -- afraid of all that electricity pushing its way up through the green stalks of the flowers, flooding the leaves, and finally touching the petals, the blue part, where the blueness of the flower resided, along with white, and a little yellow. "What kind of current is this, that we are possibly going to plug the flowers into?" Gregory asked. It seemed to be alternating current rather than direct current. That was what we all thought, because most of the houses in this part of the country were built in compliance with building codes that required A.C. In fact, you don't find much D.C. around anymore, because in the early days of electricity, many people were killed by it.

"Well, plug them in," Grace said. Because she wanted to see the flowers light up, or collapse, or do whatever they were going to do, when they were plugged in.

The humanist position is not to plug in the flowers -- to let them alone. Humanists believe in letting everything alone to be what it is, insofar as possible. The new electric awareness, however, requires that the flowers be plugged in, right away. Townbee's notions of challenge and response are also, perhaps, apposite. My own ideas about whether or not to plug in the flowers is somewhere in between these ideas, in that gray area where nothing is done, really, but you vacillate for awhile, thinking about it. The blue of the flowers is very handsome against the gray of that area.

-- Donald Barthelme, Brain Damage, 1970

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INTRODUCTION

This study represents a first attempt to sort out some of the attitudes of medical students at two different points in their careers when confronted with complex ethical problems involving multiple loyalties, hierarchies of abstract good, and issues of self-interest. The intent of this work is descriptive and hypothesis-generating. Indeed, the hypotheses formulated at the outset proved to be more of a hindrance than a help in understanding the data.

What follows is a preliminary grappling with the question of how a group of complicated human beings comes to terms with paradigms of some of the most powerful and difficult issues they will face in their professional lives.

The first section of this report consists of a review of the relevant literature. This will help orient the reader to the current state of studies on medical students and medical education. The next section consists of a discussion of the methodology of this study, which is based on a questionnaire distributed to freshmen and senior medical students and interviews centered on the students' answers to the questionnaire.

The subsequent section describes the statistical methods used in analyzing the data and the results obtained from them. The final section is a discussion of the most important aspects of the interview material.



REVIEW OF THE LITERATURE

The literature on the medical student and medical education is vast. It has been said that "Medical students can be described by the most complete body of psychological measurements ever collected on individuals with such singular interests" (Heist, 1962; Bloom, 1965).

The research divides into three main areas, although there is considerable overlap among them.

The first focuses on the selection of suitable medical students. These studies attempt to relate characteristics of applicants and students to various kinds of specialty preference, success as physicians, success with certain kinds of training programs, etc. These studies are mainly descriptive. They also postulate quantitative and predictive methods for selecting individuals into medical training (See for example, Gee and Cowles (eds.), 1957; Coker, et al, 1960a, 1960b, 1966a, 1966b; Schumacher, 1961, 1964a, 1964b; Kole and Matrazzo, 1965; Haley and Paival, 1969; Johnson, 1969; Mawardi, 1969, 1971; Price, et al, 1969; Cartwright, 1971; Weber, 1971; Donovan, et al, 1972; Rothman, 1972; Echols, et al, 1973; Rothman, et al, 1973; Weinstein and Gipple, 1973; etc.).

Second, there is a literature on the psychological difficulties and psychosocial development of medical students. The best review of this work is that of Levitt (1966). Lief (1971) summarizes the results of his and his co-workers'



more-than-a-decade long research on the psychosocial characteristics of medical students at Tulane.

The third main area of research examines the attitudes and values of medical students. It is this corpus of work that is most relevant to this study and therefore will be treated in greatest detail. When relevant, however, reference will be made to studies from the former categories.

Shortly after the Second World War, a confluence of interests among medical educators and sociologists led to intensive study of medical student values. Medical educators, noting that medical knowledge was increasing at an unprecedented rate, were concerned with how best to teach their students within the limited time available. They became interested in applying the "scientific method" to studies of different forms of medical education in order to further this goal. They also were concerned with a change in the form of medical practice from the pre-war era when most physicians were general practitioners. They began to develop innovative programs in medical education -- the Comprehensive Care Curricula* -- with major attention directed toward awareness among students of the psychosocial aspects of their patients' lives and illnesses (Merton, et al, 1957; Becker, et al, 1961; Bloom, 1965; Funkenstein, 1971).

*Comprehensive Care is "The organized provision of health services to the entire family, including a full spectrum of service from prevention through rehabilitation, continuity of care for the individual, emphasis on the social and personal aspects of disease and its management, use of the health care team concept with personal physician responsibility and coordination of the diverse elements of modern scientific medical practice" (Falk, et al, 1973).



The sociologists, on the other hand, were interested in studying complex social organizations like schools, prisons, mental hospitals, and factories as a means of understanding human social behavior. They were concerned with the process of adult socialization, and especially, with the sociology of the professions, and they were hopeful that social science could be useful in a systematic way to improve the provision of health care (Merton, et al, 1957; Becker, et al, 1961; Bloom, 1965).

The effects of medical school on attitudes and values of practicing physicians is controversial, however.

Eron, who conducted several highly influential studies on medical student "cynicism" and "humanitarianism" (1956; 1958) remarks that:

The educational experience in any particular school has a profound effect on these very attitudes of the student. Thus medical students are quite different when they graduate than when they were in the first year of medical school, and furthermore, despite the individual differences that have been noted among them, in some ways seniors seem to be cut from the same cloth. All of us who have been concerned with medical education for any length of time have noticed not only the profound changes taking place in students as they progress through four years of medical school, but how alike they all appear to be at the end of those years (1958).

Freidson, on the other hand, disputes the importance of medical school for physician attitudes.

If medical education molds the medical man, the exigencies of practice are likely to be proof of the mold. It is for per-



forming his role in the circumstances of practice that medical education prepares the physician. And it is in the realities of practice rather than in the classroom that we find the empirical materials for clarifying and articulating the actual rather than the imputed or hoped for nature of the professional role (1970; see also, Freidson, 1971, chapter 8).

Freidson suggests that the answer to this debate lies in the study of physicians during the years post medical school -- from internship to practice.

Other researchers in the field generally give lip-service to this point of view. Nonetheless, even the published work on house-staff is miniscule compared to the volumes existing on medical students (See for example, Kendall, 1961, 1963; Oken, 1961; Seeman and Evans, 1961a, 1961b).

The literature on the attitudes and values of medical students is of two types. The "true" sociological studies attempt to evaluate the development of students in terms of their social environment in the medical school. Paradigms of this approach include the studies of Merton and his colleagues, summarized in The Student-Physicians (1957), and those of Becker and his co-workers described in Boys in White (1961).

Another approach observes students via standardized personality instruments like the Allport-Vernon-Lindzey Study of Values, the Strong Vocational Interest Blank, The Edwards Personal Preference Schedule, etc. In these studies the institutional context is generally not considered in detail. Instead, students are studied longitudinally and attempts are



made to correlate results with such factors as specialty preferences and (especially) attitudes towards patients. Those who look at medical students in this way seem most concerned with the students' ability to appreciate the psychosocial dimension of the "doctor-patient" relationship-- to see the patient as a "whole man" (Parker, 1958).

The work of the Merton and Becker groups differ in several respects. Merton espouses a longitudinal approach, with adequate controls, utilizing insofar as possible the scientific method. Becker, conversely, eschews the necessity for the "panel approach," insists that he has no hypotheses to test and that his study has no "formal design," and makes extensive use of participant-observer methods. For Merton,

The view is always longitudinal, cast in the framework of a hypothesis of socialization in which the medical school is the "middle term" of an orderly developmental process...Acknowledging the fact that the medical school is a step in the socialization of the physician, [Becker's] group avoids the assumption that it is a linked step in a direct and orderly developmental process...The method of [Becker's] group, as in past studies of other types of institutions, frankly seeks "disparities between aspirations and realities" (Bloom, 1965).

The differences between Merton and Becker are apparent even in the titles of their books. Merton views the medical student as a sort of junior colleague of the faculty members. He finds that the students view themselves increasingly as physicians as they proceed through medical school and that they gradually gain confidence in their role despite the



inevitable uncertainties and frustrations. The growth to full physician-hood begins with aspirations in early childhood (Rogoff, 1957*) and continues through the time when other careers might be chosen. Medical students choose earlier than other future professionals -- e.g. law students (Thielens, 1957*) -- have already found "role models" for their careers and feel very strongly that this is the "only career that could really satisfy them." The medical student progresses to discover the complexity of modern medicine and to think increasingly about specialization. Further, in their contacts with patients, students increasingly reflect a sense of "professional self-image" (Huntington, 1957*). The student painfully develops the requisite of "detached concern" and increasingly becomes aware of uncertainty "[which] is no different from that to which every responsible, self-critical doctor is often subject" (Fox, 1957*). Ultimately, through the relatively invisible yet firm influence of the faculty, students are channeled towards specialties commensurate with their abilities, the higher-ranking students tending towards specialty training or the rotating internships of their choice at university hospitals, the lower-ranking students towards rotating internships at non-academic training centers (Kendall and Selvin, 1957*).

Becker views the world of the medical student as rather

* in Merton et al, 1957.



different. He introduces the students in a more demographic rather than a developmental context. Yet he treats their school historically. In Becker's view, these students begin their career idealistically, looking to an experience commensurate with their sense of finally having "arrived." Immediately, however, they find their medical school life to be frustrating, overwhelming, uncertain. They are angered and puzzled by the impossible amount of work, the unpredictability of the faculty's expectations, and their sense of learning little that relates to "the practice of medicine." They begin tacitly to form a "student culture" -- with its own norms, values, and means of regulation -- to cope with their predicament.

The formation of student culture is an adaptive phenomenon to the stresses and demands of the situation, albeit the student view of things is often considerably at variance with that of the faculty. Students put aside their ideals about medical education and through the student culture come to terms with their situation. Yet, they look forward to their time on the wards in clinical medicine, expecting that there, they will learn "the basic medical facts." On the wards their study of medicine will be as they have imagined; there they will learn what they will "need to know" when they are out "in practice."

The reality of their clinical experience is quite different, however. They must come to terms with faculty members of varying degrees of "malignancy" who seem demanding,



capricious, occasionally even sadistic. They find that "clinical experience" is the cornerstone of authority in the medical hierarchy. They have none. Further, they feel acutely that they are never given sufficient "responsibility" for important aspects of patient care. Indeed, a patient can become a source of what the students feel is endless, routine, worthless work. If a student has failed to glean some crucial fact from a patient, the patient can even become a source of embarrassment in front of a faculty member.

Once again, the students form a separate "culture" to cope with these predicaments. They devote their activity and energy to placating faculty members. They disdain and avoid routine work and cherish experiences which they think are filled with "responsibility." Even when they finally graduate, their internship choices and specialty preferences are shaped by "student culture." They look for those specialties they believe will afford the highest levels of "responsibility" and "clinical experience." They avoid those they feel are unlikely to provide this.

Nonetheless, their basic "idealism" remains intact, although now it is tempered by maturity and reality. The "cynicism" of the medical student according to Becker is part of the facade of the successful member of "student culture," not a permanent attitude that will be carried by the physician throughout life (Becker, 1956; Becker and Geer, 1958a, 1958b; Becker et al, 1961; Becker, 1964).* Fundamental to Becker's

*Later studies by Coombs and Stein (1971) and Coombs and Boyle (1971) at Bowman Gray Medical School essentially replicate Becker's work on "student culture."



notion of the medical student is that he is not a student-physician.

The ["boys in white"] are not doctors, the recurring experiences of being denied responsibility make it perfectly clear to them that they are not. Though they may occasionally, in fantasy, play at being doctors, they never mistake their fantasies for the fact, for they know that until they have graduated and are licensed they will not be allowed to act as doctors (Becker, et al, 1961).

Critiques of these works, especially of Becker and his co-workers, have been proferred by Levinson (1967) and, in passing, by Keniston (1968). Levinson faults Becker for ignoring "relatively enduring yet changeable personality structures" (1967). He adds that Becker's

...focus is not primarily upon the student as budding physician, but rather upon students collectively as low-status workers trying actively to adapt and to "make out" within a strongly hierarchial, stressful organization...This is a useful vantage point from which to proceed, and the research yields a significant contribution to the study of organizations. The theoretical waters are muddied, however, by the authors' polemical assertions regarding matters not within the scope of their investigations. At times they imply that the book is a study of professional socialization, when in fact this is a minor concern (ibid).

Keniston adds to this criticism:

Such studies concentrate largely on areas in which medical education is most like other kinds of education. What also needs to be studied in depth are those processes that are distinctively medical -- that distinguish the medical student from his other pre-profession fellows, and that might account for the special impact of medical education upon future physicians (1968).

Bloom (1965) acknowledges that the works of Merton and Becker are informed by two different world-views of the nature of the conduct of human beings in organizations. He cites the work of Etzioni (1960) who has elucidated the character of these conflicting ideologies as they affect the study of the mental hospital. According to Etzioni:

The study of industrial relations is more or less split into two camps. On one side are the advocates of the human relations approach, including disciplines of Elton Mayo and Kurt Lewin. On the other side are the scholars who object to the human-relations school, which they name "managerial sociology," and which they criticize for being manipulative, biased in favor of management -- for example earlier studies ignored the role of the trade unions -- and unrealistic. Another way of putting the difference is to say that the human-relations school is for "peace in industry," harmony, and "understanding" between the employer and employees, while the opponents emphasize the objective significance and positive function of industrial conflict. The human relations people emphasize two-way communication, while the opponents stress the role of the trade unions. The human-relations school suggests therapeutic interviews and participation in decision-making; the opponents point to economic, political, cultural and other "real" differences between workers and management" (ibid).

While Bloom recognizes the importance of Etzioni's formulation, he ultimately concludes that the differences between the findings of Becker and Merton have more to do with the specific "value climates" of the different kinds of medical schools at which the studies were undertaken (Bloom, 1963, 1965).*

*Bloom and Etzioni both recognize, of course, that analogies



"The type of environment which Becker...describe[s]...is common in medical education...The picture of 'student-physicians' which the Columbia studies present possess at least equal validity as a type of experience which can and does occur in American medical education" (1965).*

Bloom, unfortunately, does not follow Etzioni far enough. Etzioni concludes that "both schools [of thought] are vital to a better understanding of the organizational process (1960, Etzioni's italics). Although some organizational problems yield readily to solutions involving the repair or construction of lines of communication, others inevitably are best comprehended by taking into account power relations and hierarchial constraints inherent in the social system.

Etzioni also stressed the potential "multi-group"

from industrial relations may break down in important ways when applied to mental hospitals and even more so to medical schools.

*Research on the differing "value climates" and environments of various medical schools include: Christie and Merton, 1958; Miller, 1958; Sanazaro, 1963. Funkenstein, 1958, considers some of the "implications of this diversity." Bloom, 1965, cites unpublished data from Johnson among similar lines. Cornell, Western Reserve, and the University of Pennsylvania where the Merton studies were undertaken, differ from the University of Kansas in crucial respects such as location, student body, funding, prestige, etc. Sanazaro (1963) calls these the "Blackbox" of an individual medical school.

membership of an individual under study. Becker and his group seem more cognizant of this as a factor in medical students' attitudes. They note students' adherence to the mores of "lay cultures," such as those based on sex, and social class, to the mores of "medical culture," and to those of the "student culture."

On the other hand, Fox (in Merton, et al, 1957) describes the development of a student "little society" which differs markedly from the Becker portrait of "student culture." "A set of standards for dealing with uncertainty gradually emerges -- standards that tend to coincide with those of the faculty" (ibid, italics added). However, Fox pays relatively little attention to the organization, function, and purposes of this little society, other than to remark on its existence vis-a-vis "training for uncertainty." She concentrates on interview material mostly drawn from individual conversations with students, not from interviews of medical students in groups or in public areas. Her students are introspective about their work, rather than reflective about the process of making do within the institution.

Despite Becker's claims that medical students "know" they are not doctors -- which the Merton students undoubtedly "know" just as well -- he offers no evidence to refute the claim that the student is more likely to perceive himself or be perceived by others as a physician as his training progresses. As Levinson (1967) points out, Becker offers

little information about his subjects' intrapsychic processes, about their "strong feelings, fantasies, psychodynamic processes;" he also says almost nothing about their personal feelings and experiences. There is little attempt to tease out "complex emotions" or to unravel ambiguities between self-perception and behavior, between beliefs and actions.

Yet another major difficulty arises in both these works, although more glaringly in the studies of the Merton group. No attempt is made to examine critically the values and norms of the group being studied. Merton lists these values and norms (1957); however, the list defines such problems from the viewpoint of the medical profession. For example: "The physician has a right to expect a 'reasonable fee' depending upon the care he has given and the economic circumstances of the patient. But: he must not 'soak the rich' in order to 'provide for the poor'" (ibid). Even if Merton is correct, he never scrutinizes the history or consequences of such a belief. Does the physician have such a "right?" "Must" he not "soak the rich?" To be sure, many American physicians believe wholeheartedly in this assertion. But such a "value climate" immediately invites question: How is it that physicians believe such things? How might a medical student who refused to accept such beliefs be treated? How might the world look if physicians believed something else -- for example, that all patients have the right to medical care and that physicians should give such care out of



a sense of altruism; or that physicians should be insulted if offered more for their services beyond a baseline salary. Merton makes no attempt to examine what Parsons (1951) has described as "non- or irrational beliefs and practices in the health field," i.e., the "folkways" of the medical community.

Critical approaches have elsewhere been brought to bear on medical culture. The more theoretical works on the profession, the medical student, and the medical social system often confront such questions (See, e.g., Parsons, 1951; Hughes, 1956; Keniston, 1968; Freidson, 1970, 1971; Mechanic, 1971; Zola and Miller, 1971; Scheff, 1972; Zola, 1972). Similarly the theoretical problems of "value-free" research, "management bias" and the like have been examined extensively (See e.g., Mills, 1961 especially chapter 4; Louch, 1966; Freidson, 1970, 1971; Etzioni [1960] has already been discussed). Yet the practical studies of medical students and medical education have rarely addressed normative issues. It seems to be implicitly assumed that: "Medical school curricula and medical education ... is today without serious flaw and represents a major advance beyond the recommendations of the Carnegie Foundation report on Medical Education in 1910" (Schiff, 1971).

There are difficulties with the theoretical perspective of Becker's work as well. He and his group searched for "disparities between aspirations and realities." Indeed, his book is fundamentally richer than Merton's, filled with many striking vignettes and cameos of students and their world.

His careful depiction of the day-to-day lives of the students, of "student-culture" and its folkways is not problematic. The difficulties lie in his description of "the fate of idealism in medical school" (Becker and Geer, 1958). To find that the basic "idealism" of the medical student -- and Becker is quite cautious about the need for clarification of this term and its opposite number "cynicism" -- emerges intact, if more pragmatic and realistic, at the end of medical school is all well and good. But, it is difficult to believe that the effects of this "temporary" student-culture-determined cynicism can be so transient, that given a new set of "perspectives,"* the young physician will bring with him no legacy of his school values. Any graduate -- whether from a school, a mental hospital, or a prison -- must carry with him, if only for a time, a set of attitudes, "perspectives," which will color his life and thinking about the world. Such perceptions are not immutable, but are rather subject to modification, change and obliteration, through new experiences, or the influences of different organizational structures.

*The concept of "perspective" is central to Becker's thesis. He defines perspectives "following the theory of George Herbert Mead ... [as] co-ordinated views and plans of action people follow in problematic situations" (Becker, 1961).

Becker carefully notes that the way a medical student organizes his experience might be different from that of a doctor in practice. Yet, he seems untroubled by the notion that the way a student views reality in some degree may affect the world-view of the physician. Becker views the perspectives of "student culture" as relatively ephemeral (See, for example his discussions of the medical resident [Becker, et al, 1961]). Yet, he never considers conflicting perspectives and their effect on the individual who is "split" -- part of him a subscriber to the cynical public values of "student-culture," part an idealist who is dedicated to a separate set of values and beliefs. "It happens that many students wonder what medical education is doing to their humanity, their capacity for feeling ... The question 'Are we leaving the human race?' recurs regularly and even monotonously " (Keniston, 1968). Although Becker and his associates may believe, as Levinson (1967) asserts, that "psychodynamic factors are of little import in socialization," they ought to have been more sophisticated about the possible consequences of multiple or shifting perspectives. In addition, although Becker offers much thought on the "fate" of idealism among medical students, it is unfortunate that he fails to examine the future of the "responsibility" and "experience" perspectives which he finds so important to the students' world. On page 221 he states: "[Students make] use of two ideas which we think must be strongly emphasized in medical culture and in the perspective of practicing

physicians ... These two ideas are medical responsibility and clinical experiences" (Becker's italics). He notes that these terms probably have quite different meanings to students due to their particular place in the social system's hierarchy. Yet, he offers little discussion on how these terms might differ in meaning for those in other positions in the hierarchy. Further, he does not consider the problem of how a change in perception of these might occur. Nor does he address the question of how (and if) students might acquire other perspectives of their mentors, for example, those of the importance of "scientific medicine," "getting along with patients," and of clinical observation, reasoning, and diagnostic skills.

Turning now to the literature on medical student attitudes and values as catalogued by standardized tests, I am deeply indebted to Bloom (1965). He notes that the:

Central question of research on medical student attitudes -- and such research has never been more active -- appears to be how students will behave with patients ... The early interest of medical educators in the social sciences was precipitated by new educational programs which, frequently, contained as a major objective the teaching of both skills and attitudes in the broadened range of interpersonal relations that are part of modern comprehensive medicine. In addition, ... medical educators ... feared that, out of overconcern for the science of medicine, medical education was dehumanizing future physicians (ibid).

In the decade since Bloom's paper was published, medical educators have also become increasingly concerned with the relation of medical students and physicians to issues of community medi-

cine, the social milieu in which medicine is practiced, and ethics and human values in medicine (see Pellegrino, 1969; Rosiniski, 1969; Truett, et al, 1969; Mechanic, 1971).*

In general, these attitudinal studies share similar weaknesses. Few are comparative between medical students and other groups. The Eron studies of cynicism-humanitarianism (1956, 1958), the Christie and Merton study of Machiavallianism (1958), and the studies of Gordon and Mensch (1962) with the Survey of Interpersonal Values are among the few exceptions (1962). Rosiniski (1963) -- in one of the only studies that attempts to examine the ethical development of medical students -- at least acknowledges that his work is "preliminary" and must be followed with comparative studies. Another recently-observed difficulty is that most studies follow individual classes longitudinally. Rothman (1972) notes that striking differences may be observed in the attitude profile and intellectual achievement of different classes. He questions "the extent to which one-class longitudinal studies can be generalized."

Nonetheless that "something in the feelings and beliefs of medical students about interpersonal relationships does actually change is indicated strongly by this type of evidence"

* The interest of medical education specialists in these areas is so marked that it is surprising that no one has ever systematically studied the differences between the attitude of medical educators and other physicians relative to the physician-patient relationship and issues of public policy in health care (See, however, Bonito and Levine [1973] and Levine and Bonito [1972]).

(Bloom, 1965). However, as Bloom notes, exactly what has changed is controversial.

Furthermore, if what has changed remains unclear, the importance of the change has been at best superficially examined. Eron (1956, 1958), for example, argues that medical students as they advance in their training show an increase in "cynicism" -- which he defines as a "contemptuous disbelief in man's sincerity of motives or rectitude of conduct, characterized by the conviction that human conduct is suggested or directed by self-interest or self-indulgence" -- and a decrease in "humanitarianism" -- defined as a "regard for the interests of mankind, benevolence, philanthropy." Cynicism and humanitarianism are measured by scales of his own design. Further he finds that cynicism correlates positively with anxiety; medical students with high "manifest anxiety" have higher "cynicism" scores than those with low "manifest anxiety" scores as measured on his anxiety scale. He compares these results with those of law students and discovers that the trend for this group is the opposite with respect to cynicism: law students tend to greater humanitarianism in their senior year.* Yet he declines to discuss the implications of his findings, stating that the results are "better left to discussion by those in the individual medical schools."

*Nursing students tend to less "humanitarianism" in their senior years.



Eron concludes that even if attitudes do not necessarily correlate with behavior, "the attitude scales used in the studies reported here measure nothing more or less than verbal behavior, and it is through verbal behavior primarily that the physician communicates with the patient and the patient gets to know the physician" (ibid, italics added). Even if it could be ascertained that these scales measure "verbal behavior" alone, it is unclear whether this variant of "verbal behavior" would be manifest in talking with patients.

As discussed previously, Becker et al (1958a, 1958b, 1961) dispute the importance of "cynicism" to the formation of the permanent character of the medical student. Even so, one can only speculate whether his observations relate to the same phenomenon uncovered by Eron's scale.

Gray and his colleagues have continued to use Eron's instruments. They basically conclude that after graduation from medical school, physicians who have a large degree of "dynamic involvement on the socio-emotional" level with patients -- i.e., those in internal medicine, psychiatry, pediatrics, general practice, and obstetrics-gynecology -- increase in "humanitarianism" and decrease in "cynicism;" their hospital based colleagues with less intimate patient contact -- those in surgery, pathology, radiology, neurology, epidemiology, public health and rehabilitation medicine -- remain at similar levels of cynicism that they exhibited at the time of graduation from medical school (Gray, et al, 1965, 1966; Reinhardt and Gray, 1972; see also, Gray, et al,

1961; Gray and Newman, 1962; Gray and Ward, 1972; Canning, et al, 1973).

Gray and his co-workers take the neo-Beckerian position that a "moderate amount of cynicism" is adaptive for medical students. "Attitudes of cynicism are developed by medical students and retained by some physicians after they enter practice because they are functionally useful" (Reinhardt and Gray, 1972). They conclude rather quixotically, however, that:

Although at the present time attitudes of cynicism appear to help the student during his medical education, changes in training experiences (for example, by a reduction in [stress]...and more emphasis on behavioural science concepts) changes in training experiences ...could be made so that the student would not need to develop these attitudes. As a result of such changes, medical schools could produce physicians who could both meet the medical and psychosocial needs of patients (ibid).

Suddenly, the nature of the discourse is changed. "Cynicism" has come into a cause-and-effect relation to psychosocial insensitivity of medical students and physicians. It must be stamped out -- preferably in medical students (God, knows, they're more malleable than surgeons). Apparently this will be engineered by an appropriate dose of T.L.C. and exposure to the wisdom of savants.

Part of the difficulty with the study of "cynicism" is pointed to by Christie and Merton (1958); in order to avoid the reification of a label with possible pejorative connota-



tions, in their discussion of "Machiavellianism," they name their instrument the "Mach" scale. It might well be sobering to give Eron's instrument a more "value-free" label, one with less likelihood of being reified. Some scholar might then be able to sort out more precisely and objectively, exactly what is being measured by this scale.

Other studies of the attitude of "cynicism" include that of Miller and Erwin (1961) in which a Comprehensive Care program experience seemed to lessen the extent of the development of "cynicism," and seemed to increase a sense of the importance of teamwork in a small group of students. Here again a correlation was noted between high anxiety and "cynicism" and between low anxiety and "humanitarianism." Strangely enough, although this study group increased in their awareness of "social factors" in their patients' lives, they decreased in their estimation of "emotional factors" with respect to controls. Canning, et al (1973) found little effect on increasing "cynicism" in students who took courses or who had special experiences in family medicine and community medicine. However, he found that students who elected such programs were from the outset less authoritarian (as measured by Adorno's F-scale), less "cynical," and less dogmatic. Canning found no relation between the fluctuations in "cynicism" and "humanitarianism" and suggests these may not be related as directly as had been thought. Nor did he find any relation between anxiety and "cynicism." Instead

he suggests that Adorno's measure of authoritarianism is more useful than Eron's method in elucidating "persistent personality [traits]."

Christie and Merton (1958) found higher "Machiavellianism" among medical students than among college students, business executives, and lobbyists -- although social psychology graduate students in one of Christie's seminars were higher still than medical students. They interpret these findings cautiously because "functional differences [may exist] in the meaning of statements for those who have very different roles in the social system," but add that "medical students are [probably] no less cynical and manipulative than the others." Christie and Merton also show that fourth year medical students attribute less importance to the "values of Comprehensive Care" -- e.g., concern with social and emotional problems of patients -- than third year students, although they find a complicated relationship between the students' own attitudes, the students' assessment of the importance of such psychosocial issues to faculty members, and the measured importance of these values to faculty members at different levels of seniority and in different specialties.

Gordon and Mensh (1962) using the SIV (Survey of Interpersonal Values) found that "Benevolence" -- which they claim bears a relation to "cynicism-humanitarianism" a la Eron -- decreases during medical training and continues to decrease into residency, although the largest mean difference was between the first and second years of medical school. They con-

clude that compared to a variety of other groups "The beginning medical student is, indeed, rather idealistic in his desire to help his fellows, [but] as graduation nears, he is probably no less benevolent than the average adult male" (ibid).

Parker (1958, 1960) studied medical students using the F-scale as well as other measures. He found that students with an "authoritarian personality structure" were more likely than "non-authoritarians" to have a low opinion of psychiatry and were less likely to have "a person-orientation" to patients. In his 1960 paper, he describes greater "hostility" toward patients among the high-authoritarian group, especially toward patients of lower socio-economic status. Non-authoritarian students were more likely to feel that they had contributed to the care of their patients during clinical training on the wards. The non-authoritarians perceived this contribution to lie more in the "interpersonal" than in the "technical" dimension -- i.e., the domain of diagnosis and treatment. Parker argues that it is important to encourage authoritarian students to appreciate psychosocial factors. He suggests early "behavioral science" courses to impress the authoritarian student with the "practicality" of psychosocial knowledge. In his 1960 paper, he suggests further that an effort be made by senior staff to encourage students in their work in the interpersonal dimension.

It is striking that medical educators rarely propose remedies other than new courses, tinkering with the curriculum or modification in the system of academic rewards to



alleviate the purported failure of medical education to help students understand or deal skillfully with the psychosocial and socioeconomic aspects of their patients' lives. In a provocative essay, Mechanic (1971) suggests that fundamental and systematic aspects of the hospital, and the medical care delivery structure make it extraordinarily difficult for the physician or health worker to pay heed to these social dimensions of patients' lives. He advocates a radical restructuring of health systems. While it is not possible to deal here with Mechanic's proposals in detail, this author is in general agreement with his critique, if not with all the solutions he proposes.

To be sure, some personality types may have greater difficulty in attending to the complexities of the social and emotional lives of patients.*

In all probability, the development of "detached concern" (Lief and Fox, 1963), and "affective neutrality" (Parsons, 1951) is essential for the physician to function in our society although these can hypertrophy to "pathological" extremes (Lief and Fox, 1963) or to "cynicism."

Nonetheless, if we seriously desire that physicians attend to more than the technical aspects of their patients' care, we cannot ignore fundamental endemic impediments to this goal existing throughout the medical care delivery system. Tinkering with purported imbalances in medical school

*But note that, as Parsons has pointed out, a physician may reject or be ignorant of the theories of dynamic psychiatrists and still behave sensitively and skillfully towards patients in accordance with them (1951).



curricula or lessening the "stress" placed on medical students -- stress on the sleep-deprived house officer is rarely commented upon -- are no solutions.

Livingston and Zimet (1965) attempted to relate authoritarianism to anxiety concerning death and to specialty choice among medical students. Future psychiatrists were found to be significantly less authoritarian -- as measured by Adonrno's F-scale -- than future internists, pediatricians and surgeons. Future surgeons had the lowest "death anxiety" as measured by a special scale. Future pediatricians scored highest in this attitude, although future psychiatrists ran a close second. These authors also found that most students who did not rank psychiatry or surgery first rated these choices very low when asked to rank other specialty choices. From this data, Livingston and Zimet speculate that future surgeons and future psychiatrists may constitute unique subgroups among medical students. The high-authoritarian student is said to be attracted to the formalized hierarchy of surgery; he may be better able to defend against his "unconscious and thus have less death anxiety." The low-authoritarian would tend to be more easily intruded upon by his impulses and anxieties about death and thus would choose a profession like psychiatry where the presence of death is less likely to be found. In psychiatry, such a low-authoritarian's sensitivity and interpersonal flexibility would be at a premium. Livingston and Zimet, found "death anxiety" to be highest among junior and senior medical students and



highest of all among juniors confronting their first clinical work. They suggest that this last finding contradicts the contention of Lief and Fox (1963) that "detached concern" is a longitudinal, orderly development throughout medical school.

The detailed discussion above illustrates the kinds of difficulties encountered in attempting to compare and correlate attitude studies without an adequate corpus of descriptive work on medical students in social systems. If high "anxiety" correlates with "high cynicism," then one expects high "death anxiety," low authoritarian, psychiatrically-directed students to rank highest in "cynicism." Yet, upon graduation from medical school, future psychiatrists and others of the "high-interaction" specialty group do not differ appreciably in "cynicism" from future surgeons and other future "low-interaction" specialists. If, in fact, high "cynicism" is the mark of poor interpersonal relations with patients, as is implied but never demonstrated, then low-authoritarian future psychiatrists should be most notable in this respect. Parker (1958, 1960), however, demonstrates that low-authoritarian students are in fact more likely to be successful in the interpersonal aspects of medical care. To resolve these dilemmas, more rigorous future studies are desirable.

An interesting group of studies on 514 medical students at five schools focus on attitudes to death and dying, as measured by the Cancer Attitudinal Survey (CAS) developed by Haley, et al (1968). CAS-Part I relates to student attitudes



concerning the ability of patients to handle knowledge of their condition. CAS-II relates to attitudes concerning the vigor of early diagnosis and treatment of cancer. CAS-III concerns attitudes to death, personal immortality and preparation for and acceptance of death (Juan, et al, 1969; Juan and Haley, 1970). Using Rokeach's Dogmatism scale, these authors conclude that high dogmatics are significantly less likely to believe in the sufficiency of patients' resources to cope with death. Conversely, high dogmatics rate significantly higher in belief in personal immortality and preparation for death (ibid). On the Survey of Interpersonal Values (SIV) and Allport-Vernon-Lindzey Study of Values (AVL), high dogmatics "favored conformity, recognition, and religious values, while those scoring low on dogmatism favored independence, aesthetic, and social values" (Juan, et al, 1973; see also, Juan and Haley, 1970). In the 1973 study, these authors found that dogmatism declined over the four years of medical school. Concerning attitudes toward death as measured by CAS-I, they found that over the four years of medical school, students were likely to increase in their estimation of patients' abilities to cope with knowledge of their illness. Students progressively showed lower scores on CAS-II indicating "less favorable attitudes towards early diagnosis and treatment of cancer." The CAS-III showed no change (Juan, et al, 1973). Finding a consistent high rating on the SIV level of Benevolence throughout medical school, the authors dispute the significance attached to the



development of "cynicism," which they declare "has often been attributed an importance far beyond its meaning" (ibid).

Juan's results concerning the CAS-I may relate to that of Kimball and Duncombe at Yale (unpublished), who found that senior medical students most strongly favored "the principle of significant patient choice in the selection of treatment."

I have found only one study which attempted to correlate attitudes and values as measured by personality instruments with actual behavior. Rezler (1971) used a "Likert" scale to measure attitudes of medical students to psychosocial and socioeconomic aspects of patient care as well as to importance of explaining to patients the nature of their illness, prognosis and treatment.* Prior to giving them the Likert attitude scale, she administered a series of vignettes to the students. Each vignette described a patient with significant psychosocial or socioeconomic concomitants of disease. For example, one case depicted a mailman with atherosclerotic vascular insufficiency of the lower extremities who had had several successful operations, but had concerns about the support of his family and invalidism. Students were asked to describe in a paragraph what they would do for the patient. In the vignettes, a third of the students "intervene in the specific manner that is most appropriate to the patients they try to help." Twenty-five percent reassure the patient, and twenty-five percent discuss family and home situations. About thirty-

*The Likert scale asks the respondent to indicate agreement or disagreement, usually on a fourpoint basis, viz, "strongly disagree, disagree, agree, etc."



five percent of students only attend to organic complaints in patients with "work or living circumstances that interfere with rehabilitation." Consultation with families, referral to psychiatrists or social agencies, are mentioned relatively infrequently, although some students attempt to provide supportive therapy. Consultations with families and psychiatric referrals are more frequent when the patients are described as white collar workers, rather than blue-collar. Students ranked attention to the various non-organic aspects of the patients' care much higher on the attitude scale than on the vignettes. Rezler concludes that

It seems inadvisable to collect information about attitudes towards patients on Likert scales and infer that students are likely to behave in accordance with stated beliefs... It was demonstrated that a sizable difference exists between what students profess to agree with and what they actually do when confronted with simulated patients (ibid).

Arguably students are less likely to refer patients to social agencies or discuss aspects of illness relating to work where they have little experience or knowledge concerning these areas. If a student is ignorant concerning the effect of an illness on a patient's work, he might be loath to discuss it. Furthermore, mastery of the skill of referral to colleagues or social agencies represents part of the "street-smarts" of the physician. Medical students are less likely to have had experience in such areas. Nonetheless, Rezler's work compels us to regard attitude surveys cautiously.



It is hoped that she continues her studies not only with students, but with house-staff, practicing physicians, and faculty as well.

The impact of medical education on the more permanent values and attitudes of medical students is a complex one. Medical students are a heterogenous group. They vary in personal histories, in dogmatism, in authoritarianism. They are "members" of multiple groups according to sex, religion, social class, ethnic background, educational history, etc. Their lives are potentially shaped not only by medical school but by historical forces, by political trends, by world events. Their future careers as physicians will be influenced by their specialty choices, by their style of practice, and by their collegueal affiliations. As physicians, they will have varying "constituencies" of clients and allegiances to professional subgroups. They will have to accommodate to those and also increasingly to the demands of government and other non-professional over-seers.

It has also already been noted that medical schools can differ from each other in many respects. Sanazaro (1963) identifies faculty-student ratio, student perception of school as an environment for learning, and total expenditures as factors which show statistical correlation with different kinds of graduates. He finds, however, that student attitudes and values prior to entrance also correlate significantly. Nor does he find any method available that can satisfactorily measure the effect of teaching and curriculum. To describe



the medical school, Sanazaro uses the metaphor of the "Blackbox:" "a mechanism or series of mechanisms which changes an input into a different form of output by an unknown process" (1963). We have seen however, that even the nature of the "different form of output" is controversial.

Several studies have attempted to understand student attitudes by relating them to those of faculty members in their institutions. Caplowitz (1961) maintained that there was little effect of faculty on the transformation or development of student values. He asserts that "although students assimilate standards of technical competence, they do not accept certain other medical values of the faculty even when they are about to graduate from medical school." Students do, however, learn the institution's "standards of technical competence and become progressively more adept at applying them." Thus, students become more likely to pick out, admire, and ally themselves with the "men of lower rank, the 'promotable' faculty members," rather than with the established doyens of the institution. Caplowitz found "no relationship...between the values of faculty members and those of the students they designate as promising physicians." Concluding that "students are aware of the medical values of their teachers even when they do not accept them," Caplowitz speculates that their awareness of these values may predispose students to adopt their teachers' values after medical school.



Coker, et al (1961a) describe findings which to some extent corroborate those of Caplowitz. He polled faculty and medical students on a number of issues relating to the practice of medicine. He asked students to indicate those faculty members who "had had the greatest influence on their own views regarding medicine." He found that the "influential" faculty group differed from their "noninfluential" colleagues as to such prestige factors as seniority and specialty, but that there was no marked difference between the groups "with respect to medical-professional values." Coker found that students who indicated that a particular faculty member had been influential for them had little likelihood of actually sharing that faculty member's attitudes; further, that there were no important differences between students who chose faculty members of differing views; and finally, that the students who named faculty as influential did not differ from those students who declare themselves unable to make a choice. While Coker found that "faculty attitudes do not appear to rub off on students to any marked degree," he did discern some influence on some students' choices of specialty. Nonetheless, the character of an institution itself can have striking effects on students apart from the attitudes of faculty members (Becker, et al, 1958a, 1958b, 1961, 1964).

Christie and Merton (1958) show discrepancies between student and faculty views on psycho-social aspects of medical care.* Pollack and Michael (1965) suggest from rather tenta-

*Faculty members placed greater importance on these aspects than did students.



tive data that "doctors tended to be considerably less patient-oriented and less emotionally related to their patients than were the average student doctors" (ibid); students in their study did, however, shift in the last two years of training from an earlier position more similar to that of patients to the "average position held by doctors" on the fairness of fees. Kimball and Duncombe noted a similar shift in attitude towards fees among students (unpublished). Davis (1968) found that medical students rated "detached concern" in dealing with patients much more highly than faculty members; the latter rated a "sympathetic" attitude higher. This finding leads Davis to wonder whether "detached concern" is as important for physicians in practice as has been claimed (Parsons, 1951; Lief and Fox, 1963). Medical students did rate attention to the socio-emotional aspects of patient care more highly than their mentors, but from observations of actual patient-student and patient-faculty interactions, Davis concludes that both faculty and, to a lesser degree students are prone to disruptions in communication and to "malintegrative" behavior with patients. "Consonant with [the faculty-members'] attitudes regarding what makes a good physician (...skill in diagnosis and therapy but not necessarily concern with doctor-patient interaction), their behavior is characterized by poor rapport" (Davis, 1968).

How can we reconcile these findings with those of Christie and Merton who found the faculty of twenty-five years ago more concerned than students with psycho-social and socio-economic



factors?

Funkenstein (1971), in a provocative paper, sheds some light on this question. He divides medical education into four "eras:" 1910-1940, the "General Practitioner Era;" 1940-1959, the "Specialized Practitioner Era;" 1959-1968, the "Scientific Era;" 1968 to the present, the "Community Era." He ascribes a variety of characteristics to each era in terms of curriculum, faculty interest, student-characteristics, students' family background, postgraduation education, views of social responsibility, etc. He gathered extensive data on students at the Harvard Medical School in terms of interests, attitudes and academic performance, and employed interviews, psychometric tests, questionnaires, and study of academic performance in college and medical school. From this data he concludes that "When students entered medical school with the characteristics of one era, and there was a change ... into another era, they changed to the characteristics of the new era" (ibid). In the transition from the "Scientific" to the "Community" era, the change has only been among students; the faculty for the most part continue to hold the attitudes of the "Scientific Era." Funkenstein finds the faculty and students in conflict over values, career plans, views of social responsibility, and the nature of the organization of medical care, and finds students increasingly rejecting faculty as role models. He describes a new breed of students who are self-consciously uninterested in adapting to the institution except to do what is necessary to get their degrees.



In effect, Funkenstein posits a new kind of "student culture." He ascribes the "success" in socialization of students into the values of the "Scientific" era, and the failure of this socialization to continue, to "[The fact that] that at least one-half of students have a chameleon-like quality in that they change with alterations of the environmental stimuli, such as incentives and rewards, peer group pressures, and the dominant mode of the times." He observes that "currently, the rewards and incentives for careers in science are decreasing. The reinforcement of students by their peers, society, the government, and foundations has shifted away from science to working in the community." (ibid).

Funkenstein's analysis of a variety of complex, inter-relating social forces on student attitudes and behavior is not as carefully drawn as it might be. Nonetheless, he does pinpoint how a marked shift in what Becker calls the "lay culture" (1961) has had significant effect on at least one group of medical students at one type of school.*

*In general, other studies which discuss "lay culture" influence on student attitudes have been more concerned with social class and demographic phenomena. These generally have been related to specialty choice. Other parameters looked at include intellectual and academic performance criteria, as well as some psychometric test data. Thus Schumacher (1961, 1964b) found that students favoring general practice tend to be from small towns, or rural areas, attend public undergraduate schools, are married, at entrance to medical school. They perform least well on scholastic aptitude tests like MCATs. They place higher values on "practical knowledge," are less concerned with broad social problems and have a lesser need for leadership. Students choosing part-time academic careers are at the opposite extreme on all of the above variables. Students choosing full-time specialty practice fall in intermediate positions. Similar findings have been reported by Coker



A series of studies by Levine and Bonito (1972) and Bonito and Levine (1973) offer some confirmation of Funkenstein's work. They found a significant "generational effect" in students attitudes towards the role of students in the running of universities and medical schools. That is, the students' views were much more favorable than those of the faculty, even those in the area of specialization chosen by the students. As to attitudes regarding the "domain" of the physician vis-a-vis other health workers, the authors describe a "generational effect" as well as a "self-selection" effect. That is, students during their clinical years were more likely to switch specialty choice to the one whose faculty's views were closest to their own. The generational effect is shown in that the students still differed significantly from these faculty. As to additudes towards the appropriate organization of medical care, the authors found an additional "socialization" effect. That is, students in the clinical wears differ from those in the pre-clinical years, "with increased homology to the faculty role incumbents" (ibid). I remain somewhat perplexed, however, about the sorting out of "socialization" effects from those

et al (1960a), Weinstein and Gipple (1973). Other studies on the attitude profiles on those selecting different specialties include: Menninger (1957a, 1957b); Livingston and Zimet (1965); Coker, et al (1966a, 1966b); Yufit (1969); Juan and Haley (1970); Echols, et al (1973). An attempt at defining the relevant demographic and attitudinal characteristics of the medical student of the 1960s and 1970s is being undertaken by Rothman (see Rothman, 1972; and Rothman, et al [1973]. See also Mawardi [1969, 1971]).



of "self-selection."

A very small number of studies have looked at the same problem from the other end of the socialization process, investigating the changes that take place in the attitudes, values, and behavior of physicians after entering practice. Perhaps the best-known of these is that of Peterson, et al (1956) which examined the "problems of the General Practitioner" in rural and urban practice. Peterson's criteria of performance was based mostly on diagnostic skill as judged by a research group of internists. They found that "[There is no demonstrable] relationship between either academic performance or level of practice and the few facts obtainable about the doctors' family and community backgrounds." MCATs were of little predictive value. "Advancing age was associated with a lower quality of work." After the age of thirty-five, no relationship could be found between the quality of work and performance in medical school. Bloom (1965) interprets these results as follows: "It was as though the situation -- or culture -- of the practicing profession took over the major influence on the practitioner, functioning to equalize the total group and reduce their early differences" (ibid). Peterson and his group noted, however, that higher quality of work was associated with longer study of internal medicine, although "post-graduate education programs" had minimal effect. They recommended a more flexible set of medical school curricula and internship and residency requirements to meet the individual learning



pace and style.

Freidson (1970, 1971) discusses at length the way that different kinds of practice regulate standards of conduct; he asserts that practitioners establish networks of referral and informal contact which serve functions of observation and regulation. He postulates two theoretical extremes, the "client-dependent" practice and the "colleague dependent" one. The former has virtually no dependence on collegueal referrals and must adapt to "pleasing the customer" in order to attract patients. The latter depends completely on referrals, must "honor the prejudices of colleagues, and so is likely to conform more to professional than to lay standards" (1970). Freidson also points out that group practices and other "bureaucratically" organized forms of medical care are more likely to be "colleague-dependent" (ibid).

In summary, one must be exceedingly cautious in accepting sweeping statements about the relative effect of medical education on "values and attitudes" of medical students over the course of their lives. A crucial question is attitudes and values about what? Peterson et al (1956) find a levelling effect on performance, but this says little about "values and attitudes." Peterson did find that "with advancing years ...interest in many and varied things outside the practice of medicine becomes more pronounced." Thus, the practitioner may become less intellectually stimulated by medicine, but it is unclear that his views about medicine -- or other



things -- become different. Even if the physicians' "values and attitudes" about medicine were different later in practice, no evidence is presented to justify Bloom's claim that "medical culture" is the crucial variable in this hypothetical change.

Becker (1961), Funkenstein (1971), Levine and Bonito (1972), Bonito and Levine (1973), as well as Schumacher (1961, 1964b), and others have been concerned with the effects of "lay culture" on the medical student at least at some times and in some schools. Additional work must be done to attain a more complex understanding of this phenomenon. In particular, there is a need for more descriptive, hypothesis-generating studies like those of Becker. Studies of physicians in practice will be crucial, although the practical barriers to such work are immense. I suspect, however, that with the advent of increased government regulation of physicians, such studies will become more frequent.

There are no published studies which examine the responses of medical students to ethical issues in medicine. Rosinski (1963) conducted a study concerned, among other things, with "the ethical attitudes" of medical students, including such "values" as "intellectual honesty," "respect for the dignity ...of man" and so on. Although the list did include "understanding of the fundamental rights of patients," the sorts of attitudes measured are the usual pious homilies that can be subscribed to by almost anyone. A few other studies only describe the various courses on medical ethics given at differ-



ent schools and related issues; these studies adhere, however, to the current notion that "every medical case has an ethics component" (Veach and Gaylin, 1972; see also Banks and Vastyan, 1973; Falk, et al, 1973; Fletcher, 1973).

The work of Kimball and Duncombe (unpublished) on the values of Yale medical students is relevant to a discussion of medical student responses to ethical issues in medicine. They found that most students in all four classes in the medical school rated "personal ethics" as of "extreme importance" to them although formal ethical and religious training were seen as less so. Most said they would feel "extremely guilty" if they caused the death of a patient. Students in all four classes were aware of social iniquities, although the greater the seniority of class, the "less strong the belief that a physician should become 'active' in the social and political issues affecting the health of patients." Only the freshmen strongly endorsed the notion of using medicine to remedy "basic social ills" and to change society. All other classes vehemently disagreed. As noted above, seniors most strongly endorsed the principle of "significant patient choice in the selection of treatment."

Despite the accumulation of voluminous data on the medical student, insufficient light has been shed on these fundamental questions:

Is the medical school a separate institution, the setting mainly for its own distinctive culture and experience? Or is the medical school the direct representative of the medical profession, a sociali-



zing agency with a major function in preparing the total physician in attitudes and values as well as in the skills and knowledge necessary for his professional role? (Bloom, 1965)

More descriptive and critical studies are needed, including sufficient work on medical practice and house officer training. Promised follow-up to the work of the Columbia (Merton) and Chicago (Becker) groups has not appeared to the extent anticipated.

In addition, we need to examine the effect of "lay cultural" processes on the medical student and practitioner. Implicit in the study of Funkenstein (1971) is the idea that medical students may be influenced in their development by social forces far beyond the confines of the medical school. These may already have had considerable effect on students' attitudes towards medicine and its practice prior to entrance to medical school and also may influence them during their training.

My findings do not permit me to offer definitive conclusions about these issues. Hopefully, this study will help to develop a better framework for the scrutiny of these critical problems.



METHODOLOGY OF THE STUDY

A questionnaire was distributed to all members of the first and fourth year classes of the Yale University School of Medicine on their arrival at registration in September, 1974. In addition, twenty-one randomly selected students -- ten from the first year class and eleven from the fourth year class -- were administered an interview of approximately one hour in length concerning their answers to the questionnaire. Prior to answering the questionnaire, the students were asked to provide such data as sex, age, religion, college major, area of future medical specialization, etc. A section was included for those students who wished to supply additional comments. The first year students were also given a glossary of certain medical terms appearing in the questionnaire.

The questionnaire itself consists of six vignettes. Each vignette is accompanied by five answers which describe possible responses to that vignette. The respondents were asked to rank the answers from best to worst. This questionnaire is modeled on that used by Friedenberg (1963) in his study of high school students. A study of medical students using a somewhat similar design was conducted by Rezler (1971) and is described in the previous section.

The vignettes cover a range of issues like malpractice, care of the terminally ill, appropriateness of rules governing patient activity on a psychiatric ward, etc. Although none of the six sections of the study were conceived to be in



exact parallel with one another, the answers to them were designed to elicit responses to a number of themes. Among these are willingness to go directly to patients with information about controversial aspects of their care; willingness to involve patients in their own treatment; preference for consultation with superiors in the medical hierarchy before or instead of these actions; willingness to "go outside of the system;" choices between activity and passivity in a given situation; etc.

The six vignettes and the answers to each one are reproduced below. The instructions for each section were exactly the same and were as follows:

On the following page are a list of actions the student might take in these circumstances. While it is true he might undertake to perform a combination of these or something entirely different, disregard this. For the moment, think only in terms of each of these as separate and alternative actions. A blank sheet of paper is provided along with your answer sheet so that you may write in alternatives of your own devising. Please read all the answers through thoughtfully. Then, having read them through:

- 1) Select the one answer which you feel represents the best action that could have been taken under the circumstances at that time. Mark this selection with a "B" on your answer sheet in the appropriate space. (That is, if, for example, you think answer I-#1 is best, mark "B" in the space next to #1 on your answer sheet).
- 2) Select the one answer which you feel represents the worst action and mark a "W" in a similar fashion in the appropriate space on your answer sheet.
- 3) Returning to the answers remaining, rank these from best to worst indicating the best remaining choice with a "#1," the next-best



remaining with a #2," and the worst remaining with a #3." On your answer sheet, mark your choices in the appropriate spaces.

The directions result in a symmetrical forced-choice distribution of B-1-2-3-W. The distribution of answers formed the basis for the interviews and for the statistical analyses. The entire questionnaire including all materials distributed to the students is reproduced in the appendix.

The Six Vignettes

Vignette #1

A medical student is taking a clerkship on a private medical service. The student becomes particularly interested in the case of a young black man suffering from Boeck's Sarcoid. The symptoms of the patient's disease can be treated non-specifically with Steroid drugs. These drugs, however, often cause side-effects as well as dependency reactions in patients using them.

Prior to falling ill, the patient was employed as a laborer. Now, however, he is too ill to work. Also, by coincidence, the patient lost his medical insurance just prior to becoming ill, although neither the patient nor his physicians were aware of this until midway through the patient's hospitalization.

The University Service at the hospital runs a special clinic for patients with this disease. New, often experimental, treatments are used in this clinic with a special emphasis on different drug therapies. The head of this service confers



with the patient's private doctor and offers to take over the care of this patient without charge. The private physician, however, refuses to transfer the patient saying that he is "interested in this disease too" and that he will make economic concessions in caring for the patient.

The student, concerned about what is best for the patient, discusses the situation with his Chief Resident and the head of the clinic. The Chief Resident tells the student that the patient would "probably be better off" in the University Service clinic. He feels, however, that the patient should be left in the care of the private physician since the latter is "quite competent" as well as "influential with the other private physicians." Besides, he says, "the private doctors are very sensitive since the University physicians often make them feel inferior." The head of the clinic adds that for this same reason, he doesn't want to look like he is "meddling" in the treatment of the patient. He adds that it is "wrong to try to steal patients from other doctors."

Answers:

1. The student shouldn't take any action. The relationship between a physician and his or her patient should not be interfered with. Besides, if the private physicians are antagonized, the care of the other patients on the ward will be made more difficult in the future.
2. The student should sit down with the private physician and discuss the situation. Perhaps the student has information the physician doesn't and vice versa. Certainly, colleagues



ought to be able to get together and work out a rational treatment plan that is best for a patient.

3. The student should tell the patient everything that has transpired. Patients have the right to be fully informed about all aspects of their care. Whenever possible, patients should make decisions themselves about who treats them and what treatment will be used.

4. The student should explain to the patient about the University Service clinic. However, he should recommend that the patient stay with the private physician. Even though the clinic is financially advantageous for the patient, he will probably wind up as a guinea pig if he gets treated there. Also, unlike in the clinic, the patient can get really personalized care from the private physician who knows him well.

5. What the student should do is to help keep the patient's bill as small as possible. By really keeping up with the patient's condition, the student can make sure that the patient is discharged from the hospital as soon as possible. Likewise, the student should remind the ward staff to consider carefully the cost of all laboratory studies and procedures before going ahead with them.

Vignette #2

A 60 year old, white male is admitted to a medical ward at the local Veterans' Hospital for work-up of a heart murmur. On physical examination, the medical student discovers signs of other chronic diseases in addition to hearing the heart



murmur. The patient, a long-time heavy smoker, describes getting short-of-breath after walking short distances and shows physical signs of emphysema and bronchitis. The patient also shows signs of moderately severe blockage of his carotid and femoral arteries bilaterally. He complains of pains in his calves on exertion -- most probably, thinks the student, due to impaired blood flow to the legs -- and of episodes of dizziness, reversible one-sided weakness, and fainting -- most probably, surmises the student, caused or influenced by lowered blood flow to the brain due to blockage of the carotid arteries.

The consulting cardiologists undertake a Cardiac Catheterization in order to evaluate the nature of the patient's heart disease and the advisability of surgery. They discover an abnormal aortic valve, apparently the cause of the murmur, although other measurements, e.g., of pressure and blood flow within the heart give results described by the cardiologists as "equivocal" in terms of the immediate need for surgical replacement of the diseased value. The patient's coronary arteries are also visualized during this study and are described as being "unoccluded" and "generally within normal limits for a man of this age." This finding is considered quite surprising given the patient's other, peripheral, vascular disease.

There is now considerable debate among the cardiologists, the cardiovascular surgeons, and the residents and interns about the advisability of surgery. It is argued that the



study has not definitively shown sufficient cardiac compromise to warrant surgery, especially in a man who is a poor surgical risk due to his pulmonary and vascular diseases. Alternatively, it is argued that the patient's cardiac status can only decline and at a later time the patient will be an even worse risk for surgery. Finally, the cardiovascular surgeons and the cardiologists concur in a recommendation for surgery, although some of the residents and interns still express doubts. The patient agrees to undergo surgery on an elective basis, although he is informed that there is "a chance" that he may not survive the operation. The patient is transferred to the surgical service.

Some time later, after leaving her clerkship, the student discovers that the patient died during surgery. She learns that an autopsy disclosed the cause of death to have been "ligation of the Anterior Descending branch of the Left Coronary Artery, causing massive infarction of cardiac tissue." The report concludes that this probably occurred "while the replacement valve was being sutured in place with the patient on cardio-pulmonary bypass, a time when the heart vessels are poorly visualized due to the absence of blood in the heart." The student learns that the family of the patient was only told that the patient "died on the table."

Answers:

1. The student should report the circumstances of this case to the County Medical Society. All potential cases of malpractice are most properly resolved in an investigation by this



body.

2. The student should not do anything. All physicians will undoubtedly make a mistake someday which will result in harm befalling a patient. The student is no exception.
3. The student should discuss the matter with the Chief of Surgery at the Veterans' Hospital. This way the student can express her concern and perhaps provide input to help develop procedures so that such tragedies do not occur in the future.
4. The student should write an anonymous letter to the patient's family suggesting that they obtain a copy of the pathologist's autopsy report and then consider suing for malpractice. This might help the family receive just compensation for the wrongful death and also avoids jeopardizing the student's career.
5. The student should send letters to the newspapers, patients' rights organizations, and veterans' organizations informing them of what has happened. It is only by arousing public opinion that effective reforms will ever be made in the way medicine is practiced in the United States.

Vignette #3

A medical student interested in pursuing a career in psychiatry is taking a clerkship on an in-patient psychiatric service. A young man in his early twenties diagnosed as a "borderline schizophrenic" is voluntarily admitted to the ward. The staff feels that this patient "needs hospitalization very much," despite discussion in a staff meeting which



concluded with a decision that the patient was not legally "committable" under state law since he is not "dangerous to himself or others." As part of the treatment plan, the patient has been restricted to the ward and can only leave in the company of a staff member. Somewhat later on, the patient was denied all telephone privileges since it was felt that he was "abusing" the use of the telephone by making very frequent long calls to his family and friends. Now, the patient can only receive in-coming calls and his time on the phone is carefully monitored.

The general consensus among the staff is that the patient has "improved" on this regimen. The patient, himself, agrees that he "feels better now" than on admission, but has expressed unhappiness with the attempts to regulate his conduct and, in accordance with hospital procedures required by state law, he has several times given notice that he wishes to leave the hospital. Each time this occurs, members of the staff have tried to convince the patient to stay. The patient is told that he is "still in need of help" and that if he leaves the hospital now, he will "probably wind up in the state hospital." On each occasion, the patient has withdrawn his request at the last minute.

The student attends a lecture on "Legal Aspects of Mental Hospitalization." The lecturer states that it is a violation of state law for a patient to be denied access to the telephone if the patient wishes to make an out-going call. Likewise, the lecturer states that it is "illegal" for hospital



personnel to attempt to "cajole or harrass voluntary patients" to relinquish their intention to leave the hospital when notice has been given.

The student discusses the situation with his resident who says that the student's job is "to learn psychiatry, not law." He adds that the student has done "great work and is getting an excellent recommendation" but that he'd "hate to see the student distracted by side-issues."

The student approaches the Ward Chief who says that he appreciates the student's concern, but that "lawyers only understand law, not the treatment of mentally sick people." He adds that this patient is "testing" the staff to see if "limits and boundaries" can be set for his behavior. If the patient really wanted to leave, he could easily do so, notes the Chief, but the proof that the patient recognizes the need for help is that he has stayed on the ward. The Chief adds that "this kind of patient" must be carefully managed since they are at risk for becoming "completely psychotic" which greatly worsens the prognosis for "helping the patient achieve normal functioning."

Answers:

1. The student should talk to the patient and try to be supportive. The student can thus help the patient work through his negative and positive feelings about his hospitalization. After all, the ward staff has the patient's best interests at heart.



2. The student should inform the patient of the patient's legal rights as the student understands them. The student should leave it up to the patient to seek legal remedies for his situation if he so desires.
3. The student should contact the newspapers, the ACLU, and mental patients' rights organizations. By taking these actions, the student will be helping many mental patients gain their civil rights. What's important here is not so much the individual patient, but rather the reform of system-wide abuses of people's civil liberties.
4. The student should take no action. It is not to the patient's nor the student's benefit if the student antagonizes his superiors. When the student himself becomes a psychiatrist, he will be in a much better position to make real, meaningful changes in the mental health care system.
5. The student should discuss the patient's case with his friends who are students at the university law school. The patient is entitled to legal advice and the law students will know better than the medical student what is best in this complicated legal matter.

Vignette #4

A 55 year old white female from a prominent family is admitted to a private surgical service with abdominal complaints. On history, the intern finds that the patient has suffered from insidious weight loss of 20 to 30 pounds over the last few months, accompanied by loss of appetite. The



patient's physical exam is generally within normal limits. Laboratory studies, however, show that the patient's stools are "positive" for occult blood and that the patient has a lowered hemoglobin and hematocrit. X-ray studies of the bowel indicate a "poorly defined constricting lesion of the sigmoid colon."

The patient is taken to surgery. On exploration, a tumor mass is found in the region of the bowel indicated on the X-ray. The abdominal cavity is studded with small metastases. Pathological studies confirm that the tumor is of a malignant type. Because the tumor has already spread, no attempt is made to remove it. A colostomy is performed and the patient is returned to the ward. The surgeon in charge of the case tells the patient and her husband that the "operation went well" and that because of "bowel problems" a colostomy was necessary.

The patient's daughter, a physician herself, is informed, however, by the patient's surgeon and internist of the true nature of the illness. The daughter is very upset, but insists that her mother not be told saying, "mother couldn't stand the shock." The patient's brother, also a physician, is soon after informed of the real nature of the patient's condition. He, however, demands that the patient be told "the truth," although he insists this his sister's physicians carry out this task. The physicians refuse to inform the patient. Instead, however, they talk to the patient's husband and explain to him that his wife has disseminated cancer.



The husband, like the daughter, insists that the truth be kept from the patient.

Meanwhile the patient, in talking to the intern, says, "I guess things are pretty serious. Of course, the doctors are doing all they can." She adds, "Well, I've had a good life. I'm not afraid to die."

Answers:

1. The intern should discuss with the patient in full the true nature of her illness. Patients have the right to receive all information pertaining to their condition, even in the face of family objections.
2. The intern should discuss the matter with one of the hospital chaplains. These people have the greatest experience in counselling dying patients and their families. Perhaps it would be most appropriate for the chaplain to inform the patient that she has disseminated cancer.
3. The intern should be supportive of the patient and her family during a difficult time. The patient already seems to have a pretty clear idea of what's going on. Besides, as long as the patient doesn't ask directly what's wrong with her, she probably doesn't want to know.
4. The intern should sit down with the family members and explain that in his judgment, from what the patient has said, the patient already understands quite clearly that she is terminally ill. He should advise them to reconsider seriously the option of fully informing the patient. He should agree, however, to abide by the family's decision in the matter. It



would be improper for the intern to make this decision unilaterally.

5. The intern should take up the matter with the Chief of the Surgical Service. In this complicated situation, involving a prominent family, the intern should rely on people with greater experience, otherwise his own career might be jeopardized.

Vignette #5

A medical student is taking a clerkship on a medical ward. A 23 year old black man, a known sufferer from Multiple Sclerosis and the father of two small children is admitted to the service for work-up and treatment of complications of this disease, including refractory urinary retention. The patient is treated with the usual therapies, including drugs, but with inexplicably poor results. Ultimately, a trial of an experimental cholinergic-type drug gives success in managing the problem of urinary retention. This drug is administered intravenously and a special sample is sent daily from the lab. The patient has been fully informed about and has given his signed consent for the use of this experimental drug.

One evening, the resident asks the medical student if the student wishes to prepare and administer the drug. The student agrees, having seen the residents and interns give the patient the drug on several occasions. The resident asks the student if he "knows what to do" and the student assents. The resident then gives the student the bottle with the drug and



leaves the ward, saying he "has other things to do." The student then administers about 50 ml. of the drug by IV push as he has seen the house staff do it this way in the past. Within moments, the patient undergoes a complete cardiopulmonary arrest. Furious resuscitation attempts are to no avail. The patient is pronounced dead within an hour of the administration of the drug.

After an autopsy, the Chiefs of Medicine and of Pathology confer and conclude that the patient died because the drug, as sent by the lab, must be diluted by a factor of 1:400 which the student failed to do. The student thus administered an amount of drug several hundred times the therapeutic dose. The family is informed that the patient died of "sudden complications" and that "everything possible was done."

The student is then transferred to another ward to complete his clerkship. He is also reprimanded by the Chief of Medicine for not informing himself about the use of the drug. The resident is not disciplined. The Chief tells the student that the "matter is now closed." After the clerkship is over, the student learns that he has received a poor recommendation for his work during the clerkship.

Answers:

1. The student should get some psychiatric help and counselling. If he doesn't work through his guilt feelings about this unhappy incident, his effectiveness as a physician will be impaired.



2. The student shouldn't let these events deter him from pursuing his career. He should, in fact, work all the harder to prove his worth as a student. Anyway, in the future, he will probably save many lives and thus make up for his one error.
3. The student should go to the hospital Ethics Committee and demand that a full hearing be undertaken concerning the recent tragedy. He should demand full disclosure to the patient's family of what has occurred, otherwise, he will tell them himself. He should state his willingness to take responsibility for his part in the death, even if it means ruining his career.
4. The student should try to see if he can get a better recommendation for the clerkship. The school has no right to judge him so severely for one mistake that was really the result of the resident's failure to supervise the student properly. Surely the Chief of Medicine will understand how unfair it is for the student to be reprimanded while the resident gets away free.
5. The student should write an anonymous letter to the patient's family suggesting that they obtain a copy of the pathologist's report and consider suing for malpractice. The family clearly has a good strong case of malpractice here and deserves a day in court. The student won't get in much trouble if suit is brought anyway, since his superiors, not the student, are legally responsible for what has happened.



Vignette #6

A medical student is working on a surgical service. Her surgical preceptor is requested by the neurology service to perform a skin and muscle biopsy on a patient suspected to be suffering from a myopathy. All previous diagnostic studies have failed to provide sufficient information for making a definitive diagnosis. The student and her preceptor go to the neurology floor and await the pathologist who is to collect the specimen. After about twenty minutes of waiting, the pathologist has still not arrived, and the surgeon, who has a very busy schedule, decides to begin the procedure anyway. The student cautions the preceptor that perhaps they should wait. She suggests that, since the pathologist was called in -- a rather unusual occurrence -- perhaps special fixatives are to be used on the biopsy specimen. The surgeon, however, states that he can't wait any longer and that he's sure that fixing the preparation in formalin as usual will be sufficient.

Just as the surgeon is finishing the procedure, the pathologist arrives and is furious that the biopsy has been put into formalin. He wished to use a special fixative in order to make electron micrographic studies of the biopsy tissue. He states that EM studies give much better data in cases such as this. He declares that more usual preparations are "practically useless."

A heated discussion ensues between the surgeon, the pathologist, and the neurology staff. It becomes apparent



that the biopsy will have to be done again. The student is curious to know whether the patient will be charged for the second biopsy. She is told, "Of course. The work is being done, isn't it?" The student is then sent to prepare the patient for the second procedure.

Answers:

1. The student should tell the patient that the procedure must be repeated because new studies have shown that specimens taken from two different biopsy sites give much better information than those taken from only one. This will reassure the patient that his physicians are using only the most advanced techniques to work on his case.
2. Before leaving to see the patient the student should give the assembled physicians a piece of her mind. She should let them know that it's quite unfair for them to insist that the patient be charged a second time. It's bad enough that the patient has to go through the biopsy all over again. She should tell them that they seem more interested in the biopsy than in the patient's general well-being.
3. The student should explain to the patient exactly what has happened. She should note that "even doctors make mistakes." However, the student should point out that it is unfair for the patient to be billed twice for the procedure. The student should counsel the patient to pay only for one biopsy and to pursue the matter in court if the hospital or the surgeon presses for additional payment.



4. The student should only tell the patient that a second biopsy is required. If the patient asks why, the student should say something like "we need a better specimen." Later on, the student can intercede with the surgeon to make sure he only bills the patient once. This way, the patient isn't unfairly charged and will also continue to have faith in his doctors.

5. The student should merely tell the patient that another biopsy is required and attempt to be soothing and supportive if he seems upset. If the patient learns the truth, he will become mistrustful of his physicians and this will make treatment of his illness more difficult.

Typology of the Answers to the Vignettes

The answers to the six vignettes were deliberately constructed to combine actions with statements of values and attitudes. Many of the latter are verbatim reproductions or paraphrases of utterances made by students, house staff, and physicians when considering situations such as these. The complexity of the answers was purposefully designed to be provocative and stimulating to the interviewees.

For the purposes of statistical analysis, however, it is convenient to make groupings of the answers by type. Names for the answer-type groups were deliberately selected to be descriptive in character, in the hopes of avoiding the problem of "reification" of labels discussed in the previous section. The groupings are as follows:



Inform-Patient Answers

Those answers to the vignettes in which patients are approached directly by the protagonist are designated as Inform-Patient answers.

One variation of this type of answer is amplified by statements of principle concerning patients' rights to full information. Answers I-3 and IV-1 contain such statements. Answers III-2 and VI-3 do not.

Another variation of the Inform-Patient answer involves providing the families of deceased patients with information regarding their deceased relatives' medical treatment. In answer V-3, such information is provided indirectly by a special agency of the hospital social system.

Answer I-4 presents another variation of the Inform-Patient formulation. Unlike the others in this grouping, the protagonist here chooses to go beyond the straightforward presentation of information to the patient and urges upon him a certain course of action.

In all subsequent discussions, Inform-Patient answers will be used to describe all the answers in this group except I-4, unless I-4 is specifically included.

Anonymous-Letter Answers

This grouping bears a relation to the "deceased relative" form of the Inform-Patient group. Here, however, in answers II-4 and V-5, the protagonist can choose to write an anonymous letter to the family of the patient. These answers are grouped separately since they each contain a justification which is



couched in terms of the protagonist's own self-interest.

Consult-Superior Answers

This group of answers illustrates the protagonist's decisions to consult with a superior rather than make a direct approach to the patient or his family. Answers I-2, II-3, IV-5 and VI-4 are of this type.

Answer V-4 is a special variant of this type in that the student-protagonist's task here is a self-serving one. Answer IV-5 is related to this variant since it too is couched in the language of self-interest. These two answers might be seen as a kind of pair which share the self-interest dimension of the Anonymous-Letter type.

Answer VI-2 is unique among all the choices given students since it advocates the open expression of angry protest to superiors in the medical hierarchy. Note, however, that the student's anger here does not directly address resolution of the problem that stimulated the anger -- the cost and inconvenience to the patient.

No-Action Answers

In this group of responses, no intervention and the absence of action is recommended, with appropriate rationales. Answers I-1, II-2 and III-4 are of this type. Answer V-2 is a variant of this type in that the protagonist is advised to put aside the problem addressed in the vignette.

Going-Outside-the-System Answers

Answers II-5 and III-3 offer the option of "going outside



the system" by directly by-passing patients and superiors and seeking the aid of outside public or quasi-public groups. Answer II-1 is a borderline case since the County Medical Society can be seen either as part of the usual medical disciplinary hierarchy or as a separate agency whose involvement in a grievance proceeding would be relatively unusual. From the perspective of the County Medical Society as an inherent part of the professional hierarchy, this answer bears a relation to the Consult-Superior answers. Despite this ambiguity, this answer will be grouped under this heading. I will, however, return to this particular typological problem in a later section.

Consult-Third-Party Answers

Here, the protagonist may consult with persons other than patients or immediate superiors. Answers I-5, III-5, IV-2, IV-4 and V-1 are of this type. Answer IV-4 is a special case in that the patient's family is involved as the third party. Selection of this answer may more directly confront the question of informing the patient. Nonetheless, this answer does not lead inevitably to this result, although the lines of communication may be kept open.

Be-Supportive Answers

In these answers, the protagonist goes directly to the patient, not to inform but to be reassuring and comforting. Answers III-1, IV-3, VI-1 and VI-5 are of this type. In VI-1, the protagonist is counselled to deliberately deceive the



patient. It thus contrasts with VI-5 in which the protagonist is urged only to omit mention of the reason for the repeated biopsy.

Working Hypotheses

While this study was always intended to be hypothesis-generating and descriptive, I proceeded with the following working hypotheses in mind:

1. That first year students would rank higher Inform-Patient answers significantly more frequently than fourth year students.
2. That first year students would rank higher Going-Outside-of-System answers significantly more frequently than fourth year students.
3. That fourth year students would rank higher Consult-Superior answers significantly more frequently than first year students.
4. That fourth year students would rank higher No-Action answers significantly more frequently than first year students.
5. That fourth year students would rank higher Be-Supportive answers significantly more frequently than first year students.
6. That there would be no significant difference between the classes in their ranking of Consult-Third-Party and Anonymous-Letter answers.



These hypotheses were developed through the compilation of verbal reports from and observations of medical students in clinical situations.

Pre-Testing the Questionnaire

Prior to its distribution, the questionnaire was pre-tested on a small sample to assess comprehensibility, time needed for completion, etc. This pre-test sample included individuals with as well as without medical knowledge. A few minor editorial changes resulted from the pre-test. Time for completion of the questionnaire ranged from twenty minutes to forty minutes among the pre-test sample.

Interviews

Ten first year and eleven fourth year students were selected for interview by taking every tenth name from alphabetical class lists of students at the Yale University School of Medicine. A few students in each class either refused to be interviewed or could not be reached at the time the interviews were conducted. In these cases, the name of the student above the initially selected one in the class list was chosen. In one case, this second student was also unavailable for interview. In this instance, the name below that of the first student selected was used. This method is similar to that used by Kimball and Duncombe (unpublished) in their study of Yale medical students. All interviews were completed by the third week of the Fall Semester, 1974 at the Yale Medical School.

I conducted each interview in the same manner. Students



were asked to complete the questionnaire just prior to the interview. All but one student complied with this instruction. Interviews ranged in length from approximately forty-five minutes to one hour and a half. In general, although the interviews used open-ended questioning technique, they followed a similar format (Cannell and Kahn, 1968). Interviewees were asked to discuss their "thoughts, feelings, and reasoning" in ranking the answers as they did. They were also asked to discuss their responses to the separate components of the individual answers. I attempted to keep interviews neutral in tone, but occasionally opposing arguments were raised to points of view expressed in order to clarify the nature and intensity of responses.

The interviews themselves were all tape-recorded and most were transcribed. All transcriptions were checked with the recordings for accuracy.

The interview data was not scored or formally rated. Rather, the interviews were scrutinized for general themes and trends. These will be discussed after consideration of the statistical data.



STATISTICAL RESULTS

Fifty-three freshmen and fifty-two senior students returned completed questionnaires.*

These respondent groups represent approximately fifty percent of their classes.** A response of this magnitude is considered quite unusual. Studies and surveys distributed among Yale medical students in a similar manner in the past have rarely exceeded a twenty-percent return rate (Lederer, Binder, verbal communications, 1974).

Analysis of Data

The entire sample of 105 questionnaire responses was analyzed by computer using the Data-Text language (Armour and Couch, 1972). Additional programs were devised in consultation with Mr. Robert B. Killingsworth of the Office of the Provost, Yale University. Statistical methods were selected following Blalock (1972).

Demographic Data -- Characteristics of the Study Population

The following descriptive variables were studied in the respondent population: age, sex, race, religion, political identification, college major, other advanced degrees, M.D.-

*A fifty-third fourth year student submitted his answers too late to be included in the computation of the results. Several other seniors responded so incompletely as to make their answers unusable.

**First year class: 102 students; fourth year class: 106 students.



Ph.D. status, area of future specialization, age of choosing medicine as a career, father's and mother's occupations, family income, addition of written comments to the questionnaire, number of years between college graduation and medical school entry, and what was done during the interval.

Father's occupation and family income were combined to create a four-level scale of social class. Parent's occupations were categorized according to the scale devised by Hollingshead and Redlich (1958). This consists of the following groups: 1) executives and proprietors of large concerns, and major professional; 2) managers and proprietors of medium-sized businesses and lesser professionals; 3) administrative personnel of large concerns, owners of small independent businesses, and semi-professionals; 4) owners of little businesses, clerical and sales workers, and technicians; 5) skilled workers; 6) semi-skilled workers; and 7) unskilled workers (ibid). In addition to these seven categories, housewives, physicians, farmers and the unemployed were grouped separately for some of the analyses.

Chi Square tests were performed to assess possible significant differences between the classes on the descriptive variables. Where appropriate, t-tests were also performed (for example, in the analysis of family income). Similar analyses were conducted to seek out possible significant differences between the interviewed and non-interviewed groups within each class.

It had been hoped that data would be available to test



for significant differences between the respondent population and the total population of each class, at least on some of the descriptive variables. Unfortunately, due to the policy of the Yale University School of Medicine concerning confidentiality, it was impossible to acquire this information. Thus, such analyses were carried out only on the variables of sex and race, since data concerning the total population of each class could be obtained independently for these two variables.

Results

Significant differences between the respondent samples from the two classes were found on only two descriptive variables.* These were found on the following variables: area of future specialization and age of choosing medicine as a career. Differences between the classes on the former are obviously largely traceable to medical school attendance. Nonetheless, the findings concerning this variable are of interest.

Area of Future Specialization

The findings for this variable are presented in Table I. About 91% of freshmen indicated that they were undecided about a future specialty. In comparison, only about 27% of seniors

*A third descriptive variable which showed significant differences between classes would have been remarkable only if none had been found; namely, age. (Median age of freshmen: 22; median age of seniors: 25).



	CLASS		TOTAL
	1	4	
Psychiatry	1.9%	7.7%	4.8%
	1	4	5
Internal Medicine	1.9%	32.7%	17.1%
	1	17	18
Surgery	1.9%	3.8%	2.9%
	1	2	3
Obstetrics/ Gynecology		3.8%	1.9%
		2	2
Pediatrics	1.9%	5.8%	3.8%
	1	3	4
Pathology		1.9%	1.0%
		1	1
General/Fam- ily Practice	1.9%	7.7%	4.8%
	1	4	5
Undecided	90.6%	26.9%	59.0%
	48	14	62
Research		3.8%	1.9%
		2	2
OTHER		5.8%	2.9%
0		3	3
PERCENT TOTAL	50.5% 53	49.5% 52	100.0% 105

TABLE I. Area of future specialization.

$$x^2 < .001$$



were undecided. Both of these figures are quite high compared with previous studies (See for example, Donovan, et al, 1972 for data concerning recent classes at the University of Rochester School of Medicine -- a medical school which resembles Yale more than many others studied. For data from Tulane, see Lief [1971]). In part, these high figures are due to the criteria used for assigning students to the undecided group. Those students who indicated any uncertainty at all -- e.g., "probably surgery" -- were so assigned. Also classified as undecided were those who answered the question: "Have you decided yet on an area in medicine in which you will concentrate when you have finished your training? If so, what?" with a simple "No." In general, the undecided freshmen answered with the simple negative while the undecided seniors usually elaborated on their negative responses.

For the most part, the distribution of specialty choices indicated by the respondent seniors was not untypical of previous classes as judged by comparison with house-officer assignments listed in the Bulletin of the Yale University School of Medicine (1972, 1973, 1974). Compared with previous classes, future surgeons were slightly under represented in the respondent sample. On the other hand, several seniors in the undecided group indicated that they were leaning towards specializing in surgery. Also, it has been observed that there has been a recent steady decline in the percentage of Yale seniors electing to specialize in surgery (Keohane, 1975, verbal report).



Age of Choosing Medicine as a Career

There was a significant difference between the classes in the distribution of stated age at which medicine was decided upon as a career as measured by Chi Square. The median age of choice, however, fell between 18 and 20 in both classes. The latter datum corresponds closely with that found by Rogoff (in Merton, et al, 1957), especially concerning the age at which a definite decision was made to pursue medicine as a career.

The fourth year students showed a higher percentage at each extreme of the distribution of this variable -- that is, choosing medicine before age 12 and after age 20 -- although the highest percentage in both classes was found in the 18-20 year old grouping. Rogoff also found in her sample that the highest percentage of students chose medicine as a career between the ages of 18 and 20. The Chi Square data are summarized in Table II.

Rogoff presented data to show that "youthful deciders" -- those who have chosen medicine as a profession at younger ages -- may have formed a different image of the profession, namely one where "helping sick people" is perceived as more important than the "intellectual challenge of medicine." Unfortunately, the evidence she offers for this claim is not very compelling. She bases her contention on the finding that a far higher proportion of "youthful deciders" indicated -- just prior to beginning medical school -- that they would "get more personal satisfaction from successfully solving a relatively



	CLASS		TOTAL
	1	4	
Under 12	1.9%	15.4%	8.6%
	1	8	9
12-17	13.2%	7.7%	10.5%
	7	4	11
18-20	67.9%	48.1%	58.1%
	36	25	61
AGE CHOSE MEDICINE	9.4%	26.9%	
Over 20	5	14	18.1%
	7.5%	1.9%	19
No response	4	1	4.8%
			5
PERCENT TOTAL	50.5%	49.5%	100.0%
	53	52	105

TABLE II. Age of Choosing Medicine as a Career.

$$\chi^2 = .007$$

simple medical problem for a [greatly appreciative] patient [than from] solving a very complicated problem for a patient who expresses no appreciation whatsoever" (ibid).

Consideration of several factors may help explain these differences in the distribution of age of career choice between the classes. During the late 1960s college students have increasingly changed career plans during the university years, especially towards medicine and law (Funkenstein, 1971). This trend may have been especially prominent among college students graduating in 1974 (New York Times, May 16, 1974). Further, due to complex socio-economic factors, many students with advanced scientific training began seeking admission to medical schools in the late 1960s and early 1970s, although admission to graduate schools of science declined during the same period (Funkenstein, New York Times, op. cit.). It may be that, by 1974, the population of students with advanced training in science who made a relatively later decision to enter medical school has declined. For example, in the first year class, 14 students indicated that they had taken time off between college graduation and entrance to medical school, but only five of these had decided on a medical career after the age of twenty. Sixteen seniors had taken time off, but only three of these had not decided on a medical career after age 20.

Other Descriptive Variables

None of the other descriptive variables showed significant differences between the two classes. In addition, the

percentages of women and non-white students from each class in the respondent sample did not differ significantly from their percentages in the total populations of the classes under study.

Nevertheless, the data concerning several of the descriptive variables is particularly noteworthy. I will now turn to a discussion of these variables.

Religion

About 56% of seniors and about 48% of freshmen characterized themselves as atheist, agnostic, or without current religious affiliation. Several members of each class specifically described themselves as former members of a religious group (e.g. "former Jew"). Smaller numbers of first year students described themselves as atheist or agnostic. More first year students, however, indicated that they were without religious affiliation (i.e. "none"), or were "former" members of religious groups. Kimball and Duncombe (unpublished), in their study of Yale medical students, describe data not inconsistent with these findings. Their data indicate that formal or institutional religion plays little conscious part in the present lives of large numbers of Yale medical students. Virtually no difference was found in the percentages of students in each class who identified themselves as Roman Catholic, Protestant, or Jewish. These data are summarized in Table III.

RELIGION	CLASS		TOTAL
	1	4	
Roman Catholic	11.8%	8.2%	10.0%
	6	4	10
Jewish	21.6%	20.4%	21.0%
	11	10	21
Protestant	13.7%	14.3%	14.0%
	7	7	14
Atheist	9.8%	24.5%	17.0%
	5	12	17
Agnostic	19.6%	24.5%	22.0%
	10	12	22
Former Roman Catholic	2.0%		1.0%
	1		1
Former Jew	7.8%	4.1%	6.0%
	4	2	6
Former Protestant			0.0%
			0
NONE	7.8%	2.0%	5.0%
	4	1	5
OTHER	5.9%	2.0%	4.0%
	3	1	4
PERCENT TOTAL	51.0%	49.0%	100.0%
	51	49	100

TABLE III. Religion

 $\chi^2 = \text{N.S.}$

Political Affiliation

Close to 60% of students in each class designated themselves as "Liberal" politically. Only one individual -- a senior who is the oldest respondent in the study -- rated himself as a "Conservative." A somewhat higher percentage of first year students rate themselves as "Moderates." Three individuals in each class label themselves as "Radical." The remaining students gave idiosyncratic classifications, most on the leftward end of the political spectrum (For example, "radical-liberal," "maverick," "self-styled humanistic democratic socialist," etc.). Kimball and Duncombe found similar data in their study, although they report that labels of political affiliation corresponded poorly with more complex attitudes.

Thus, the "middle-of-the-road" Yale medical student of the early and mid-1970s sees himself as politically "left-of-center." It remains to be seen whether a similar trend exists at other medical schools which differ in institutional climate, geography, etc. These data are summarized in Table IV.

Social Class Data

Median family income was in the twenty to thirty thousand dollar per year range in both classes. Higher percentages of seniors' families had incomes of less than ten thousand dollars per annum. Higher percentages of freshmen families had incomes higher than forty thousand dollars per annum.

Family income data is summarized in Table V.

	CLASS		TOTAL
	1	4	
Conservative		1.9%	1.0%
		1	1
Moderate	25.0%	15.4%	20.2%
	13	8	21
Liberal	57.7%	59.6%	58.7%
	30	31	61
Radical	5.8%	5.8%	5.8%
	3	3	6
OTHER	11.5%	17.3%	14.4%
	6	9	15
PERCENT TOTAL	50.0%	50.0%	100.0%
	52	52	104

TABLE IV. Politics $\chi^2 = \text{N.S.}$

<u>Thousand Dollars/year</u>	CLASS		TOTAL
	1	4	
less than 5	4.1%	6.1%	5.1%
	2	3	5
5-10	4.1%	16.3%	10.2%
	2	8	10
10-20	24.5%	20.4%	22.4%
	12	10	22
20-30	28.6%	24.5%	26.5%
	14	12	26
FAMILY INCOME			
30-40	8.2%	12.2%	10.2%
	4	6	10
40-50	12.2%	8.2%	10.2%
	6	4	10
more than 50	18.4%	12.2%	15.3%
	9	6	15
PERCENT TOTAL	50.0%	50.0%	100.0%
	49	49	98

TABLE V. Family Income. $\chi^2 = N.S.$

Fathers' occupations clustered strongly at Hollingshead and Redlich levels 1 and 2, although the first year sample contained more children of physicians. Over 50% of the respondents' mothers were employed, although this finding is not untypical for the United States as a whole (Weaver, 1975). Most employed mothers were described as having occupations on levels 2, 3 or 4.

As might be expected, most students in the sample fell in the middle and upper class ranges on the index of social class.

Descriptive Variables of the Interview Sample

There were no significant differences between the interviewed and non-interviewed groups among fourth year respondents.

First year interviewees differed significantly from other first-year respondents only with respect to religion. The freshman interview group contained a disproportionate number of Roman Catholics and no Protestants. These data are summarized in Table VI.

Analysis of Response to the Vignettes

In this section, I will discuss the statistical results arising from the respondents' ranking of their answers to the six vignettes.

Methods

Data arising from the ranking of answers to the vignettes were studied in the following manner:

RELIGION	INTERVIEW		TOTAL
	YES	NO	
Roman Catholic	40.0%	4.9%	11.8%
	4	2	6
Jewish	10.0%	24.4%	21.6%
	1	10	11
Protestant		17.1%	13.7%
		7	7
Atheist		12.2%	9.8%
		5	5
Agnostic	20.0%	19.5%	19.6%
	2	8	10
Former Roman Catholic	10.0%		2.0%
	1		1
Former Jew	20.0%	4.9%	7.8%
	2	2	4
Former Protestant			0.0%
			0
None		9.8%	7.8%
		4	4
Other		7.3%	5.9%
		3	3
PERCENT TOTAL	19.6%	80.4%	100.0%
	10	41	51

$$X^2 = .01$$

TABLE VI. Comparison of interview and non-interview groups of freshmen students. -- Religion

First, the data was tabulated so that the total response pattern of the classes could be examined. This data is found in Table VII.

Next, Chi Square analysis was used to assess the possible significance of differing response patterns to each answer between the classes. The initial procedure here was to perform what was termed a "five-way analysis." This meant simply that answer distributions were compared using the data in its raw form, i.e., as percentage B-1-2-3-W.

After conducting the interviews and reading the written comments of respondents, it became clear that the middle rankings -- 1-2-3 -- were far more likely to be answers of exclusion. The "B" and "W" rankings represented considerably more definite choices. Thus, to minimize the effect of variation among the 1-2-3 rankings, each answer was further analyzed by grouping the middle terms together into a single "M" group. Chi Square was then performed on the ranking B-M-W ("Three-way analysis"). Finally, to exclude completely the effect of differences in the "M" grouping, a "two-way" Chi Square analysis was then performed on the "B" and "W" groups alone.

In addition, mean rankings of each answer between the classes were tabulated and compared by t-test in both the B-1-2-3-W and B-M-W form (five and three-way analyses). Means were ordered by ranking them as B-1-2-3-W for the answers to each question. Thus, a response "profile" was created for each class on every question.

Further, a "mean-ranked score" was created for the six



sections of the study in the following way. First, a ranking of B-1-2-3-W was created for the answers to each question by ordering the means of the answers for the whole sample of 105. Then each student was given a score based on the simple (Pearsonian product-moment) correlation coefficient of his answer as compared to the "mean-ranked" pattern. (Thus, a perfect match would have a coefficient = 1.00; a perfect negative correlation would be scored = -1.00). These scores were summed for each class on all six sections of the study. T-tests and analysis of variance were then performed on these results. I will take the liberty of describing the "mean-ranked score" as "modal score" throughout this report. This terminology will avoid confusion with the references to "mean rankings" of an answer, although obviously the "mean-ranked (modal) score" bears a relation to "mean rankings."*

Results

Significant differences were found between the rankings of answers by class on five of the six vignettes. On three out of the six, significant differences were found in the ranking of Inform-Patient answers. Significant differences were not shown consistently on any other answer type; however,

*The label "modal score" is not wholly incorrect. Analysis of modal patterns of answers shows that they are virtually identical with the mean rankings, although occasionally ties must be broken by more qualitative methods.



in the interest of clarity, I will discuss the results vignette by vignette, beginning with number IV.

Vignette #IV

In both classes, answer IV-4 - a Consult-Third-Party answer -- was selected as best (B) by about 60% of respondents, only 2% in either class ranking it worst (W). On this answer then, no significant difference was found.

On the Inform-Patient answer (IV-1), however, a dramatic difference was found, although not in the anticipated direction. Twenty-nine percent of seniors rated this answer best (B) compared with only 4% of freshmen; 55% of the latter rated this answer worst (W) compared with 23% of the seniors. This finding was significant at less than the .001 level on five, three and two-way Chi Square tests. Difference in mean ranking of this answer was also highly significant. On five and three-way t-test, significance was less than .001.

The Be-Supportive answer (IV-3) was ranked best by 19% of the freshmen and 2% of seniors. Six percent of freshmen and 14% of seniors considered this answer to be worst. Significance was at the .04, .01 and .005 level on the five, three and two-way Chi Square. On five and three-way t-test, difference in mean ranking was at the .04 and .005 level, respectively.

Ordered mean rankings for the two classes were W-2-1-B-3 for the freshmen and 1-3-2-B-W for the seniors. These patterns show the most marked differences of any vignette in the study.



Comparison of first and fourth year modal scores revealed a significant difference at the .04 level on t-test* for this question.

No other significant differences were found between the two classes on Vignette IV.

Vignette #V

On this vignette, only the Inform-Patient variant (V-3) showed a significant difference on Chi Square. Fifty-five percent of seniors and 33% of freshmen rated this answer best; 4% and 12% rated it worst, respectively. Significance on the three and two-way Chi Square was at the .05 level. (Five-way Chi Square showed no significant difference).

Difference in mean ranking was significant at the .02 level on five and three-way t-test for this answer.

Ordered mean rankings reflect this difference; they were 1-B-2-3-W for freshmen and 1-2-B-3-W for seniors.

Comparison of modal scores showed significant differences at the .04 level on t-test.

No other significant differences were found between the classes on Vignette V.

Vignette #VI

This vignette also showed a significant difference on the

*In comparing only two groups the F-test (analysis of variance) reduces to the t-test. Thus, the F-test and t-test values were the same (Blalock, 1972).



Inform-Patient answer (VI-3); again fourth year students regarded this answer more favorably. Forty-six percent of seniors and 21% of freshmen ranked this answer best; 12% and 23% respectively ranked it worst. All three Chi Square analyses showed significance at the .02 level. Mean ranking difference was significant at the .02 and .007 level on five and three-way t-test.

The Consult-Superior answer (VI-4) also showed significant differences on five and three-way Chi Square. (Two-way analysis was impossible since no student in either class ranked this answer worst (W). The trend was in the opposite direction, however, with 53% of first year students and 25% of fourth year students ranking this answer best (B). Chi Square was significant at the .02 and .004 levels on five and three-way analyses, respectively. Mean ranking showed significant difference at the .002 and .004 levels on five and three-way t-tests respectively.

Ordered mean rankings were W-1-2-B-3 for first year students and W-2-B-1-3 for fourth year students. T-test on the modal score data was significant at the .02 level on this vignette.

No other significant differences were found between the classes on this vignette.*

*Answer VI-5, a Be-Supportive variant, showed a significant difference only on the three-way Chi Square. This finding was probably due to the effect of the lumped middle rankings -- "M" = 96% freshmen and 81% seniors.



Vignette #I

Few significant differences were found between the classes on this vignette. The Inform-Patient answer (I-3), however, was rated best more often and worst less often by seniors. Thirty-three percent of seniors and 19% of freshmen rates this answer best; 12% and 21% rated it worst, respectively. These differences approached significance only on the two-way Chi Square (at the .07 level). Three-way t-test analysis of difference in mean ranking was also at the .07 level. Although this data is not significant, it also shows the trend seen on the vignettes discussed previously; that is, seniors rank the Inform-Patient answers best more often and worst less often than do freshmen.

Answer I-4, an Inform-Patient variant, showed a significant difference between the classes on the five-way Chi Square and five-way t-test. Significance disappeared, however, on all analyses in which the 1-2-3 answers were grouped or omitted. Thus, the significant findings on the five-way analyses were based on the disproportionate effect of the middle rankings. (In fact, the most striking difference between the classes on this answer is on the second best (1) ranking. Twenty-six of freshmen and only 4% of seniors rated this answer at this level).

Seniors did, however, on the whole rate this Inform-Patient variant lower than freshmen. Ordered mean rankings reflect this notion: for the first year group they were



W-B-1-2-3; for the fourth year students rankings were W-B-1-3-2).

T-tests on the modal score data were significant at the .04 level, however.

No other significant findings were noted on this vignette.

Vignette #II

Significant differences were found between the classes on II-2, a No-Action answer. Ten percent of seniors and 2% of freshmen rated this answer best and 12% of seniors and 25% of freshmen rated it worst. Five and two-way Chi Square showed significant differences at the .05 and .03 levels respectively. Three-way Chi Square showed no significant difference, however. Five and three-way t-tests of mean rankings showed significance at the .007 and .03 levels, respectively.

Significant differences were found on the Anonymous-Letter answer (III-4) on five and three-way Chi Square, although two-way analysis did not show significant difference. T-tests also showed no significant difference in mean ranking. This was interpreted to mean that on this answer significant differences were due to the effect of the middle ranking.

Freshmen tended to rank II-1, the Going-Outside-of-System variant, slightly higher than seniors, but this difference was not significant. II-5, the other answer of this type, showed virtually identical response patterns in the two



classes.

Modal score data showed no significant differences between the two classes.

Ordered mean rankings were also identical for the two classes: 1-2-B-3-W.

No other significant differences were noted between the classes on this vignette.

Vignette #III

Seniors rated the Going-Outside-of-System answer (III-3) worst slightly more often than freshmen. First year students ranked the Consult-Third-Party answer (III-5) best somewhat more often than seniors.

There were, however, no significant differences on any answer in Vignette III. In fact, answers in this section showed the most striking uniformity of any in the study. Ordered mean rankings were 3-1-W-3-2 for both classes.

All data concerning the responses to the six vignettes is summarized in Table VII.

Correlations Among Answer Types

To further assess the results, Pearson's product-moment correlation coefficients were computed between all the answers to the six vignettes. (For example, one could note the direction -- positive or negative -- and the level of significance of a correlation between ranking of Inform-Patient answers and Consult-Superior answers. Correlation coefficients again range from 1.00 to -1.00).



For the most part, in both classes, there is a consistent significant, positive correlation among the Inform-Patient answers. In both classes, Inform-Patient answers show a consistent, significant negative correlation with No-Action, Be-Supportive, and Consult-Third-Party answers. The latter three answer types generally show consistent significant positive correlations with each other. Inform-Patient answers show scattered significant negative correlations with Consult-Superior answers. The latter tend to show significant negative correlations with Going-Outside-of-System answers as well.*

These data were interpreted in the following manner. It appears that in both classes there is a relatively stable group that consistently favors the Inform-Patient answers. The data presented above on Chi Square, mean ranking, etc. suggests that the fourth year class has a larger contingent of this Inform-Patient group.

Further, the correlation data, as well as the other analyses presented previously, suggests that the group that rejects the Inform-Patient answers selects no single alterna-

*In the preceding section, I discussed the ambiguous nature of answer II-1. The correlation data indicate that this answer was perceived differently by the two classes. Among first year students, it shows a significant positive correlation with the Inform Patient answers. Among fourth year students, II-1 shows a significant positive correlation with the Going-Outside-of-System answers. With respect to the Consult-Superior answers, only one significant correlation is found with answer II-1: Among freshmen there was a significant negative correlation between II-1 and answer VI-4.



tive answer type. Rather, one alternate type or another may predominate, perhaps partially determined by the context of an individual vignette.

Characteristics of the Inform-Patient Group

The following method was devised to further study the existence and nature of the two groups discussed in the previous section.

Computer cards were automatically sorted to separate out those individuals who rated all of five Inform-Patients answers -- I-3, III-2, IV-1, V-3 and VI-3 -- as B, 1, or 2.

In carrying out the sorting operation, a major division occurred on answer IV-1. It was theorized that this division reflected the dramatic polarity between freshmen and senior response to this answer. Thus, sorting of cards was continued for both groups which had been created on answer IV-1. At the end of the separation procedure, three groups of individuals were found. Those who rated all five answers B, 1 or 2 were designated Group A; those who rated IV-1 low but rated the other four answers high were named Group B; the remainder were labeled Group C. These three groups were then analyzed with respect to class and other descriptive variables.

Group A consisted of 33 individuals and was made up of almost 70% seniors. Group B contained 21 persons; it was 62% freshmen. The remaining group of fifty-one persons -- about half the total sample -- consisted of almost 59% first year students. Chi Square analysis of this data was signifi-



cant at the .02 level. Table VIII summarizes this data.

Only one descriptive variable showed a significant relationship to membership in Groups A, B, or C. Chi Square analysis of these three groups by college major was significant at the .02 level. Social Science and Physical Science majors predominated in Group C. On further analysis, however, it was found that this difference was traceable to the first year class. Chi Square analysis of the distribution of college major by Groups A, B, C within each class showed no significant difference among seniors. Chi Square remained significant at the .03 level for freshmen, however, Almost all freshmen social and physical science majors were in Group C. Half the freshmen biology majors were in this group, with the remainder split almost evenly between Groups A and B. Three of the four humanities majors were in Group A. It can be noted, however, that the numbers of students in each college major category are quite small, particularly in Groups A and B.

Among seniors, six of the eight Group B members were biology majors. In Groups A and C, most college major areas were almost equally represented, although four of six physical science majors were in Group C and nine of twenty biological science majors were in Group A.

Further analysis of the descriptive variables among Groups A, B, C within each class revealed one other significant difference among freshmen. Chi Square analysis of the distribution of political labels was significant at the .04 level.



CLASS	GROUP	A	B	C	TOTAL
		1	30.3%	61.9%	58.8%
		10	13	30	53
4		69.7%	38.1%	41.2%	49.5%
		23	8	21	52
	PERCENT TOTAL	31.4% 33	20.0% 21	48.6% 51	100.0% 105

$$\chi^2 = .02$$

CLASS	GROUP	AB	C	TOTAL
		1	42.6%	58.8%
		23	30	53
4		57.4%	41.2%	49.5%
		31	21	52
	PERCENT TOTAL	51.4% 54	48.6% 51	0.0% 0
				100.0% 105

$$\chi^2 = \text{N.S.}$$

TABLE VIII. A, B, C and AB, C groupings by class
(See text for explanation)



Ten of thirteen freshmen moderates were found in Group C, although sixteen of thirty liberals were found here as well.

No other significant findings related to the descriptive variables were noted in either class on the basis of membership in Groups A, B, or C.

Since Group A freshmen differ from about 80% of their classmates in response to Vignette IV, an examination of them in terms of the descriptive variables was attempted. Only a few distinctions emerge. Group A freshmen were all white. No one in this group was older than 23. They mostly described themselves as "Liberal," "Radical," or "Other" -- only one was a "Moderate." Interestingly, over 30% of freshmen women respondents were found here compared with about 14% of the men, although Group A was equally divided between males and females. None of these distinctions showed statistical significance, however.

It was decided to combine Groups A and B together. This procedure divided the study population approximately in half with 54 students in the AB group and 51 in the Group C.

Group AB was made up of 57% seniors and 43% freshmen, with 41% seniors and 59% freshmen in Group C. This distribution was not significant on Chi Square, however. Nonetheless, a persistent trend remains showing a larger percentage of fourth year students consistently ranking Inform-Patient answers higher. This data is summarized in Table VIII.

Study of the AB and C groups with respect to the descriptive variables both among groups and among groups within

each class showed only one significant difference. In the fourth year class, all of the five M.D.-Ph.D. students were in the AB group ($X^2 = .05$). This finding seems somewhat at variance with the usual "student-culture" stereotype of this type of student as bookish, research-oriented, and unconcerned with non-technical aspects of patient care.

Among the two classes, few distinctions on the descriptive variables emerged with respect to Groups AB and C. Group C freshmen continued to show higher percentages of physical science majors, social science majors, and political moderates. Most of the freshmen Protestants were also found here.

Among seniors, Group AB was characterized by the presence of fifteen of twenty biological science majors, seven of the ten Jewish students, eight of the nine political "other" group and six of the eight students who indicated a choice of medicine as a career prior to the age of 12.*

None of these trends showed statistical significance, however.

*The last trend may bear a relation to the claim of Rogoff that the "youthful deciders" are more "people-oriented" (Rogoff, in Merton, et al, 1957). Of course the relationship between membership in groups AB or C and "people-orientation" is unclear. Indeed, even the definition of "people-orientation" is unclear and usually quite subjectively determined. Nonetheless, it would appear that the relationship of career choice to personality, individual development, and socio-economic constraints might bear further study, especially among medical students.



The most striking aspect of the AB and C groupings, however, is that, within each class, the numbers of students in the subcategories of the descriptive variables in each of the two groups is approximately equal. Thus, for example, on political affiliation among seniors, half of the moderates are in Group AB and half in Group C. Seventeen liberals are in Group AB and fourteen in Group C. As noted above, however, about 90% of the "other" category is in Group AB.

This levelling trend is notable on virtually all of the descriptive variables and in each of the classes.*

Results of the Analysis of Response to the Vignettes Among Interviewees

Interviewees' responses were submitted to five, three, and two-way Chi Square tests.

Only one answer to one vignette showed a significant difference between the interviewed and non-interviewed samples.

*The procedure used to determine membership in Groups AB and C has two major potential sources of error. First, one might err by assigning to Group AB many students who ranked many or all of the Inform-Patient answers quite low, at level 2 of the B-1-2-3-W hierarchy. On the other hand, one might assign to Group C many students who ranked all but one of the five Inform-Patient answers very high (except VI-1). Conceivably, both of these kinds of students might think quite differently about the Inform-Patient answers from other students in their groups. An attempt was made to assess these sources of error by identifying all students in Group AB who ranked three or more of the five answers under consideration at level 2 and all students in Group C who ranked only one Inform-Patient answer very low (at 3 or W). In both classes, the largest shift was among students who ranked only one Inform-Patient answer low. Thus, Group AB was enlarged. Nevertheless, the percentages of seniors and freshmen in the two groups remained virtually identical with those found by the original procedure, although as might be expected, most of the seniors moved into the Group A subsection of Group AB and most freshmen into the B subsection.



On Vignette I, answer I-3 -- an Inform-Patient answer -- was rated significantly less well by interviewed first year students. This finding was consistent on all three Chi Square tests at the .04 level. Only one first year interviewee (10%) rated this answer best (B); five (50%) rated it worst (W). The comparable findings in the non-interviewed group were nine best (21%) and six worst (14%), respectively.

In the fourth year class, no significant differences were found between the interviewees and non-interviewees in the ranking of any answer to the vignettes.

The AB, C groupings divided both interview samples roughly in half. Four first year and six fourth year students were in the AB group (three seniors and one freshman in Group A). Six freshmen and five seniors were thus consigned to Group C. The percentage of seniors to freshmen in each group is approximately that of the AB, C groupings in the whole sample.

Discussion of the Statistical Results

Before turning to a discussion of the interview data, I would briefly like to consider three possible explanations for the data described above.

The "Experience" Hypothesis

It has been suggested that first year students are less likely to select Inform-Patient answers because they are inexperienced in working with patients, feel intimidated by the possibility of making some catastrophic blunder with a



patient, feel much more unsure and uneasy about any approach to a patient than do seniors (Gewirtz, verbal communication, 1975).

There is a counter-example to this notion. In Vignette III, almost identical percentages of first and fourth year students rank the Inform-Patient answer (III-2) as Best. (33% of seniors and 34% of freshmen rank this answer best; 6% and 2% respectively rank it worst). In fact, this answer contains no additional attitudinal or rationalizing statement; it merely advocates an action to be taken. Thus, if "experience" with patients was the sole determinant of the results described, one would expect that this answer too would reflect the phenomenon. To be sure, students' attitudes towards psychiatry might be relevant in determining the pattern of answers to this vignette; obviously, no attempt was made to control for this.

I would be foolhardy to claim that experience with patients has nothing to do with the differing response patterns between the two classes. On the other hand, it seems to me doubtful that this is the only relevant variable. I will return to this point in the section on the interviews.

The "Generation Gap" Hypothesis

The second theory advanced to explain the results is based on the supposition that seniors' attitudes have been shaped by experiences during the college campus upheavels of the 1960s. Thus, they are more likely to be "activist" in

their perspective on society, the medical profession, etc. The seniors, due to their college experiences, are more radical, more committed to confrontation and social change.

The freshmen, on the other hand, are said to be vanguard of the new "silent generation" of college students. These students' attitudes have been shaped by the Nixon-era, a time of economic uncertainty, and disillusionment. They have responded by turning inward, becoming passive and apolitical. They are said to be committed to "getting ahead" and to "personal growth," not to social change (Firestone, Redlich, 1974, verbal communication).

It would take too long to attempt a discussion of the inherent assumptions in this point of view. As discussed above, Funkenstein (1971) presents data that emphasize a more complex set of factors that might influence attitudes towards certain styles of "activism" among medical students. Nonetheless, an attempt was made to examine this "generation gap" notion statistically.

All the freshmen respondents who were over the age of twenty-four were identified and their answer patterns to the vignettes compared with those of the others in their class. Unfortunately, there were only six of these older students, a very small sample indeed.

On five, three and two-way Chi Square, the answer patterns of the group of older first year students showed no significant differences from those of their fellows. Indeed, no consistent trend was noted. The older students rate some

Inform-Patient answers higher, and others lower, than their compatriots. Additionally, they show no consistent trend in their rankings of the other answer types.

Further, half of the older freshmen were found in Group AB and the remainder in Group C.

Despite the small sample size, it seems unlikely that the "generation gap" hypothesis is adequate to explain the findings presented above.

The "Future Specialty" Hypothesis

It has been noted that the personality characteristics of students selecting different specialties are different (Menninger, 1957a, 1957b; Livingston and Zimet, 1965; Yufit, 1969; Juan and Haley, 1970; etc.). Yufit argues that there are personality differences among students who select different specialties depending on orientation to "people [or to] instruments or techniques" (1969). The seniors who select Inform-Patient answers might then be more likely to be those who aspire to a "people-oriented" specialty.

An attempt was made to compare responses of seniors who differed in future specialty preference. Following Reinhardt and Gray (1972), seniors were grouped into "high-interaction" and "low-interaction" specialties, depending on the extent of "dynamic involvement on the socio-emotional level between patient and physician" in the various specialties. The "high-interaction" group consisted of future specialists in psychiatry, pediatrics, internal medicine, general family

practice, and obstetrics-gynecology. The "low-interaction" group was made up of future workers in surgery, radiology, pathology, anaesthesiology, neurology, public health, and rehabilitation medicine. These groupings are not inconsistent with those made by Yufit (1969) or by Livingston and Zimet (1965).*

Unfortunately, the "low-interaction" sample was quite small, containing only nine students. By far the largest percentage of students planned to specialize in Internal Medicine (See Table I).

There were no significant differences on any answer type between the two groups on five and three-way Chi Square. (Due to the small size of the groups, two-way Chi Square could not be performed meaningfully).

The only answer that came close to showing a significant difference between the two future specialty groups was V-2, a No-Action variant.**

*Freshmen were not studied because of the large Undecided group and because of the documented trend for change in specialty preference among many students over four years of medical school (Donovan, et al, 1972; Levine and Bonito, 1972; Bonito and Levine, 1973).

**Chi Square data was also examined for the answers to the six vignettes by future specialty choice without the low/high-interaction groupings. These data are difficult to interpret meaningfully since often very small numbers of students are involved. Only one significant difference was noted, however. Future pediatricians, family practitioners, and Undecideds were found to rank answer IV-4, a Consult-Third-Party variant best significantly more often than other specialty groups. (Five-way Chi Square at .05; three-way at .03).

AB and C grouping showed five of the nine "low interaction" group in Group C. Although low-interaction specialists were divided approximately in half by the AB, C grouping, about two-thirds of the high-interaction contingent was found in Group AB. This effect was due in large part to future specialists in Internal Medicine. Eleven out of sixteen of these students were found in Group AB.

Thus, future specialty preference seems to have comparatively little effect on the rankings of the fourth year students' answers. Nonetheless, this may be an area worth future study.

Methodological Issues

I would like to briefly address three methodological problems inherent in the statistical results.

First, it is impossible to make an assessment of longitudinal trends with the data at hand. Obviously, one would have to have studied the seniors four years ago and one would need to re-study the freshmen four years hence in order to make such an assessment. Another possibility would have been to study simultaneously all four classes presently in the medical school, an approach used with success by Becker et al (1961).

The data of Juan et al (1973) that more advanced medical students have a greater belief in cancer patients' abilities to cope with knowledge of their illness is suggestive that the differences between classes shown here does represent a

longitudinal trend. In addition, Kimball and Duncombe (unpublished) demonstrate that Yale Medical School seniors endorse most strongly "the principle of significant patient choice in the selection of treatment" compared with students in the other three classes in the medical school. Their finding also enhances the likelihood that the differences shown here are longitudinal.

One possible indication of a longitudinal effect can be discerned, however, among the trends of the descriptive variables among seniors and freshmen. The latter show the greatest polarities -- some descriptive variable categories associate very strongly with membership in Groups A, B and C. This tendency is less marked among seniors, although, to be sure, some trends emerge among them as well with respect to the descriptive variables. One interpretation might be that because of factors related to medical school attendance, membership in "lav-culture" groups based on politics or college major, for example, might assume lesser importance in the way seniors approach the vignettes. These ideas are quite speculative, of course, and must be pursued in much greater detail before any final conclusion is reached. I hope to be able to pursue this work further when the present freshmen are seniors in order to evaluate longitudinal questions in a more satisfactory manner.

Another difficulty in interpreting the results stems from the inherent design of the answers. They were deliberately created as complex, evocative units to stimulate the thinking of interviewees. Originally, the statistical section was

seen as a minor part of the study. It was to be used to evaluate the representativeness of the response of the interviewees. Since the results were so divergent from those expected, however, a rather elaborate set of statistical analyses were necessary to help organize my thinking about the interviews. Thus, due to the "multi-valency" of the individual answers, a kind of uncertainty principle is present in interpreting the findings. One is never sure whether a given answer is ranked as it is due to the action suggested or to the rationalizing attitudinal statements or both. Members of the two classes may even rank an answer the same way but might do so because of different parts of it. In the next section on the interviews, I will attempt to clarify these problems, at least with respect to some of the answers.

Summary of the Statistical Section

In summary then, in this section we have found the following:

1. With respect to the descriptive variables, first year students differed significantly from fourth year students only in the distribution of ages at which medicine was chosen as a career, although median age of choice was the same in both. Other significant differences between the classes, on the variables of age and future specialization, are thought to be related to medical school attendance.
2. First year interviewees differed significantly from their

non-interviewed counterparts only with respect to religious affiliation. No significant differences were found between interviewed and non-interviewed seniors.

3. With respect to the responses to the six vignettes, seniors ranked three Inform-Patient answers best significantly more often than the freshmen. The latter rated the same answers worst significantly more often. A fourth answer of this type showed the same trend but without statistical significance. The fifth answer of this type showed virtually no difference in ranking between classes.

Freshmen rated one Be-Supportive answer and one Consult-Superior answer best significantly more often than seniors. The latter rated the Be-Supportive answer worst significantly more often, but no student in either class rated this Consult-Superior answer worst, although significantly higher numbers of seniors rated this answer lower than freshmen.

Seniors rated one No-Action answer best significantly more often and worst significantly less often than freshmen.

Other significant differences were interpreted as being less meaningful since they could be ascribed to the effect of differing rankings between the classes at the middle levels (1-2-3) of the forced-choice distribution, not to Best and Worst rankings.

No trends emerged between the classes on the other answer types.



4. Correlation coefficient data showed a significant positive correlation between the different Inform-Patient answers. These answers in turn showed significant negative correlations with most No-Action, Be-Supportive and Consult-Third-Party answers. These three answer types generally show significant positive correlations with each other. Inform-Patient answers show occasional significant negative correlations with Consult-Superior answers. The latter tend to show significant negative correlations with Going-Outside-of-System answers. These correlations were found in both classes, although correlation data showed that at least one answer (II-1) was probably interpreted differently by the two classes: the freshmen show a significant positive correlation between this answer and Inform-Patient answers; seniors show a significant positive correlation between this answer and Going-Outside-of-System answers.
5. The two classes were divided into groups based on the ranking of the Inform-Patient answers. A group that consistently rated all but one of these answers higher was discerned. A majority of this group was made up of seniors. This result was not statistically significant, however, although among those who ranked all of the Inform-Patient answers very high, a significantly higher percentage of seniors was found.

Descriptive variables had some effect on placement

in the two groups based on ranking of the Inform-Patient answers. Senior M.D.-Ph.D. students were found in significantly higher numbers in the group that tended to rank most Inform-Patient answers higher. Political affiliation and college major seemed to have a greater effect on membership in these groups among freshmen.

6. Among interviewees, only freshmen showed a significant difference in the ranking of any of their answers from those of their remaining classmates. This significant difference occurred on only one answer to one vignette.
7. Three hypotheses that had been advanced to explain the foregoing results were considered. The effects of "experience" with patients alone, alleged membership in different socio-political "generations" between the two classes, and the importance of future specialty choice among seniors were considered. A counter-example was given to the first hypothesis; the latter two hypotheses were scrutinized statistically and were found inadequate to explain the results, although small samples were involved. The "future specialty" hypothesis was seen as having greater merit, however.
8. Methodological issues were then considered. The difficulty in assessing longitudinal trends was discussed. An "uncertainty principle" in interpreting the statistical data was described. This was due to the "multi-valency" of the answers as they were originally designed specifically for use in interviews.



In terms of the six working hypotheses described on page 65, the following conclusions are reached,

1. The first hypothesis -- that freshmen would rank Inform-Patient answers significantly higher than seniors -- is rejected.
2. The second hypothesis -- that freshmen would rank Going-Outside-of-System answers significantly higher than seniors -- is rejected.
3. The third hypothesis -- that seniors would rank Consult-Superior answers significantly higher than freshmen -- is rejected.
4. The fourth hypothesis -- that seniors would rank No-Action answers significantly higher than freshmen -- is demonstrated on only one answer.
5. The fifth hypothesis -- that seniors would rank Be-Supportive answers significantly higher than freshmen -- is rejected.
6. The sixth hypothesis -- that there would be no significant difference between the classes on Consult-Third-Party and Anonymous-Letter answers -- is demonstrated.

THE INTERVIEWS

In this section I will discuss aspects of the interview data. A comprehensive textual analysis of every interview will not be attempted here. Instead, I will impressionistically delineate a few important themes that recur. These themes help elucidate the statistical data and also reflect attitudes uniquely apparent in the interviews. I will proceed cautiously, letting the words of the interviewees speak for themselves.*

The most striking aspect of the interview data is the unique character of each students' responses. The overwhelming impression is of individuality and diversity. Each interview reflects the texture of a different personality. Indeed, one of those in the pre-test sample commented that the study protocol was like a Rorschach test. Even though the interviewees often emphasized similar themes, even sometimes used the same words, the tone and flavor of every interview is highly individual.

It will be most useful to begin thinking about the interviews in terms of the AB and C groupings described in the previous section. In the interviews, the AB group is characterized most consistently by an orientation towards the pa-

*Although about 25% of first year students and about 30% of seniors made some sort of comment on their answer sheets, I will not discuss this data. Most comments were quite brief, and the majority were addressed to methodological issues rather than to substantive questions raised by the vignettes. A few people in both classes took a great deal of time and wrote lengthy comments about their answers. The comment-writers brought up few salient points not addressed in the interviews. Thus, I will confine my discussion to the latter source of information.

tient; other issues tended to be secondary for those in this group. This primary orientation was found in both classes. This overall attitude is well summarized by one fourth year student who began his interview by saying:

First you come to the issue of the role of the medical student on a ward. And it's my feeling that the student has to, even though he's assuming a subservient position, that of low man in the ward structure, [he] has to still be attuned to the fact that patient care is the primary responsibility. Second, after that is learning how to deal with medical problems. I think that all of these situations...should be viewed in the light [of] what could you do possibly to improve the patient's situation and how can you best serve the patient, his family, and from a secondary perspective, the political implications and medical education per se (Italics added).

A freshman in Group AB concluded his interview by emphasizing similar factors, although he spoke more of patient rights than of patient care:

I must kind of comment that a lot of these were emotional responses on my part because a lot of the issues I don't know a lot about. It was hard on a couple of occasions for me to judge a situation as such. A lot of times I kind of assumed ideal conditions ...But outside of the assumptions which may or may not have been valid, -- I think that it might change after four years if I get soured...But I think it's just a matter of really attending to the rights of patients and their families and how that's most effective. What I'm wondering is if my modes of action would be as effective as I think they might be now (Italics added).

To be sure, students in C group were not unmindful of the patient or his family. In fact, they often rejected the Inform-Patient answers because they felt that some of the actions suggested would disrupt and disturb the situation of the patient in the vignette. Although these students

often stated that they were sympathetic to the Inform-Patient answers, at least in theory, they had several other major concerns.

Some C group students were especially concerned with the proper role of the student-protagonists in the vignettes. The most self-conscious exponent of this view was one fourth year student who described his ranking of answer I-2 best in the following terms:

I consider this answer the "student-in-the-role-or learner" answer. If you opt for this answer you are basically saying that the final decision in [this] situation has brought the student to face his prior responsibility...to learn something...I think ...that the student should go and try to further his education by discussing the particular instance at hand with someone who is in a superior position. And actually he is copping out of the fundamental issue involved, namely the moral question of what was right for the patient...In reality does sitting down with a superior or a teacher discussing the case really end up doing anything for the patient's cause? Generally it does not.

This student was also very conscious of the importance of authority. In question IV, he began as follows:

A: White, female. Prominant family. Abdominal symptoms. C.A. of the colon, colostomy. The patient is not told the truth. Relations are -- including a MD -- and everyone is copping out in terms of informing the patient. And you are an intern, not a student. A very important difference...Now you are an intern, in a greater position of authority so this changes the interpretation of the answers.

Q: O.K. How does it change it?

A: Take more of an active role basically.

Sensitivity to the appropriate role-position of the student and concern with authority was also expressed somewhat differently by a first year student:

As a student, I think you should stay within the profession. See the chief resident. Talk with somebody who has been around a little longer and knows a little more of the situation and try to work it out there. If you are really disturbed about something, you think something is being mishandled or proper treatment isn't being given, I think you should just pretty much stay within the profession.

Other students echoed the theme of the student "as learner" and the necessarily different roles of the student and the intern. Here is how this issue was framed by two different first-year students:

I just didn't think that the medical student studying medicine should be the person calling the lawyer on the phone. I think he should be studying the situation at this point. I think that is why he is a student...I don't think he should be telling...the doctors "Listen, to me. You're doing this all wrong." He is only a student. The student has a lot of rights and is to be respected, but up to a certain point. Maybe he... should wait until he has his degree and then say: "Now listen."

I did distinguish here [in vignette IV]... that we are talking about an intern as opposed to a medical student...This was a case where the person is in a position of responsibility and it might not be as necessary to go to the head of surgery and first discuss the matter with him.

A senior had a very different assessment of the roles of medical student and intern on the wards:

I find that on the services I've participated on, the medical student is usually the one who gets delegated in the end. Not delegated but usually does because he has more time to spend with the patients and as a result he takes it upon himself to explain a lot more things that are happening to the patient, things about his disease that he should be aware of and things like this. Whereas I think --- whether the interns are too busy or whether they've just given up on explanations and just demand that they [patients] take the following course of action. [That's] probably what happens.

Another perspective that characterized students in group C was summed up by one student who said "I have faith in talking." That is, one should attempt to work problems out through the professional hierarchy. Such students often considered these consultations necessary only as first steps, and were often skeptical that the results would be productive. Still, the emphasis several students placed on "talking" and "communication" was quite striking:

A: The trouble is the way society is structured right now...I think communication is probably the most productive, but it's way underutilized.

I: Communication between whom for example?

A: Especially between levels of staff and to [the] extent informed patients can be brought in to make their own decisions.
(Italics added)

In examining the implications of answer III-4 (in which it is suggested that when the student "becomes a psychiatrist, he will be in much better position to make real, meaningful changes in the mental health care system") this same student



commented:

A: See, I don't buy that. I think that they are changes made in his practice, maybe, or in the people he comes into contact with, but until there are more people who feel that way, I don't think that there is going to be ultimate mental health care system changes

I: So you really see that as a kind of communicative interpersonal snowballing. Do you think that's a fair summary?

A: Right.

One fourth year student emphasized both authority and communication in response to the same vignette:

If [the student] can't obtain results through the staff, and the patient still is not happy with the situation, I think it's time to go to the legal people and see what they think about it. Maybe they can give him advice on what his rights are...I think he should advise -- go back to the staff again and tell them what he has done. And tell them that the law people agree that this is not right and hopefully he can get the law people and the staff people together and let them work it out between themselves...[The student] doesn't have the authority, the basis to do anything anyway. But he's gotten things together and maybe [can] get an arbitration going -- it should be very helpful.

The implicit ideology of this group of students is analogous to that of the "human relations" school of sociologists discussed by Etzioni (1960). As described in the review of the literature section above, this school emphasizes the importance of establishing or re-establishing channels of communication for the solution of difficulties in a social system. Yet, when "communication" could only result in discord these students approach the problem rather differently. The last

student quoted, in discussing the fifth vignette speaks about the implications of informing the family concerning the circumstances of the patient's death:

As far as demanding full disclosure to the patient's family, about what has occurred, this could be very detrimental. Because it's like the old adage: you can't cry over spilled milk...I don't know if that's a good analogy but there's no use going through all the past as far as what can be of benefit to the future. By telling the patient's family you're just bringing up bitterness and distrust and all kinds of ramifications from that standpoint. I think the two major points are to see that the mistake doesn't happen in the hospital again by being a lesson to the hospital. That's an in-hospital situation. The other major thing is to get financial support and to care for the family on the outside. That's an outside situation. I think those two are separate and distinct. So you don't just impose on the patient's family all that's happened on the inside. You take care of that on the inside. You take care of what should be taken care of on the outside.

Note here that a distinction is made between issues pertaining to "the inside" -- "within the profession" or in this case within the hospital -- and the "outside."

Similarly, some students who favored communication disapproved of "polarizing issues."

I: I am curious about the idea of polarizing issues and what is wrong with that.

A: Polarization is wrong in the sense that you already made it divisive. If you say the issues should be discussed, that's something else...If you have a polarized issue, you don't get any, um, bridging, if you have a discussion. I think it's very difficult to have discussions among doctors, patients, students, the whole thing, without making...accusations, without being vindictive.

This view neglects the uncomfortable possibility that certain relations within a social system may be inherently conflictual.

One first year student also frequently noted the necessity of maintaining harmonious relations and paths of communication. In particular, however, he focused on the doctor-patient relationship. He too was quite aware of his role as a student in a hierarchical system.

It's...really...something [informing the patient] that should be done through the physician. I think I get some very strong feelings here [in Vignette I] which I would try to let the physician know. And I would try perhaps to let other people or perhaps, you know, talk about it with other people who care for this patient and try to get them to also approach the doctor and also some of the physician's colleagues, perhaps...I think the relationship between a physician and his or her patient should not be interfered with. I think the way you interfere with it is through the physician, that's my role in terms of having to work with this physician.

In discussing Vignette II, he remarks:

I think it would be good if the family were appraised, if they knew what was going on. But, on the other hand, it's a function of -- if they really -- it should be up to the family to ask and to persevere further ...If they want to pursue it, I think avenues are open to them.

There were two students from the AB group, one from each class, who felt that "making a little noise" confronting those in authority could sometimes be very effective. The first year student noted, referring to question III:



A: The patient voluntarily came into the hospital. I would think that if he really voluntarily wanted to leave and he is being threatened into not leaving --by basically saying "well, if you leave, you are going smack into the big looney bin up the road" and it's the ward chief who has been doing this -- I think a little conflict between the student and this guy is necessary.

I: What did you think of the last sentence [in answer III-4]?

A: Real, meaningful changes in the mental health care system? Oh, when he becomes a psychiatrist? I think that you don't have to have the credentials when something is obviously wrong to make a little noise.

Earlier this same student had remarked, in reference to question I:

Well, I think in many aspects of hospital routine you have to have -- not necessarily antagonism -- but at least healthy disagreement. Otherwise the whole purpose of the hospital and having a lot of opinions get together and everything is a failure.

The senior student who shared a similar view, when commenting on question III, answer 4, said:

I think the student does a valuable service when he provokes discussion on the ward and I think it's probably true that the student is not in a position to make a real meaningful change in the health care system because I don't think he knows enough yet. But certainly it is important for him to provoke discussions.

About answer I-1, he remarked:

That the private physician might be antagonized I think is a very poor reason for not doing anything. I don't think we're learning medicine to always be subordinate...I think that's a bad way to behave.

It has been observed that medicine in its day-to-day activities follows a model in which consensus is seen as a requirement for proper functioning. This attitude contrasts with that of the legal profession, which subscribes to an ideology of advocacy and conflict. Christie and Merton (1958) point out, however, that another part of the folklore of medicine concerns the legendary medical scientist -- the maverick thinker who perseveres through obscurity and obloquy until his ideas are ultimately -- perhaps only posthumously -- accepted.

A senior who tended to rank Inform-Patient answers at either extreme also alternated in his view of the importance of provoking discord:

A: Depending on the circumstances...the relationship between the doctor and the patient probably shouldn't be interfered with but I know I'll say that here and five minutes or another patient later, I'll be the first to go in and change that relationship. And I'll go in and say something simply because...I personally don't think... that something is being handled correctly.

I: So, it's very context-dependent?

A: Yeah, it is, very context-dependent.

In our discussion of the statistical results, the factor of "experience" with patients arose as a possible determinant of the manifest differences in the ranking Inform-Patient answers by the seniors and freshmen. Not unexpectedly, first year students almost universally voiced uncertainty about the effects of intercession with patients. The only exception

was one freshman who had had considerable experience working in paramedical fields where he was afforded responsibility for patient care. He, like the seniors, found at least some aspects of the vignettes relatively familiar. (Several other freshmen had worked as volunteers or orderlies in hospitals. They, however, differed little from their less-experienced classmates). As one first year student wondered, in relation to the fourth vignette: "I don't know if a dying patient's thought processes are like [those] of a normal, healthy patient (sic)." This uncertainty was most pronounced in the vignettes concerning the psychiatric patient and the cancer patient. Both seniors and freshmen, however, were concerned about possible deleterious effects on "emotionally unstable" or "irrational" patients if the Inform-Patient courses of action were followed. With respect to Vignette I, a freshman commented:

Compared to the others, I was more sure of the way I answered...I guess it's because it's a case where the patient is clearly responsible for what happens to him...He is in charge of his faculties (Italics added).

A senior states:

You never want to do anything that goes against the patient's wishes. If the patient doesn't really want an operation even though you know the operation is essential to the patient's life: If the patient can rationally make that decision, that's certainly a big factor, if not the factor...I think the most important problem is determining if the patient is rational to make their own decision...based on history or [presence of] psychiatric disease (Italics added).

A freshman in discussing the third vignette says:

It seemed that this particular person is more capable of handling [his] problems ...that one wouldn't have been thinking about legal rights if this was a person who couldn't have understood them for some reason (Italics added).

Another senior concerned about this aspect of "informing patients," defined "sound mind" quite broadly:

[In Vignette IV, best was] number 1. I feel strongly that if she is of sound mind and this patient apparently was and is capable of dealing with her situation -- and I get the sense that she is -- she should be fully informed as to what her illness is and there should be no reservation whatsoever unless you're dealing with a six year old child unable to cope with the situation, can't appreciate it, or an 85 year old man or woman who is again regressed to a state where it becomes an insurmountable problem (Italics added).

"Rationality" and "soundness of mind" are important concerns, yet no student examined these notions critically, although the last student cited came closest. Few wondered about how competency might be assessed other than subjectively, or through "clinical judgement" as one senior put it. No one asked whether patients might have the right to make an "irrational" decision or whether the physicians' view of "rationality" might itself be value-laden.

The students in the AB group, both freshmen and seniors expressed greater confidence in patients' abilities to tolerate information. Despite their uncertainties about approaching patients, freshmen in this group were less likely to be dissuaded from directly intervening by the cumulative weight

of their mixed emotions. They were more likely to see issues such as the students' learning, the importance of communication, and staying within channels as secondary to "attending to the rights of patients and their families." Even on Vignette IV where first year students almost universally rated approaching the patient directly as a poor choice, the flavor of the reasoning for not doing so differed between the AB and the C students.

The AB students focused on the family as the most important unit for consideration in this case. As one student put it:

Obviously here we are getting into a kind of bringing the patient's rights into a broad sphere of the family having rights ...I think it's pretty much up to the family to kind of decide. Now before we talked about the patient's determining the type of care that was to be delivered. In this situation it really isn't a question of care being delivered but making the patient as comfortable as possible.

Another agonized a bit more:

For one thing I believe that the patient has a right to be informed as much as possible exactly what is the nature of the disease and their care. On the other hand, there is a possibility that informing her might be detrimental to her. In some sense the doctor is responsible to the feelings of the family as well. I think the husband would have the most rights in this respect and he did say he wished her not to be informed.

Responses of students in the C group took the patient and the family into account, but they had other concerns as well:

I think the problem is within the family and that if you can get a consensus of family opinion which seemed to be implied in this question, the physician would abide by the family's decision, then I think it would be the best. Again it's a situation of talking with someone, seeing what they think (Italics added).

Another commented:

I said the best was that the family could make the decision...I would be interested to go back to your law students or law professors and find out what in fact the books say about the patient's right to know over family objections (Italics added).

An interesting perspective on question IV was presented by a first year student in group C who had just read Kubler-Ross's On Death and Dying (1969):

The patient most probably did know, she was probably looking for some support and all this make-believe wasn't helping her any. So...he should sit down and try to work things out --and I would almost have added -- he should work it out until he could tell her...It was difficult to make up my mind as to whether he should discuss it with the family and abide by their decision or just jump right over and tell her. Because the patient probably needed someone to talk to about this whole situation and she wasn't going to get it from anybody because her children were most probably going to stay away and smile a little bit and that would have been about it.

He ranked IV-1, the Inform-Patient answer highest of any interviewed first year student at second best. Only six other freshmen in the whole sample rated this answer as high or higher. Unlike most of his fellow freshmen, but very much like the seniors, he vehemently rejected the rationale of

answer IV-3: "Besides, as long as the patient doesn't ask directly what's wrong with her, she probably doesn't want to know."

I disagree with that mainly because of what I've read on death and dying just recently. It's obvious that she knows and probably would like someone to talk to. It's a difficult time for her and she's being sensitive to the other people and seeing that they don't want to discuss it. So she's not going to bring up the topic.*

With one other exception, it took considerable direction from the interviewer for the first year group to examine concretely the potential ambiguities in the patient's statements at the end of the section IV. Fourth year students, on the other hand, no matter how they ranked this answer, spontaneously discussed the possible multiple implications of the patient's statements in this question, often giving examples from their own experience. Indeed, most fourth year students rated IV-3 very low. They focused on the last sentence and flatly stated "I don't believe that." Fourth year students had more concrete notions of the realities of dealing with dying patients -- and their orientation to the role of the family was different in this situation. Although all were

*The only other freshman who stated he had read Kubler-Ross rated this answer (IV-3) very best. He felt that "by being supportive" one might encourage the patient to indicate her readiness to talk things over or not. Concerning the last sentence, he stated: "As far as the patient doesn't ask she doesn't want to know; that might not necessarily be true, but at the same time when she's ready to ask she will."

aware that this was a sticky situation, because of the "family's pathology," as one student put it, those who rated the Inform-Patient answer highest in this example were primarily concerned with the patient.

A: I said number one was the best, the intern should discuss with the patient and tell the full nature of the illness. I think patients always find out. They always suspect. I think it's better to play with all the cards on the table...I think it's better to tell the patient and really let him know what you're doing on the true basis of informed consent, so that they can know what's happening.

I: How did you think the family would respond to the intern doing that?

A: This particular family you might have a little bit of difficulty simply because of the way the family tree is made up with several physicians each wanting and not wanting the patient to know. However, the physician in charge still has the prerogative whether the family wants it or not. It is still the doctor's patient, not the family's patient.

Later, this student adds:

I'm really concerned about the doctor-patient representation and not...how the family feels the patient will feel. I think it's important to know that the doctor feels that my patient will feel better that he [the patient] knows or doesn't know [about his illness] not whether the family feels that...they [the patient] will feel better [if the patient is not told].

Other students were more troubled by the family's objections, and rated answer IV-4 just above answer IV-1. These students were most disturbed about agreeing to "abide by the family's decision" in answer IV-1:

But once a family has told you that they really think strongly that the patient

shouldn't be told, I don't think it's up to you to change the picture...I would be unhappy about it...That's a concession you would have to make. If you get down to a discussion with them and you've had every chance to convince them that the patient needs to be told, and they're still adamant...I don't see how you can turn around and say "Well, I discussed it with you and I don't like the game by your rules, so we'll still play by my rules..."

[For second best I picked] number 1, going and telling her. I think my only objection to that was that you circumvented the family in that situation, knowing that they really didn't want to tell her. I just think in most cases you can convince a family that the patient needs to know.

Other seniors echoed the strategy of trying to convince the patient's family. These students focused on the doctor-patient relationship as separate from the doctor-family relationship:

If you are the doctor, and you feel that the patient should be informed you should be able to convince the family, irregardless of their profession, that that is the best thing...If you really believe it then you should be able to convince them. If your argument is sound and they are people who listen. And if they are not people who listen, then you should be able to understand their family pathology well enough to put it in such a way that they would begin to see that family pathology and help them make a decision...In the end, however, ...if the family is still adamant...and you do not have the capacity to change their minds, you probably should go with the family, although I still don't like the idea. I might then go...and just tell the patient the full nature of the illness and overstep the bounds of the family and reap the consequences.

Not only did this student disagree with the notion that "[if] the patient doesn't ask, she doesn't want to know," he

also felt that "being supportive" had to be something other than a means of maintaining the status quo:

I don't agree with what they're doing. I don't support them in that sense. I wouldn't support them in that sense. To me support of the family would be getting them together and talking about it. But all the time I was getting them to seriously reconsider what was going on, I'd be learning about why it is that they don't want to tell their parents. What's in them to keep them from wanting her to know?...Why do they want to control the situation? I'd be working at that. That's what I consider support. But all the time I'd be trying to change their minds.

To be sure, other fourth year students who ranked the Inform-Patient answer lower on question IV shared with the freshmen a sense of the importance of maintaining harmony within the family in this situation.

I thought the best answer was number 4. In fact, it's almost an optimal answer... and it's nice that you made some medical expertise within the family in your protocol so that there could be a decision other than just an emotional decision on the part of the family. I think it was basically the intern saying "you know her, your mother, better than I do. I think it should be your decision coupled with mine"...The intern could word it in such a way that if the decision is made [to inform] I would be willing to make the decision, but I would like to have you there when I make it. It could really be a family type thing so they can be very supportive...

Worst was number 1, in this case. I felt that wasn't taking into account the patient and the family. On the whole idea of "right to know," it's a prototype, [sic] but I think it can also be very divisive.

Another student who shared similar sentiments noted that "Everyone has to be involved in a decision such as this." Yet,

even this student distinguished the relationship between patient and doctor from that between doctor and family.

Patient's have the right to receive all information pertinent to their condition. I don't think that's a true statement. Patient's have the right to receive all information that is pertinent to them at that time that they can handle it [and when] it will be taken in a beneficial way and is consistent with the family intent and...the doctor's intent and the doctor's information. And every situation has to be taken in itself. Every situation is unique.

Summarizing the responses to question IV, I would like to advance a tentative hypothesis about the difference between first and fourth year students in their rankings of IV-1 and IV-3. Seniors rank IV-1 higher in part because of practical experience with dying patients on their clerkships and electives, as well as from readings and discussion of the problem. They focus on the last sentence in answer IV-3 and reject it because their experience in general has been that it is incorrect. These findings, while encouraging, are not particularly earth-shaking. They resemble the findings of Juan et al (1973), discussed above, that seniors had a greater belief in cancer patients' abilities to cope with knowledge of their illness. Kimball and Duncombe's work (unpublished) showing seniors stronger endorsement of individual patient's voice in treatment may also be relevant. Beyond this finding, however, I note that there is also a change in the way seniors view the relationship between doctor (or student-doctor), patient, and third parties, such as family members. Fourth year stu-

dents, I suggest, have become increasingly committed to the notion of a one-to-one doctor-patient relation. While others may affect it, they are secondary to the fundamental relationship. First year students seem to have a more diffuse sense of the doctor-patient relationship. They tend to see themselves less as agents of individual patients, at least insofar as the significant others of the patients are concerned.

I do not suggest a radical difference in perception of patients and families between the two classes. Rather, it is my impression that the seniors are more likely to conceptualize the problem as "what is best for my patient? How can I go about doing it with (or despite) this family?" The freshmen are more likely to look upon the problem as "How can I best meet the needs of this whole family (including patient)?" To be sure, as the quotations above illustrate, these viewpoints are not completely universal within the two interview groups. I note, further, that there is no evidence to indicate that four years of medical school rather than other factors -- personality type, "experience" (e.g. reading Kubler-Ross), maturation, and so on -- accounts for this difference. But the idea bears further thought and scrutiny.

Our finding may relate to Freidson's discussion of "thoroughgoing particularism, a kind of ontological and epistemological individualism characteristic of the clinician" (1971). Freidson here disputes Parson's view that "In common

with the predominant pattern of occupational roles generally in our society [the role of the medical practitioner] is therefore, in addition to its incorporation of achievement values, universalistic..." (1951). Freidson goes on to discuss the clinician's attitude towards criticism of fellow members of the profession and discipline of those who violate codes of professional conduct both as to clinical practice and general comportment (abusers of alcohol and drugs, etc.):

While self-criticism is acceptable, criticism by others is not...Suspension of criticism is considered necessary in the light of the imputed inevitability of mistakes and also in light of the ascribed inability of the layman to accept the inevitability of mistakes...Thus all practitioners should stick together, preserving a united front against criticism by outsiders. If one practitioner cannot restrain himself from criticizing another, he should at least do it in private, to the man's face, or at worst within a closed professional circle...When bad performance is recognized by practitioners on perceiving errors or incompetence, what do they do? (ibid).

According to Freidson, the miscreant physician is usually disciplined by relatively informal means. He may be stripped of his current position but rarely is he expelled from the profession unless much publicity surrounds the case.

Several vignettes involved such issues as that of professional self-scrutiny. In particular, Vignettes V and VI showed the seniors more likely to endorse an activist stance vis-a-vis informing the patient or patient's family of the medical errors involved. Differences in approach were again noted between the AB and the C groups.

Concerning answer VI-3, an AB senior student stated:

I chose number 3 [as best]. I've done this a number of times to a patient, when I've made a mistake. I tell the patient I made a mistake. It's happened on L.P.s and on other procedures and I know it will happen to me again. And if the patient feels in the face of my mistake that he'd rather not have the study done, I think that's appropriate too...But I think you can try to put it in it's perspective and explain that it's an unfortunate mistake and it's something that should be tolerated and I'm sorry but that's that.

And an AB freshman remarked:

I think the patient has every right to have a low opinion of the medical profession if this is the way it comports itself. I really don't see anything wrong with the patient losing confidence in physicians. It seems to me that doctors aren't gods and if they are going to justify being respected, then they have to act in a respect-worthy manner. This is not a case of that. I think if the patient gets mad that's really probably the right response. I think if it happened more often, there would be fewer cases of this kind of thing.

A freshman pointed out that by following the course of action described in VI-3, the patient might actually be reassured. The patient would learn that repetition of the biopsy had not been necessitated by a finding of severe disease. A senior remarked that VI-3 might actually increase the patient's trust since he would know his physicians were "leveling with him."

A freshman who rated VI-3 worst and VI-4 best said:

I do think it's important [for patients to have faith in their doctors] and that's why I guess I answered the worst would be saying that even doctors make mistakes...

You know, it's an odd thing. I haven't personally been socialized enough to think that doctors need to protect one another. That in fact, we might find doctors saying to one another "even doctors make mistakes." But they wouldn't say it to a patient or they wouldn't use that as an explanation to a patient for a procedure that was not successful. And yet, from the patient's side of it, in overhearing people at the supermarket or at home, it's certainly a common explanation for things.

Another freshman who chose VI-4 best and VI-3 worst remarked:

The reason I liked that over the others was that he was interacting with the surgeon and not the patient who is awaiting to know whether or not he was dying. A bad mistake was made and you don't sit down with the patient and burden him with it now.

None of the group C freshmen, however, were terribly optimistic that intercession with the surgeon about the bill would be very effective. While they seemed most concerned about the effects on the patient, several wished that VI-2 had sounded more "reasonable."

Giving someone a piece of my mind. It's not a very professional way to approach people...If it had said "discussing it with other physicians" I might have been inclined to rank it higher.

A student who selected VI-2 best said:

I think speaking to the patient's physician, that would be really important...I think ideally the most important thing would be to deal with it with the physicians then and there. The next thing would be to deal with it with the patient's physician.

Seniors who rated VI-3 low usually also applauded the "even doctors make mistakes" part of the answer. They felt, however, that it was inappropriate to burden the patient about the bill, since that could be relatively easily taken care of through the surgeon. They also tended to question the timing of the announcement to the patient, although they felt it might be more appropriate later on.

Question V raises the issue of a more serious transgression against a patient. The group AB students in both classes again considered attending to the patient's family as the primary goal. C-Group students were more concerned with the effect on the student; the harm done to the family "could not be undone," they felt, so "there's no use going through all the past as far as what can be of benefit to the future." Some of the students advocated psychiatric help (V-1). Others thought that answer V-2 was more appropriate. An occasional student ranked V-4 rather high, although almost everyone else deplored it. A freshman who rated V-1 best described his thinking as follows:

I could see the student being very severely depressed and I personally don't think it was his fault. I don't think he should do anything rash to damage himself further...maybe he's got his head together so well he just realizes that everything is alright. But if he doesn't, it would be foolish to ruin a career. I think he should get some psychiatric help, counselling. Probably, I know it isn't the first mistake that has been made in the medical profession. And I don't think he should ruin a possibly valuable career because somebody else just negligently just let him do it.

A senior who ranked V-2 best discussed it as follows:

Basically the student shouldn't let this interfere with his career and that he should take this in a way that it's a very serious mistake. And he therefore should work all the harder to prove his worth and overcome his error...He's going to have to look at it from the standpoint that he will probably do a lot of good in medicine if he can learn from this mistake and go ahead from there...He's going to have to live with it and use it in the best way by saying "this has to be an example for me, and it will never happen again."

The most succinct version of the AB-Group position to the situation presented by V was provided by a freshman:

Well, I thought this one was pretty straightforward. Obviously a full confession is in order. Number 3. Hospital Ethics Committee. Obviously, the worst thing is to grub grades, Number 4...The resident is not disciplined and the Chief is saying the matter is closed. I mean this whole thing is a messed-up deal. The resident shouldn't have told the student to administer the drug. The student should refuse to in that situation to administer the drug, or at least should have figured out how to administer the drug. Killing the patient -- they figured out why the guy died and then said "well, we're going to forget it." That's wrong.

While these students felt that psychiatric help might be useful, several pointed out that the student's feelings of guilt would be quite appropriate, since a "real thing has been done." But they were universally critical of the philosophy expressed in V-2:

He's got no remorse at all. Didn't let that deter him from pursuing a

career, work hard, and he has only made one mistake so far.

In general, the AB students were more aware of the roles of the Chiefs of Medicine and Pathology who had declared the matter "closed." C students usually only recognized the involvement of the resident and the student, unless prodded by the interviewer.

One trend relevant to Freidson's contentions does emerge in this question, particularly among seniors of both AB and C groupings. As already quoted above, a student who vehemently rejected answer V-3 said:

I think the two major points are to see that the mistake doesn't happen in the hospital again by being a lesson to the hospital. That's an in-hospital situation. The other major thing is to get financial support and to care for the family on the outside. That's an outside situation...You take care [the inside situation] on the inside. You take care of what should be taken care of on the outside on the outside (Italics added).

This awareness of the "inside" and the "outside" was generally found among those who supported answer V-3.

Well, again, I think the Ethics Committee is good because it's an in-hospital organ and the staff can't really legitimately complain about that.

Or:

Again, it's back to the issue of where malpractice belongs and it's not something that should be ignored. It's not something that should be covered up. It's something that should be brought to the attention of those people who are involved with dealing with it further --

in this case, the hospital Ethics Committee...The family again has the right to be fully informed but through proper channels.

Another senior discussed the possibility of reprisals if he contacted the Ethics Committee:

But you see you're going back to the fact that doctors don't fuck over other doctors and that probably wouldn't happen...not [to those who] make mistakes, but to [those who] make trouble... Well, the squeaky wheel is greased...Right now I think that if you blow it, you gotta take care of the responsibilities. The question is, that's the student idealistically [speaking]. What if you are suddenly the surgeon and you're putting the suture in and you tie it off. Will I then want to do the same thing? I don't know. Because the question is one of an honest mistake. If I felt that I made the mistake and didn't check really where the artery was when I put that suture in and tied it off, what would I do then? I don't know. I hope I would be able to do [number] 3 here. If I felt I had checked thoroughly and I thought that I was putting the needle in the proper location and I had thought a about the location of the artery and [that it] might be right there, considering the angiograms, and I put that needle through and tied off the coronary artery, then I would not feel obligated to do this because I felt I had done my best and done the things necessary to avoid that and it happened anyway, despite my best nature, well then, O.K. But if you made a mistake and hadn't checked -- and Oh my God -- I really blew it. I hope I have the courage to do that [number 3].

The only student who proposed a systematic solution to this sort of problem was a senior who suggested that in all cases concerning deaths with an iatrogenic component, families be sent a pathologist's report. This individual was the only one interviewed who volunteered that such dilemmas might re-

quire an explicit and systematic attempt at solution.

It is clear from question V that by the time they are seniors, students distinguish between the "inside" and the "outside" of the medical world. An attitude that things are best done "through channels" on the "inside" prevails. Seniors appreciate that doctors are loath to treat erring colleagues harshly.

It is clear from the interviews on questions II and III that freshmen dislike "going-outside-of-the-system" answers as strongly as seniors. The statistics bear out this observation. A few students in each of the AB and C groups agreed -- with prodding -- that in the face of repeated, blatant negligence, internal channels having been exhausted they might with great reluctance consider "going public." Others in both the AB and C groups in both classes steadfastly maintained that they would never do so. The first year AB students, however, agreed more readily that "public opinion" might help to reform the medical profession. They were more sympathetic to the notion of "going public" than were the seniors. As one AB senior put it:

I guess I was never impressed by issues that were settled by mass hysteria. I think things can be settled in a lot better ways--by dealings in the back-room.

Granted that the "going-outside-of-system" answers are deliberately provocative -- particularly in question II where the most ambiguous set of facts is combined with the most

extreme choices.* It is interesting nonetheless that even freshmen medical students have such an aversion to these answers, even when the interviewer attempted to make them more palatable:

I: Can you imagine a circumstance where you would feel it necessary to take action like in number 5?

A: It's a terrible thing to say. But if this sort of thing, especially incompetence, happened repeatedly and nothing was done, then I think some action would need to be taken. And it's the kind of thing I would seek some support on in terms of other medical students, other people in the hospital, board of directors...(Italics added).

We cannot compare these findings to the responses of law students or other comparable groups of graduate students on issues of professional self-scrutiny. Further, we have only a small interview sample at one medical school. Freidson suggests that the unfavorable attitude of the medical practitioner to outside criticism and review is based on:

The visibility of performance [being] problematic in clinical work involving a personal and confidential service... The clinician...emphasizes his own personal responsibility...He asserts his autonomy. In addition, perhaps reacting to the extended period of supervised practice he went through in the course of his professional training, he stressed his maturity: 'I'm a big boy now,' he is

*I consider this to have been unfortunate. This is the question I would change most if I were repeating the study. The first year students found this question by far the most factually difficult to understand. Further, no answer in this question sufficiently paralleled the Inform-Patient answers of the other vignettes.

wont to say. Being supervised is synonymous with being a student. It implies not being trusted with one's responsibility. (1971).

Yet, the freshmen students in this study, three weeks into medical school, differ in degree perhaps, but hardly in kind from the seniors in their conception of the separation of "the inside" and "the outside." Is this a view common to others of their age and educational background? Are these attitudes somehow especially adaptive to the pre-medical student's life? Does this suggest an identification with the medical profession prior to entering it? Where in "lay-culture" might these views be nurtured?

Concerning Vignette II, the interviews were not very fruitful in helping to understand why the seniors ranked the No-Action strategy of II-2 significantly higher than the freshmen. Virtually every student expressed a dislike of inaction, one senior going so far as to say that he preferred "doing harm" to doing nothing. While students agreed with the second part of this answer concerning "harm befalling a patient," there was general agreement that this rationalization had no bearing on the student's response. It thus remains unclear why seniors were found to rate this answer differently from freshmen and whether this difference resulted from emphasis on one part of the answer or another.

Zola in his article, Medicine as an Institution of Social Control (1972) states that: "The change of medicine's commitment from a specific etiological model of disease to a multi-causal

one and the greater acceptance of the concepts of comprehensive medicine, psychosomatics, etc., have enormously expanded that which is or can be relevant to the understanding, treatment, and even prevention of disease." Zola theorizes that our concepts of illness are inextricably bound with moral judgements, and notes the "use of medical rhetoric and evidence to advance any cause" both among physicians and the lay public. Statements by students in both classes concerning the civil liberties of the psychiatric in-patient in Vignette III are relevant to Zola's contentions.

One senior spontaneously volunteered the following comments while discussing the third vignette:

Certainly monitoring of calls [of patients] occurs and I think that's an invasion of civil rights. I don't feel that should be occurring unless significant information [is] coming out of it. And it shouldn't be a routine thing on a patient that wouldn't be deemed dangerous to the society...I might monitor once or twice, even with [friends of the patient] in the hopes of finding some things that might be of value in terms of his therapy. I don't like the idea of it happening to me, but I know it happens... It certainly should be kept with confidentiality and no action except for therapeutic action should be taken on the basis of the phone calls. But I feel it's in the realm and jurisdiction of the physician to do that* (Italics added).

Another senior had comments in a similar vein about the relation between civil liberties and therapy although his ambiva-

*This student was the only interviewee to read the word "monitor" to mean "listen in on" rather than the intended "restrict."

lence was clearly more marked:

You may...out of necessity have to violate "civil liberties of the patient" having their best interests at heart...It may have been the same thing with the telephone -- in order to assert its authority you have to place restrictions on this particular patient and although it is against civil rights it's in his best interests and it's consistant with the therapy and mode of treatment the people had in mind...This is a very insignificant case but the potentials of getting five or six steps up the ladder where sig-nificant civil rights are being violated is the next question in [my] mind ...What I think is at stake here is the individual patient and not the civil liberties...There may be "system-wide abuses" of civil liberties but probably for good reason. But there's probably also not good reason for a lot of civil liberties abuses. This may be one of the cases. It's hard to tell.

I: How do you tell?

A: I don't know. What can one say? Clinical judgement. It's very difficult on something like this to say should one be allowed to abuse someone's civil liberties. I think yes. However, I can't define a reason when I would say yes, but then on the some reason in different circumstances, I might say no.

Two freshmen students also shared the view that "for the patient's own good" a physician might violate "civil liberties."

The first marched to the beat of one drummer in particular:

He talked to the resident and the resident tried to say "well, you know, the law is the law, but we're treating a patient"..Although they weren't in total agreement with the law, I thought the law was secondary in this situation.

I: Can you tell me a little more about that?

A: About the law being secondary? Well, I kind of believe in Henry David Thoreau's thesis that -- laws can be broken, not that they can, but should be broken if it's in the best interest to break the law.

The second freshman who advocated this point of view summarized in his own way the arguments of many psychiatrists:

I don't know if law students know better than medical students what is best in this complicated legal matter. It is a therapeutic set-up and maybe the law students say "well, what we should do is..." and then they come up with an answer which would put the patient right over the borderline and make him schizophrenic and traumatize him. Whereas the doctor, so maybe it's even a little illegal but we're helping him. It could be that if they really had his best interests at heart they might even break the law a little bit to help him.

I: How do you feel about that?

A: Breaking the law to help a patient? I may be relying on a crutch by saying it depends on the situation. It sounds a little strong -- breaking the law to help a patient. But I would prefer to stay within the law...I don't know if that is kosher, but I think I would prefer 99% of the time to stay within the law. But if it would help the patient, I would be willing to break the law to help a patient.

These last remarks are particularly poignant because, more than the others, this student is struggling to choose between conflicting ideals -- the laws of men, or the laws of the doctor.

Even some students who advocated Inform-Patient in question III and felt the patient was being unfairly treated



discounted the legal aspects of this question. A fourth year student who selected as best III-2, the Inform-Patient answer here, remarked:

Well, the legal problems are really the side-issue here. I think what's important is the patient's care and I think the reason you would get excited about them withholding phone calls is that I'm not convinced it's good care. If you find that the ward staff seems to be more interested in maintaining peace and quiet on the floor and...the patient is kind of lost in there, the individual is lost...I think the legal issue really is a side-issue. If he wants to fight after he has left the hospital and when he is completely healthy and has no other problems, I think that's O.K., but I don't think the legal issue is part of getting cured.

This student's view follows the tendency to focus on the individual patient which was discussed above relative to question IV. In this view, all is secondary to the needs of the individual patient. Here too the freshmen differ from the seniors only quantitatively, not qualitatively. Again it is unclear whether the organization of medical practice or medical school is crucial for determining these views. These findings suggest that this view of patients may be already present -- albeit in somewhat inchaote form -- in some students at the time of their entrance at least to this medical school.

This focus on individual patients reappears in student discussions of the need for change in medical care and education. We have already quoted one student who emphasized that "until more people feel that way [that care should be organized

differently], I don't think that there are going to be ultimate mental health care system changes." Both freshmen and seniors, chorused this view although one student did say:

I guess ideally I think the system-wide abuses could be best changed by starting at an individual level, although there are moments when I think what might be better would be just to legislate a change and then everybody has to stick by it whether they like it or not.

Another senior said "it might be nice if there was a system" to deal with issues like that of informing families in cases of iatrogenic death. He, however, did not see himself being involved in establishing one. The senior who was most adamant about the need for reforms still took a very individualistic view of the problem:

I don't know if they are so much policy decisions. I think it's more that young doctors have to decide for themselves where are they going to direct their energies, what kind of medicine they are going to practice and I think it's a very individual decision. I would just hope that people would make more individual decisions where the commitment would lie towards...the best possible health care delivery for the most people regardless of where is your economic standing.

Earlier, with regard to malpractice, he noted:

I think there are fairly good legal means of dealing with these problems. But the profession has to be educated and professional people have to be intelligent enough to take stands against their peers...It's part of what is wrong with modern medicine today. It's the same reason why there is no national health care. Doctors

are concerned with living in a \$100,000 house with three cars and health care delivery is a subservient issue. Add if you start questioning the validity of certain of your peers' decisions, you're letting yourself in for a great deal of flack... I hope some time in the future it won't happen. But it's a very unfortunate situation.*

At the conclusion of his interview, one very idealistic freshman offered the following views on reform of the medical profession:

I think it's just something that will have to start sort of all on its own and in ten years maybe hopefully everybody is thinking the same way and things will stop happening. But if they are going to stick to the old way, it will continue.

*This student went on, after being asked whether he thought the issue was "purely financial" to make an argument about the clinical mentality very similar to Freidson's:

I think a good part of it [is]. A lot of it is that whole ego-tripping game that a doctor can't deal with the fact that he's made decisions and some of these decisions have cost peoples' lives. Which is that he if he ever had to face that reality head on, he would perhaps encumber his ability to make future decisions. So he denied the possibility that he can make wrong decisions. And by recognizing that other people have made wrong decisions, you're in a sense admitting to your own fallibility as a doctor. And that's difficult to do. So there is a sort of ego game that you play and I think there are very real financial concerns that enter into making that kind of decision... Part of the ego game you play is adaptive and part of it is just the mystique of the omniscient doctor figure. But it always amazed me that the mystique surrounding the doctor-figure -- and it hasn't diminished in my mind in any sense. It's unfortunate and I think to a large extent it makes a difference in how we approach patients and how we deal with problems...

I: How will people start thinking in a different way?

A: Well, if this student jumps up and down it's not going to change anybody's thinking. I don't think that it would. How do you change peoples' minds? Well, probably in their education from way back, not in medical school. From way back. Choosing the people who most likely would not do these criminal, evil things.

On the question of the importance of medical education for the values and attitudes of medical students, it is clear where this student stands, at least for now. The data culled in these interviews, suggests that, at least some attitudes that have been viewed as formed by "medical" and "medical student" culture are present in nascent form among at least some entering freshmen. My work suggests that this is certainly a topic worth more detailed study.

My findings show that a larger group of fourth year students are more likely to select Inform-Patient answers. The orientation of the Inform-Patient group is primarily towards the patient, other considerations being seen by them as secondary. Not only are the seniors in this group more numerous, but they are more likely to see their responsibility and relation to the individual patient as more fundamental than responsibilities and relations to others in their own or in the patient's social world.

This study cannot predict whether the current freshmen class respondents will after four years of medical school show a pattern of response similar to that of the current

seniors. Nor can this study provide information about the response pattern of the current seniors four years ago. Even if such a longitudinal pattern could be discerned here, it still would not necessarily be valid for other classes or at other schools.

The interviewees themselves wondered about the possible effects of four years of medical school on their responses to the protocol. One freshman thought that perhaps after he knew "more medicine" he would answer differently. Other freshmen -- especially in the C group -- wondered if perhaps they would be less skittish about approaching patients later on. The AB students wondered if they might get "soured" on some activist measures. The seniors, however, generally thought that they had become less activist towards ethical issues than they were when they first entered medical school. One student thought he had become more passive during his years in school:

As you do become closer to becoming a doctor you find that some of these things were much more important to me when I came into medical school than they are now. And I guess I have come to accept human error and inadequacies more than I did when I began. I think part of it is because you are becoming part of that system and so by knocking it you are knocking yourself and that's hard to do. I think there is a lot of internal pressure not to knock the system --if you are a physician, I think there is a lot of pressure from other physicians, especially in your specialty...pressure not to criticize how things are done.

Another student was less certain about the change in his reactions over four years of medical school:

I think I can really see how my answers have changed or would have changed in looking back on what I would have been like four years ago answering the same questionnaire. I don't know. Does that mean that medical training has slanted me to think like a doctor?

I think four years ago I would have said that on a lot of the questions about full disclosure, I would have been a little more energetic as far as pursuing outside sources such as County Medical Society, American Civil Liberties, writing letters to the newspapers, writing letters to families, things like that... Now whether I would actually would have I don't know... Maybe I would have been leaning in that direction then, more than I am now -- sort of working within the system...

I: What's changed?

A: I don't know... I wonder if that's what it means when you become hardened as a physician and you don't really care any more.

In general, seniors, both interviewees and non-interviewees express surprise and skepticism when told of the results of the statistical section. They felt sure that they had become more callous, "socialized," hardened. Indeed, the working hypotheses formulated for this study -- by a senior medical student -- shared their view that senior students would be far less "activist" than freshmen.

Perhaps this perspective of the seniors is due in part to their own experiences with actual situations similar to the ones in the vignettes. If the personal anecdotes of the interviewees are any indication, these students generally remained silent; despite their condemnation of inaction, they took none. One senior commented about ranking his an-

swers to the second vignette:

'I was in a case like this, very similar. I was in something which was obviously malpractice. And I was the student on the case. So I said I might as well put down what I did which was basically nothing except talking to a lot of people about it to get rid of some of the anxiety I felt and [to] help me think about it...I feel the issues still haunt me. I still think about it.*

This student in particular almost always thought the Inform-Patient answers were best, but felt that "in reality" he would not have done them, thus he rated them generally quite low. He distinguished what he felt were his "idealistic" impulses -- what he might have done "in theory" -- from what he felt was the reality of his life as a medical student.

For the most part, the questionnaire and the interview give data on students in a situation where they can give free play to their idealism. Like that of Becker (1961; and Becker and Geer, 1958a), this study confirms that medical students remain highly idealistic to the end of their medical school training. The interviews also capture much of what Becker (1956) has termed the "repertoire of mixed emotions" of the medical student.

Provocative questions remain: Why is it that seniors perceive themselves as so different, so less likely to be "activist" than when they were freshmen? Is this a form of

*Here, perhaps, is a possible reason why seniors rated the No-Action higher than freshmen on this vignette.

"retrospective amnesia?" Is this another of the "folkways" of the medical profession? Is the question asked by the medical students described by Keniston -- "Are we leaving the human race" -- related, as Keniston posits, to "the growing awareness that they have simply stopped reacting emotionally to experiences...about which they were extremely apprehensive?" (1968) Or is it that they feel unable in reality to act on the feelings they do have -- with the concomitant sense that they have betrayed their ideals? Finally, what is the effect on these students who have tested their idealism against reality and found themselves wanting?

SUMMARY AND CONCLUSIONS

In the foregoing sections we have seen that senior medical students are more likely to endorse intervening directly with patients than are freshmen medical students.

Two distinct groups were identified on the basis of their responses to the Inform-Patient answers. The group that was more likely to rank these answers high (the AB group) contained a majority of seniors. The interviews demonstrated that the main focus of those in the Inform-Patient (AB) group was "patient care" and "patient rights."

The other group of students (the C group) while voicing a concern for patients and their families, stressed several other issues which caused them to rate the Inform-Patient answers lower. Some particularly emphasized the importance of maintaining harmonious patterns of communication; some considered the role and position of the student as paramount; others were most concerned with maintaining intact the hierarchy of medical authority. This multiple set of concerns among the C group students is reflected in the statistical results where no consistent alternative answer type emerged among those who rated Inform-Patient answers lower.

Students in both classes feared that many patients would not be able to handle full information concerning the issues raised in the vignettes. This was true of both AB and C-group students. Freshmen in general were more unsure about the effect of directly approaching patients, but the AB group

freshmen overcame these doubts more easily.

The observed difference between the classes in their ranking of the answers to the dying cancer patient vignette (#IV) was hypothesized to be due to seniors' greater experience with the dying patient and also to seniors' greater orientation toward the individual patient in their view of the doctor-patient relationship. Freshmen had a less "particularistic" view of this relation and accordingly were less likely to perceive family members and other non-patients as secondary to the individual patient's care. But the difference between the classes in their respective perceptions of patients -- as to both patients' primacy in the care relationship and patients' ability to deal with distressing information -- was merely one of degree.

Freshmen and seniors also differed in their attitudes toward informing patients of medical mistakes. Seniors generally favored informing the patient -- even those who considered doing so inappropriate in the specific instance claimed they favored the general principle.

Both seniors and freshmen eschewed notions of "going-outside-of-system," although AB group freshmen seemed slightly more tolerant of this idea. Seniors and freshmen alike shared a sense that some matters were better kept "within the profession." This finding contrasts sharply with Freidson's hypothesis that physician's rejection of public scrutiny of certain medical matters is due to the character of their training and the nature of their practice (1970).

Some students volunteered that they would be willing to violate patients' civil liberties for the patients' "own good." Even some of those who considered such an approach inappropriate in the given instance (Vignette III) remained less concerned with issues of civil liberties than with questions of patient care.

Seniors and freshmen in both AB and C groups generally felt that "reform" of the profession would mostly come from "good people" who practiced differently or who had different attitudes from their predecessors. Most ignored or explicitly rejected the idea of more systematic change imposed by laws, rules or other formal procedures.

Seniors perceived themselves as less "activist," more "socialized," and "hardened" since entrance into medical school. Freshmen already wondered if this fate would befall them. Students in both classes were found to be manifestly quite idealistic; this confirms the conclusions of Becker and his co-workers (1958a, 1958b, 1961) that senior medical students remain idealistic after four years of medical school. Seniors, in this study, however, generally described themselves as having felt unable or unwilling to act on their idealism in real situations like those presented in the vignettes. It was suggested that the nature of medical students' idealism be scrutinized in greater detail.

The large degree to which fundamental professional attitudes were found to be shared by freshmen and senior medical students raises serious issues regarding the importance of

pre-medical training and self-selection factors prior to medical school admission in shaping the attitudes of medical students.

Although this instrument used in this study has proved its usefulness, especially when combined with interview data, further, more wide-ranging, studies are called for. It is clear that the questions raised by this study cannot be answered simply by more studies of medical students.

Comparitive work on law students, nursing students, and other pre-professional, graduate, and professional students are required. Further, it is high time that systematic, critical studies are performed on the practice of physicians and the nature of the social organization of medical care.

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APPENDIX

September 1, 1974

Dear Fellow Student:

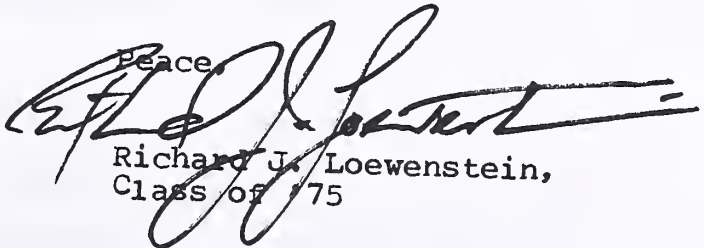
I would like to solicit your cooperation in helping me with my senior thesis. I am studying the interrelationship between medical education and physicians' responses to certain professional dilemmas. The study is being given out to all members of the first and fourth year classes, Yale Medical School.

Enclosed you will find a sort of "questionnaire" consisting of six fact situations, each no longer than a page. Following each fact situation is a listing of five different responses to each situation that the principle actor can make to it. Full directions for each situation are also included (although, in fact, the directions are the same for each section). In addition, there is a general information sheet to be filled out and returned with the answer sheet. A glossary of some medical terms appearing in the study has been appended to the first year students' packets. In practice trials, the study has taken between twenty and forty minutes to complete.

I would appreciate it very much if you would take the time to complete the study as quickly as possible and turn in your completed answer sheets to the box placed at the rear of the mail room in the medical school (Sterling Hall of Medicine). Feel free to contact me about any questions or problems that arise. My phone number is 776-1236.

Thank you very much.

Peace,



Richard J. Loewenstein,
Class of '75

P.S. I just wanted to say thanks to those fourth year students who **expressed an interest last spring** in participating in this study. Due to a change in design, it was decided to give the study to the whole first and fourth year classes, rather than fractions thereof. Interviews related to the study are being done with students randomly selected from each class.



GENERAL INFORMATION:

Please answer the following questions about yourself and hand in this completed form with your completed answer sheet. Thank you, very much.

A BOX IS PROVIDED AT THE REAR OF THE MEDICAL SCHOOL MAILROOM IN WHICH YOU SHOULD PLACE YOUR COMPLETED ANSWER SHEETS.

Med school class: _____ Age: _____ Sex: _____

Ethnic Identity: _____

Religion (Indicate if you are atheist or agnostic): _____

Year of college graduation: _____

College major: _____

Degrees other than college (e.g., Ph.D., MPH, etc.): _____

Are you an M.D.-PhD. student? _____

Have you decided yet on an area in medicine in which you will concentrate when you have finished your training? _____

If so, what? _____

Politically, do you see yourself as :

conservative _____ moderate _____ liberal _____ radical _____

other (describe) _____

If you did not go directly from college to medical school, what did you do in between? _____

How old were you when you decided to pursue a career in medicine?

Father's Profession: _____

Mother's Profession: _____

Family Income (per year): \$5000 or less _____ \$5000-\$10000 _____

\$10000-\$20000 _____ \$20000-\$30000 _____ \$30000-\$40000 _____

\$40000-\$50000 _____ more than \$50000 _____

Feel free to expand on any of your answers below: _____



ANSWER SHEET

Question I

1. ____
2. ____
3. ____
4. ____
5. ____

Question II

1. ____
2. ____
3. ____
4. ____
5. ____

Question III

1. ____
2. ____
3. ____
4. ____
5. ____

Question IV

1. ____
2. ____
3. ____
4. ____
5. ____

Question V

1. ____
2. ____
3. ____
4. ____
5. ____

Question VI

1. ____
2. ____
3. ____
4. ____
5. ____

PLEASE PUT YOUR COMPLETED ANSWER SHEET AND COMPLETED GENERAL INFORMATION FORM IN THE BOX PROVIDED AT THE REAR OF THE MEDICAL SCHOOL MAILROOM. THANK YOU VERY MUCH.

COMMENTS, ETC.:

GLOSSARY

Below you will find a series of brief definitions which may be of assistance to you in completing the study. They are presented in the order in which they appear in the text.

QUESTION # I:

Boeck's Sarcoid (Sarcoidosis): A chronic, often seriously debilitating disease of unknown cause most commonly affecting the lymph nodes, lungs, liver, spleen, eyes, parotid glands; less commonly, other organs may be affected as well.

Steroid Drugs: These are drugs related to hormones normally produced by the adrenal glands which have wide-spread effects throughout the body. The steroid drugs are not usually curative; rather, they seem to suppress the clinical manifestations of disease, although the specific reasons for this effect are unclear.

QUESTION # II:

Emphysema: A chronic lung disease in which the size of the lung air-spaces is increased beyond normal; usually related to cigarette smoking.

Bronchitis: Inflammation of the bronchi (the larger air passages in the lung). In its chronic form, also often related to cigarette smoking.

Carotid Arteries: A pair of major blood vessels located in the neck supplying blood to the face, skull, brain, etc.

Femoral Arteries: A pair of major blood vessels supplying blood to the lower abdominal wall, the external genitalia, and the legs.

Cardiac Catheterization: A procedure in which a long fine tube (catheter) is passed from a peripheral blood vessel into the chambers of the heart. X-ray and other studies can then be undertaken to assess heart function. Such studies are often made of the heart valves and the coronary arteries -- the blood vessels which supply blood to the heart muscle. These structures are made visible (visualized) by injection of dyes which show up on X-ray. It is important to assess whether the coronary arteries show any narrowing or obstruction (occlusion).

Aortic Valve: A structure that prevents backward flow of blood pumped from the left ventricle of the heart into the aorta. The coronary arteries originate in this area.

Vascular: Pertaining to the blood vessels.

Pulmonary: Pertaining to the lungs.

Ligation: Application of a constricting thread or wire to a structure.

Left Coronary Artery (Anterior Descending Branch): One of the two major branches of the left coronary artery. It supplies blood to much of the left ventricle and parts of the right ventricle of the heart.

GLOSSARY - PAGE 2

Infarction: A localized area of tissue death caused by loss of arterial supply or venous drainage to an area.

Suture: A stitch or series of stitches made to secure apposition of the edges of a surgical or accidental wound.

Cardio-Pulmonary By-Pass: A mechanical device through which blood diverted from the heart and lungs is pumped and oxygenated during open-heart surgery. This permits a relatively dry surgical field during such surgery.

QUESTION # III:

Schizophrenia: A chronic mental disorder characterized by disorders of thinking, social withdrawal, emotional blunting, as well as delusions and hallucinations. In the Borderline states, delusions and hallucinations tend to be absent and personality function remains more intact.

QUESTION # IV:

Occult Blood: Blood which has escaped from tissues in such small amounts as to only be detectable by chemical tests.

Hematocrit: A measure of the volume of Red Blood Cells in whole blood. An indirect measure of the amount of hemoglobin (see below).

Hemoglobin: The oxygen-carrying pigment of whole blood. A measure of the oxygen carrying capacity of blood. A low value indicates that anemia is present.

Sigmoid Colon: That portion of the left colon (large intestine) situated in the pelvis and extending to the rectum.

Metastases: Secondary lesions developing at some distance from the primary site.

Colostomy: Formation of an artificial opening into the colon. Often this opening is attached to the body wall, allowing the bowel to drain to the outside, rather than through the rectum.

QUESTION # V:

Multiple Sclerosis: A common chronic neurologic disease characterized by multiple scattered lesions in the brain and spinal cord. Symptoms depend on the area(s) of the nervous system affected, but often include disturbances of vision, gait, speech, coordination, perception of position, and bladder function.

Refractory: Not readily yielding to treatment.

Urinary Retention: Inability or difficulty in urinating resulting in inadequate emptying of the bladder; caused by mechanical obstruction or neurological problems.

GLOSSARY-PAGE 3:

Cholinergic Drugs: Drugs that stimulate or mimic the effects of Acetylcholine. These drugs act to increase activity of gut, bladder, and exocrine glands, as well as causing a wide variety of other effects on many tissues in the body.

IV Push: "IV" is an abbreviation for intravenous. "Push" is a term indicating that a substance given by the intravenous route is delivered in its entirety very rapidly.

Cardiopulmonary Arrest: Sudden cessation of the action of the heart and lungs.

QUESTION # VI:

Biopsy: Examination of tissue removed from the living body.

Myopathy: Any disease of muscle.

END OF GLOSSARY.

On the next page you will find the first fact situation (marked "I"). Please read it through carefully. Then, having read it through, turn to the subsequent page listing the instructions for how to proceed. After having completed the first section, continue on to the next fact situation (marked "II") and so on. There are six sections to the study. For each one you should have three pages: the fact situation, the instructions, and the answers, respectively. Be sure to mark all your answers on the answer sheet.

A medical student is taking a clerkship on a a private medical service. The student becomes particularly interested in the case of a young black man suffering from Boeck's Sarcoid. The symptoms of the patient's disease can be treated non-specifically with Steroid drugs. These drugs, however, often cause side-effects as well as dependency reactions in patients using them.

Prior to falling ill, the patient was employed as a laborer. Now, however, he is too ill to work. Also, by coincidence, the patient lost his medical insurance just prior to becoming ill, although neither the patient nor his physicians were aware of this until midway through the patient's hospitalization.

The University Service at the hospital runs a special clinic for patients with this disease. New, often experimental, treatments are used in this clinic with a special emphasis on different drug therapies. The head of this service confers with the patient's private doctor and offers to take over the care of this patient without charge. The private physician, however, refuses to transfer the patient saying that he is "interested in this disease too" and that he will make economic concessions in caring for the patient.

The student, concerned about what is best for the patient, discusses the situation with his Chief Resident and the head of the clinic. The Chief Resident tells the student that the patient would "probably be better off" in the University Service clinic. He feels, however, that the patient should be left in the care of the private physician since the latter is "quite competent" as well as "influential with the other private physicians". Besides, he says, "the private doctors are very sensitive since the University physicians often make them feel inferior". The head of the clinic adds that for this same reason, he doesn't want to look like he is "meddling" in the treatment of the patient. He adds that it is "wrong to try to steal patients from other doctors".

PLEASE TURN TO THE NEXT PAGE.

QUESTION # I -- INSTRUCTIONS:

On the following page are a list of actions the student might take in these circumstances. While it is true he might undertake to perform a combination of these or something entirely different, disregard this. For the moment, think only in terms of each of these as separate and alternative actions. A blank sheet of paper is provided along with your answer sheet so that you may write in alternatives of your own devising. Please read all the answers through thoughtfully. Then, having read them through:

- 1) Select the one answer which you feel represents the best action that could have been taken under the circumstances at that time. Mark this selection with a "B" on your answer sheet in the appropriate space. (That is, if, for example, you think answer I-#1 is best, mark "B" in the space next to #1 on your answer sheet.)
- 2) Select the one answer which you feel represents the worst action and mark a "W" in a similar fashion in the appropriate space on your answer sheet.
- 3) Returning to the answers remaining, rank these from best to worst indicating the best remaining choice with a #"1", the next-best remaining with a #"2", and the worst remaining with a #"3". On your answer sheet, mark your choices in the appropriate spaces.

Feel free to refer to the fact situation on the previous page while considering your answers.

After having filled in all your answers for this question, please turn to the next question and complete the answers for it. If you have used the blank sheet provided with the test, please remember to hand it in along with your answer sheet. Any other comments you might wish to make about the test or an individual question would be most welcome. Please use the blank sheet to record these as well.

PLEASE TURN TO THE NEXT PAGE.

ANSWERS FOR QUESTION # 1:

- 1) The student shouldn't take any action. The relationship between a physician and his or her patient should not be interfered with. Besides, if the private physicians are antagonized, the care of the other patients on the ward will be made more difficult in the future.
- 2) The student should sit down with the private physician and discuss the situation. Perhaps the student has information the physician doesn't and vice versa. Certainly, colleagues ought to be able to get together and work out a rational treatment plan that is best for a patient.
- 3) The student should tell the patient everything that has transpired. Patients have the right to be fully informed about all aspects of their care. Whenever possible, patients should make decisions themselves about who treats them and what treatments will be used.
- 4) The student should explain to the patient about the University Service clinic. However, he should recommend that the patient stay with the private physician. Even though the clinic is financially advantageous for the patient, he will probably wind up as a guinea pig if he gets treated there. Also, unlike in the clinic, the patient can get really personalized care from the private physician who knows him well.
- 5) What the student should do is to help keep the patient's bill as small as possible. By really keeping up with the patient's condition, the student can make sure that the patient is discharged from the hospital as soon as possible. Likewise, the student should remind the ward staff to consider carefully the cost of all laboratory studies and procedures before going ahead with them.

PLEASE GO ON TO THE NEXT QUESTION.

II

A 60 year old white male is admitted to a medical ward at the local Veterans' Hospital for work-up of a heart murmur. On physical examination, the medical student discovers signs of other chronic diseases in addition to hearing the heart murmur. The patient, a long-time heavy smoker, describes getting short-of-breath after walking short distances and shows physical signs of emphysema and bronchitis. The patient also shows signs of moderately severe blockage of his carotid and femoral arteries bilaterally. He complains of pains in his calves on exertion -- most probably, thinks the student, due to impaired blood flow to the legs -- and of episodes of dizziness, reversible one-sided weakness, and fainting -- most probably, surmises the student, caused or influenced by lowered blood flow to the brain due to blockage of the carotid arteries.

The consulting cardiologists undertake a Cardiac Catheterization in order to evaluate the nature of the patient's heart disease and the advisability of surgery. They discover an abnormal aortic valve, apparently the cause of the murmur, although other measurements, e.g., of pressure and blood flow within the heart give results described by the cardiologists as "equivocal" in terms of the immediate need for surgical replacement of the diseased valve. The patient's coronary arteries are also visualized during this study and are described as being "unoccluded" and "generally within normal limits for a man of this age". This finding is considered quite surprising given the patient's other, peripheral, vascular disease.

There is now considerable debate among the cardiologists, the cardiovascular surgeons, and the residents and interns about the advisability of surgery. It is argued that the study has not definitively shown sufficient cardiac compromise to warrant surgery, especially in a man who is a poor surgical risk due to his pulmonary and vascular diseases. Alternatively, it is argued that the patient's cardiac status can only decline and at a later time the patient will be an even worse risk for surgery. Finally, the cardiovascular surgeons and the cardiologists concur in a recommendation for surgery, although some of the residents and interns still express doubts. The patient agrees to undergo surgery on an elective basis, although he is informed that there is "a chance" that he may not survive the operation. The patient is transferred to the surgical service.

Some time later, after leaving his clerkship, the student discovers that the patient died during surgery. She learns that an autopsy disclosed the cause of death to have been "ligation of the Anterior Descending branch of the Left Coronary Artery, causing massive infarction of cardiac tissue". The report concludes that this probably occurred "while the replacement valve was being sutured in place with the patient on cardio-pulmonary bypass, a time when the heart vessels are poorly visualized due to the absence of blood in the heart". The student learns that the family of the patient was only told that the patient "died on the table".

PLEASE TURN TO THE NEXT PAGE.

QUESTION # II -- INSTRUCTIONS:

On the following page are a list of actions the student might take in these circumstances. While it is true she might undertake to perform a combination of these or something entirely different, disregard this. For the moment, think only in terms of each of these as separate and alternative actions. A blank sheet of paper is provided along with your answer sheet so that you may write in alternatives of your own devising. Please read all the answers through thoughtfully. Then, having read them through:

- 1) Select the one answer which you feel represents the best action that could have been taken under the circumstances at that time. Mark this selection with a "B" on your answer sheet in the appropriate space. (That is, if, for example, you think answer I-#1 is best, mark "B" in the space next to #1 on your answer sheet.)
- 2) Select the one answer which you feel represents the worst action and mark a "W" in a similar fashion in the appropriate space on your answer sheet.
- 3) Returning to the answers remaining, rank these from best to worst indicating the best remaining choice with a #"1", the next-best remaining with a #"2", and the worst remaining with a #"3". On your answer sheet, mark your choices in the appropriate spaces.

Feel free to refer to the fact situation on the previous page while considering your answers.

After having filled in all your answers for this question, please turn to the next question and complete the answers for it. If you have used the blank sheet provided with the test, please remember to hand it in along with your answer sheet. Any other comments you might wish to make about the test or an individual question would be most welcome. Please use the blank sheet to record these as well.

PLEASE TURN TO THE NEXT PAGE.

ANSWERS FOR QUESTION # II:

- 1) The student should report the circumstances of this case to the County Medical Society. All potential cases of malpractice are most properly resolved in an investigation by this body.
- 2) The student should not do anything. All physicians will undoubtedly make a mistake someday which will result in harm befalling a patient. The student is no exception.
- 3) The student should discuss the matter with the Chief of Surgery at the Veterans' Hospital. This way the student can express her concern and perhaps provide input to help develop procedures so that such tragedies do not occur in the future.
- 4) The student should write an anonymous letter to the patient's family suggesting that they obtain a copy of the pathologist's autopsy report and then consider suing for malpractice. This might help the family receive just compensation for the wrongful death and also avoids jeopardizing the student's career.
- 5) The student should send letters to the newspapers, patients' rights organizations, and veterans' organizations informing them of what has happened. It is only by arousing public opinion that effective reforms will ever be made in the way medicine is practiced in the United States.

PLEASE GO ON TO THE NEXT QUESTION.

III

A medical student interested in pursuing a career in psychiatry is taking a clerkship on an in-patient psychiatric service. A young man in his early twenties diagnosed as a "borderline schizophrenic" is voluntarily admitted to the ward. The staff feels that this patient "needs hospitalization very much", despite discussion in a staff meeting which concluded with a decision that the patient was not legally "committable" under state law since he is not "dangerous to himself or others". As part of the treatment plan, the patient has been restricted to the ward and can only leave in the company of a staff member. Somewhat later on, the patient was denied all telephone privileges since it was felt that he was "abusing" the use of the telephone by making very frequent long calls to his family and friends. Now, the patient can only receive in-coming calls and his time on the phone is carefully monitored.

The general consensus among the staff is that the patient has "improved" on this regimen. The patient, himself, agrees that he "feels better now" than on admission, but has expressed unhappiness with the attempts to regulate his conduct and, in accordance with hospital procedures required by state law, he has several times given notice that he wishes to leave the hospital. Each time this occurs, members of the staff have tried to convince the patient to stay. The patient is told that he is "still in need of help" and that if he leaves the hospital now, he will "probably wind up in the state hospital". On each occasion, the patient has withdrawn his request at the last minute.

The student attends a lecture on "Legal Aspects of Mental Hospitalization". The lecturer states that it is a violation of state law for a patient to be denied access to the telephone if the patient wishes to make an out-going call. Likewise, the lecturer states that it is "illegal" for hospital personnel to attempt to "cajole or harrass voluntary patients" to relinquish their intention to leave the hospital when notice has been given.

The student discusses the situation with his resident who says that the student's job is "to learn psychiatry, not law". He adds that the student has done "great work and is getting an excellent recommendation" but that he'd "hate to see the student distracted by side-issues".

The student approaches the Ward Chief who says that he appreciates the student's concern, but that "lawyers only understand law, not the treatment of mentally sick people". He adds that this patient is "testing" the staff to see if "limits and boundaries" can be set for his behavior. If the patient really wanted to leave, he could easily do so, notes the Chief, but the proof that the patient recognizes the need for help is that he has stayed on the ward. The Chief adds that "this kind of patient" must be carefully managed since they are at risk for becoming "completely psychotic" which greatly worsens the prognosis for "helping the patient achieve normal functioning".

QUESTION # III -- INSTRUCTIONS:

On the following page are a list of actions the student might take in these circumstances. While it is true he might undertake to perform a combination of these or something entirely different, disregard this. For the moment, think only in terms of each of these as separate and alternative actions. A blank sheet of paper is provided along with your answer sheet so that you may write in alternatives of your own devising. Please read all the answers through thoughtfully. Then, having read them through:

- 1) Select the one answer which you feel represents the best action that could have been taken under the circumstances at that time. Mark this selection with a "B" on your answer sheet in the appropriate space. (That is, if, for example, you think answer I-#1 is best, mark "B" in the space next to #1 on your answer sheet.)
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PLEASE TURN TO THE NEXT PAGE.

ANSWERS FOR QUESTION # III:

- 1) The student should talk to the patient and try to be supportive. The student can thus help the patient work through his negative and positive feelings about his hospitalization. After all, the ward staff has the patient's best interests at heart.
- 2) The student should inform the patient of the patient's legal rights as the student understands them. The student should leave it up to the patient to seek legal remedies for his situation if he so desires.

- 3) The student should contact the newspapers, the ACLU, and mental patients' rights organizations. By taking these actions, the student will be helping many mental patients gain their civil rights. What's important here is not so much the individual patient, but rather the reform of system-wide abuses of people's civil liberties.
- 4) The student should take no action. It is not to the patient's nor the student's benefit if the student antagonizes his superiors. When the student himself becomes a psychiatrist, he will be in a much better position to make real, meaningful changes in the mental health care system.
- 5) The student should discuss the patient's case with his friends who are students at the university law school. The patient is entitled to legal advice and the law students will know better than the medical student what is best in this complicated legal matter.

PLEASE GO ON TO THE NEXT QUESTION.

IV

A 55 year old white female from a prominent family is admitted to a private surgical service with abdominal complaints. On history, the intern finds that the patient has suffered from insidious weight loss of 20 to 30 pounds over the last few months, accompanied by loss of appetite. The patient's physical exam is generally within normal limits. Laboratory studies, however, show that the patient's stools are "positive" for occult blood and that the patient has a lowered hemoglobin and hematocrit. X-Ray studies of the bowel indicate a "poorly defined constricting lesion of the sigmoid colon".

The patient is taken to surgery. On exploration, a tumor mass is found in the region of the bowel indicated on the X-Ray. The abdominal cavity is studded with small metastases. Pathological studies confirm that the tumor is of a malignant type. Because the tumor has already spread, no attempt is made to remove it. A colostomy is performed and the patient is returned to the ward. The surgeon in charge of the case tells the patient and her husband that the "operation went well" and that because of "bowel problems" a colostomy was necessary.

The patient's daughter, a physician herself, is informed, however, by the patient's surgeon and internist of the true nature of the illness. The daughter is very upset, but insists that her mother not be told saying, "mother couldn't stand the shock". The patient's brother, also a physician, is soon after informed of the real nature of the patient's condition. He, however, demands that the patient be told "the truth", although he insists that his sister's physicians carry out this task. The physicians refuse to inform the patient. Instead, however, they talk to the patient's husband and explain to him that his wife has disseminated cancer. The husband, like the daughter, insists that the truth be kept from the patient.

Meanwhile, the patient, in talking to the intern, says, "I guess things are pretty serious. Of course, the doctors are doing all they can." She adds, "Well, I've had a good life. I'm not afraid to die."

PLEASE TURN TO THE NEXT PAGE.

QUESTION # IV -- INSTRUCTIONS:

On the following page are a list of actions the intern might take in these circumstances. While it is true he might undertake to perform a combination of these or something entirely different, disregard this. For the moment, think only in terms of each of these as separate and alternative actions. A blank sheet of paper is provided along with your answer sheet so that you may write in alternatives of your own devising. Please read all the answers through thoughtfully. Then, having read them through:

- 1) Select the one answer which you feel represents the best action that could have been taken under the circumstances at that time. Mark this selection with a "B" on your answer sheet in the appropriate space. (That is, if, for example, you think answer I-#1 is best, mark "B" in the space next to #1 on your answer sheet.)
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PLEASE TURN TO THE NEXT PAGE.

ANSWERS FOR QUESTION # IV:

- 1) The intern should discuss with the patient in full the true nature of her illness. Patients have the right to receive all information pertaining to their condition, even in the face of family objections.
- 2) The intern should discuss the matter with one of the hospital chaplains. These people have the greatest experience in counselling dying patients and their families. Perhaps it would be most appropriate for the chaplain to inform the patient that she has disseminated cancer.
- 3) The intern should be supportive of the patient and her family during a difficult time. The patient already seems to have a pretty clear idea of what's going on. Besides, as long as the patient doesn't ask directly what's wrong with her, she probably doesn't want to know.
- 4) The intern should sit down with the family members and explain that in his judgement, from what the patient has said, the patient already understands quite clearly that she is terminally ill. He should advise them to reconsider seriously the option of fully informing the patient. He should agree, however, to abide by the family's decision in the matter. It would be improper for the intern to make this decision unilaterally.

- 5) The intern should take up the matter with the Chief of the surgical service. In this complicated situation, involving a prominent family, the intern should rely on people with greater experience, otherwise his own career might be jeopardized.

PLEASE GO ON TO THE NEXT QUESTION.

A medical student is taking a clerkship on a medical ward. A 23 year old black man, a known sufferer from Multiple Sclerosis and the father of two small children is admitted to the service for work-up and treatment of complications of this disease, including refractory urinary retention. The patient is treated with the usual therapies, including drugs, but with inexplicably poor results. Ultimately, a trial of an experimental cholinergic-type drug gives success in managing the problem of urinary retention. This drug is administered intravenously and a special sample is sent daily from the lab. The patient has been fully informed about and has given his signed consent for the use of this experimental drug.

One evening, the resident asks the medical student if the student wishes to prepare and administer the drug. The student agrees, having seen the residents and interns give the patient the drug on several occasions. The resident asks the student if he "knows what to do" and the student assents. The resident then gives the student the bottle with the drug and leaves the ward, saying he "has other things to do". The student then administers about 50 ml. of the drug by IV push as he has seen the house staff do it this way in the past. Within moments, the patient undergoes a complete cardiopulmonary arrest. Furious resuscitation attempts are to no avail. The patient is pronounced dead within an hour of the administration of the drug.

After an autopsy, the Chiefs of Medicine and of Pathology confer and conclude that the patient died because the drug, as sent by the lab, must be diluted by a factor of 1:400. which the student failed to do. The student thus administered an amount of drug several hundred times the therapeutic dose. The family is informed that the patient died of "sudden complications" and that "everything possible was done".

The student is then transferred to another ward to complete his clerkship. He is also reprimanded by the Chief of Medicine for not informing himself about the use of the drug. The resident is not disciplined. The Chief tells the student that the "matter is now closed". After the clerkship is over, the student learns that he has received a poor recommendation for his work during the clerkship.

PLEASE TURN TO THE NEXT PAGE.

A medical student is taking a clerkship on a medical ward. A 23 year old black man, a known sufferer from Multiple Sclerosis and the father of two small children is admitted to the service for work-up and treatment of complications of this disease, including refractory urinary retention. The patient is treated with the usual therapies, including drugs, but with inexplicably poor results. Ultimately, a trial of an experimental cholinergic-type drug gives success in managing the problem of urinary retention. This drug is administered intravenously and a special sample is sent daily from the lab. The patient has been fully informed about and has given his signed consent for the use of this experimental drug.

One evening, the resident asks the medical student if the student wishes to prepare and administer the drug. The student agrees, having seen the residents and interns give the patient the drug on several occasions. The resident asks the student if he "knows what to do" and the student assents. The resident then gives the student the bottle with the drug and leaves the ward, saying he "has other things to do". The student then administers about 50 ml. of the drug by IV push as he has seen the house staff do it this way in the past. Within moments, the patient undergoes a complete cardiopulmonary arrest. Furious resuscitation attempts are to no avail. The patient is pronounced dead within an hour of the administration of the drug.

After an autopsy, the Chiefs of Medicine and of Pathology confer and conclude that the patient died because the drug, as sent by the lab, must be diluted by a factor of 1:400. which the student failed to do. The student thus administered an amount of drug several hundred times the therapeutic dose. The family is informed that the patient died of "sudden complications" and that "everything possible was done".

The student is then transferred to another ward to complete his clerkship. He is also reprimanded by the Chief of Medicine for not informing himself about the use of the drug. The resident is not disciplined. The Chief tells the student that the "matter is now closed". After the clerkship is over, the student learns that he has received a poor recommendation for his work during the clerkship.

PLEASE TURN TO THE NEXT PAGE.

QUESTION # V -- INSTRUCTIONS:

On the following page are a list of actions the student might take in these circumstances. While it is true he might undertake to perform a combination of these or something entirely different, disregard this. For the moment, think only in terms of each of these as separate and alternative actions. A blank sheet of paper is provided along with your answer sheet so that you may write in alternatives of your own devising. Please read all the answers through thoughtfully. Then, having read them through:

- 1) Select the one answer which you feel represents the best action that could have been taken under the circumstances at that time. Mark this selection with a "B" on your answer sheet in the appropriate space. (That is, if, for example, you think answer I-#1 is best, mark "B" in the space next to #1 on your answer sheet.)
- 2) Select the one answer which you feel represents the worst action and mark a "W" in a similar fashion in the appropriate space on your answer sheet.
- 3) Returning to the answers remaining, rank these from best to worst indicating the best remaining choice with a #"1", the next-best remaining with a #"2", and the worst remaining with a #"3". On your answer sheet, mark your choices in the appropriate spaces.

Feel free to refer to the fact situation on the previous page while considering your answers.

After having filled in all your answers for this question, please turn to the next question and complete the answers for it. If you have used the blank sheet provided with the test, please remember to hand it in along with your answer sheet. Any other comments you might wish to make about the test or an individual question would be most welcome. Please use the blank sheet to record these as well.

PLEASE TURN TO THE NEXT PAGE.

ANSWERS FOR QUESTION # V:

- 1) The student should get some psychiatric help and counselling. If he doesn't work through his guilt feelings about this unhappy incident, his effectiveness as a physician will be impaired.
- 2) The student shouldn't let these events deter him from pursuing his career. He should, in fact, work all the harder to prove his worth as a student. Anyway, in the future, he will probably save many lives and thus make up for his one error.
- 3) The student should go to the hospital Ethics Committee and demand that a full hearing be undertaken concerning the recent tragedy. He should demand full disclosure to the patient's family of what has occurred, otherwise, he will tell them himself. He should state his willingness to take responsibility for his part in the death, even if it means ruining his career.
- 4) The student should try to see if he can get a better commendation for the clerkship. The school has no right to judge him so severely for one mistake that was really the result of the resident's failure to supervise the student properly. Surely the Chief of Medicine will understand how unfair it is for the student to be reprimanded while the resident gets away free.
- 5) The student should write an anonymous letter to the patient's family suggesting that they obtain a copy of the pathologist's report and consider suing for malpractice. The family clearly has a good strong case of malpractice here and deserves a day in court. The student won't get in much trouble if suit is brought anyway, since his superiors, not the student, are legally responsible for what has happened.

PLEASE GO ON TO THE NEXT QUESTION.

A medical student is working on a surgical service. Her surgical preceptor is requested by the neurology service to perform a skin and muscle biopsy on a patient suspected to be suffering from a myopathy. All previous diagnostic studies have failed to provide sufficient information for making a definitive diagnosis. The student and her preceptor go to the neurology floor and await the pathologist who is to collect the specimen. After about twenty minutes of waiting, the pathologist has still not arrived, and the surgeon, who has a very busy schedule, decides to begin the procedure anyway. The student cautions the preceptor that perhaps they should wait. She suggests that, since the pathologist was called in -- a rather unusual occurrence -- perhaps special fixatives are to be used on the biopsy specimen. The surgeon, however, states that he can't wait any longer and that he's sure that fixing the preparation in formalin as usual will be sufficient.

Just as the surgeon is finishing the procedure, the pathologist arrives and is furious that the biopsy has been put into formalin. He wished to use a special fixative in order to make electron micrographic studies of the biopsy tissue. He states that EM studies give much better data in cases such as this. He declares that more usual preparations are "practically useless".

A heated discussion ensues between the surgeon, the pathologist, and the neurology staff. It becomes apparent that the biopsy will have to be done again. The student is curious to know whether the patient will be charged for the second biopsy. She is told, "Of course. The work is being done, isn't it?" The student is then sent to prepare the patient for the second procedure.

PLEASE TURN TO THE NEXT PAGE.

QUESTION # VI -- INSTRUCTIONS:

On the following page are a list of actions the student might take in these circumstances. While it is true she might undertake to perform a combination of these or something entirely different, disregard this. For the moment, think only in terms of each of these as separate and alternative actions. A blank sheet of paper is provided along with your answer sheet so that you may write in alternatives of your own devising. Please read all the answers through thoughtfully. Then, having read them through:

- 1) Select the one answer which you feel represents the best action that could have been taken under the circumstances at that time. Mark this selection with a "B" on your answer sheet in the appropriate space. (That is, if, for example, you think answer I-#1 is best, mark "B" in the space next to #1 on your answer sheet.)
- 2) Select the one answer which you feel represents the worst action and mark a "W" in a similar fashion in the appropriate space on your answer sheet.
- 3) Returning to the answers remaining, rank these from best to worst indicating the best remaining choice with a #"1", the next-best remaining with a #"2", and the worst remaining with a #"3". On your answer sheet, mark your choices in the appropriate spaces.

Feel free to refer to the fact situation on the previous page while considering your answers.

After having filled in all your answers for this question, please turn to the next question and complete the answers for it. If you have used the blank sheet provided with the test, please remember to hand it in along with your answer sheet. Any other comments you might wish to make about the test or an individual question would be most welcome. Please use the blank sheet to record these as well.

PLEASE TURN TO THE NEXT PAGE.

ANSWERS FOR QUESTION # VI:

- 1) The student should tell the patient that the procedure must be repeated because new studies have shown that specimens taken from two different biopsy sites give much better information than those taken from only one. This will reassure the patient that his physicians are using only the most advanced techniques to work on his case.
- 2) Before leaving to see the patient the student should give the assembled physicians a piece of her mind. She should let them know that it's quite unfair for them to insist that the patient be charged a second time. It's bad enough that the patient has to go through the biopsy all over again. She should tell them that they seem more interested in the biopsy than in the patient's general well-being.
- 3) The student should explain to the patient exactly what has happened. She should note that "even doctors make mistakes". However, the student should point out that it is unfair for the patient to be billed twice for the procedure. The student should counsel the patient to pay only for one biopsy and to pursue the matter in court if the hospital or the surgeon presses for additional payment.
- 4) The student should only tell the patient that a second biopsy is required. If the patient asks why, the student should say something like "we need a better specimen". Later on, the student can intercede with the surgeon to make sure he only bills the patient once. This way, the patient isn't unfairly charged and will also continue to have faith in his doctors.
- 5) The student should merely tell the patient that another biopsy is required and attempt to be soothing and supportive if he seems upset. If the patient learns the truth, he will become mistrustful of his physicians and this will make treatment of his illness more difficult.

END OF QUESTIONNAIRE. THANK YOU VERY MUCH FOR YOUR TIME AND TROUBLE.

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