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THE RELEVANCE OF ANTHROPOLOGY IN MEDICAL EDUCATION: A MEXICAN CASE STUDY

A thesis submitted to the
Department of Anthropology, McGill University
in partial fulfilment
of the requirements for the Degree of
DOCTOR OF PHILOSOPHY
in Anthropology

by
W.B. Murray

August, 1980

ABSTRACT

The growth of medical anthropology as a distinct sub-discipline has opened up many new roles for anthropologists within the medical field, and identified an ever wider range of mutual interests. In this study the anthropologists role as a teacher in the basic medical curriculum is examined in order to determine whether "broad and general relevance" exists between the two fields.

Field data is analyzed from 2½ years active participation teaching at a newly founded medical school in the North Mexican industrial city of Monterrey, Nuevo Leon. Information on institutions history and social structures, student values and attitudes toward the professional medical milieu, and responses to specific teaching material is discussed as components of the decision making process which led to role definition. The differences between classroom and field teaching of anthropology were explored in connection with an urban vaccination campaign and an experimental field course in a bi-ethnic rural community of the Sierra Tarahumara (Chihuahua). The medical school is seen as a reflection of the community and professional context which surrounds it, and the need to make anthropological teaching congruent to its particular needs and circumstances is stressed.

The study concludes that general relevance has not yet been achieved due to the lack of a defineable clinical role for the anthropologist, and unresolved conflicts between the biological and anthropological models of man.

RÉSUMÉ

L'essor de l'anthropologie médicale en tant que sous-discipline distincte a créé de nombreux nouveaux rôles pour les anthropologues au sein du monde médical et révélé une gamme encore plus étendue d'intérêts communs. Dans cette étude, nous examinons le rôle de l'anthropologue qui enseigne dans le cadre du programme d'études en médecine, afin de déterminer s'il existe une "concordance générale" entre les deux milieux.

Nous avons analysé les données recueillies sur le terrain au cours de deux ans et demi de participation active à l'enseignement dans une école de médecine nouvellement fondée dans la ville industrielle de Monterrey, Nuevo Leon au nord du Mexique. Nous exposons les renseignements sur l'historique des institutions et les structures sociales, les valeurs reconnues par les étudiants et leurs attitudes face au milieu de la médecine professionnelle ainsi que leurs réactions envers des éléments spécifiques du matériel didactique, comme autant d'aspects du processus décisionnel qui a abouti à la définition des rôles. Les différences entre l'enseignement de l'anthropologie en classe et sur le terrain ont été analysées à propos d'une campagne de vaccination dans les villes et d'un cours pratique expérimental donné dans une localité rurale bi-ethnique de la Sierra Tarahumara (Chihuahua). L'école de médecine passe pour être le reflet de la communauté et du milieu professionnel qui l'entourent. Nous soulignons donc la nécessité de rendre l'enseignement de l'anthropologie conforme aux besoins particuliers du milieu et aux conditions qui y règnent.

L'étude conclut que l'on n'a pas atteint une concordance générale, les chercheurs ayant été incapables de préciser le rôle de l'anthropologie; en effet, il existe toujours des conflits irrésolus entres les modèles biologique et anthropologique de l'homme.

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Dedication

To the generations of medical students present and still to come throughout the world, this work is dedicated with hope and affection by one of their future patients.

Acknowledgements

In a research project of the type reported here, which extended over almost three years of fieldwork, one incurs many debts of gratitude to many different people. Some of them must remain nameless for reasons of confidentiality. Others remain nameless because they are forgotten among the literally thousands of people one meets as an active participant in professional education, and a resident in a large metropolitain centre like Monterrey. Still others deserve special mention because of the repeated aid and guidance which they offered.

A special debt of gratitude is owed to the Latin American Teaching Fellows program of the Fletcher School of Law and Diplomacy, Tufts University, Boston, Massachusetts, and particularly to Mr. Gary Glenn and Mr. William Cloherty of that organization. Their offer of an opportunity to teach anthropology in Monterrey was too inviting to be refused, and their continued understanding and support of our work allowed the project to be carried to its completion.

In Monterrey, we owe a special debt of gratitude to the late Dr. Jose Gonzalez Quijano, whose vision of medical education gave anthropology an important place in the curriculum of the school he helped to found, and who subsequently demonstrated his appreciation and understanding of our objectives on numerous occasions; to Dr. Manuel Baez, former director of the Instituto de Ciencias de La Salud during the period of our fieldwork; and to Drs. Mariano Ortega and Kenneth Massey of the Division de

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In connection with the Tarahumara field project, thanks are due to Dr. Bernardo Coindreau of Monterrey, who first suggested the field location in Norogachic and helped with the initial contacts with the Tarahumara Mission; to Bishop Jose Llaguno, who accepted our field proposal and supported the project in a very personal way during our field stay; to Mother Elise Andress of the Clinica San Carlos for her understanding and support of our efforts; to Father Carlos Diaz Infante, tireless defender of the Tarahumara and example of the cause of his faith, whose advice and guidance in the field were invaluable; and to Luis Bacasorari, our Tarahumara guide and interpreter, without whose help the field phase of the project would have been impossible. To the six nameless students who participated in the project, our debt is still more profound.

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Finally, the author acknowledges a special editorial debt to Dr. James F. Hopgood for his constructive comments on Chapter 2 and 3; to Dr. John G. Kennedy, for his critical review of Chapter 5; and to the chairman of his doctoral committee, Dr. Richard F. Salisbury, for his continued interest and encouragement, and many useful editorial suggestions.

CHAPTER 1

ANTHROPOLOGY, MEDICINE, AND MEDICAL EDUCATION

I. Introduction

During the past two decades contacts between anthropology and medicine seem to have entered a new phase. A new sub-discipline of anthropology, specifically called "medical anthropology", has come into being, and its inception and subsequent growth are the most dramatic outward expression of this new relationship. The roots of this development, we submit, lie much deeper than the mere creation of a new sub-discipline to be displayed on academic paper, however. Rather, they stem from a series of new relationships between anthropologists and doctors. A definite role for the anthropologist in medicine has not yet been established, but several new alternatives are being actively explored. The terms of these new relationships are still under negotiation, so at present many of them appear open-ended, but we must definitely admit that our contacts with medicine have been permanently changed. Our thesis describes an ethnographic exploration of one of these new roles: that of the medical anthropologist teaching in the basic medical curriculum.

In many ways our data is the product of a fortunate accident. A teaching position for an anthropologist became available at a newly-founded medical school in Mexico at a time when most Canadian and American medical schools did not have full-time anthropologists on their faculties. We were fortunate enough to be able to fill it for 2½ years.[1] Our ethnographic data, then, comes from that experience as a teacher in a medical school in the north Mexican industrial centre of Monterrey, Nuevo Leon, and the

approximately 250 students who took our course during that period constitute our sample population. But for the purposes of our thesis problem most of the details of that ethnographic setting are accidental. We might just as well have taken up the same questions in Cali, Colombia or Cairo. Our first question would have to be the same in any case: just what is the role of the medical anthropologist in the teaching of medicine? At that time no one really knew.

When our fieldwork was initiated, the anthropologist was an unknown newcomer to medical education. If, by accident, he made his way into the medical curriculum he entered a new and open-ended role. The process by which the terms of this role were negotiated, and gradually filled with content puts the anthropologist into close contact with medical students and doctors, and will in effect "create" medical anthropology in their eyes. The transformation which our discussion examines, then, is from the open, unstructured requirements of a role which was basically unknown either to its occupant or his audience to a role in which certain expectations had become established, and the role had begun to take on some concrete dimension and form. In this light almost any medical anthropologist who has faced a medical student audience for the first time will have been initiated in the process we shall attempt to describe. The experience was new in Monterrey in 1973 for both anthropologist and medical student, and it would still be new for the vast majority of both today. It is this newness which provides the essential ingredient for our field situation. For only when the role of anthropologist is new will the open negotiations take place: thereafter prior expectations will begin to enter in, and close off certain role alternatives.

By focussing on the negotiations around this new social role, many issues in the larger confrontation between anthropology and medicine are brought into view, and many lessons can be learned. In a very real sense a whole new view of medicine and anthropology is opened up. The issues we must take up even in an ethnographic description of our experiences are varied and eclectic, and for most of them we have no final answers. For many we can only hint at the dimensions of the problem, while for others perhaps a few suggestions are in order. But in the end we are surely condemned to something less than a final definition of the role. This is not our goal.

Instead, we propose to leave the realm of categorical answers altogether and explore "process" -- the way in which a role category ever so gradually begins to take on meanings. The bases which may be touched in this process are many, but we would contend that the process itself remains much the same: definition is being given to an amorphous role category. A theoretical analysis aimed only at a structural definition of the role will not lead us to understand the process, however.

In our analysis we shall focus on a characteristic of that process -- the search for "relevance" -- and attempt to see how it guides us as an operating principle. Webster's dictionary (New Collegiate Edition, 1958) defines the word "relevant" as "bearing upon, applying to, or pertinent to the case in hand". Synonyms include "germane", "material" ("so close an association with the matter in hand ... that it cannot be dispensed with"), and appropriate or opportune, and Webster suggests that relevance "implies a traceable and significant connection". Relevance is thus a very lofty and exacting standard to apply to a new role relationship. Nevertheless, we would submit that it is the correct criteria through which to view the role

we shall be examining. Any anthropologist who aspires to less than relevance as a teacher of medical students is surely cheating both him/herself and the students, and any medical anthropology which is less than "relevant" seems doomed to a short and ephemeral existence. The demonstration of relevance in the medical classroom thus implies much more than a demonstration of competence by a given individual. It is also a test of the value of the things s/he teaches, and the professional skills s/he can bring to this new role.

Many anthropologists, as we shall see shortly, contend that anthropology is not yet capable of demonstrating such indispensable relevance to the field of medicine. We are sympathetic to this view, and by no means intend to make such a demonstration of indispensability our objective either. We doubt that our own course ever demonstrated such relevance to our own medical students. For this reason we must qualify our thesis as a search for, or a focus on the relevance of anthropology in medical education, suggesting by this that at times it could be perceived, but that it remained throughout more a goal than a concrete reality. To those who question "relevance" as a goal for the medical teaching role we must therefore beg indulgence, and ask them to accept the goal arbitrarily for the moment so that we may consider through our ethnographic narrative where its pursuance might lead us.

Such a focus allows us to perceive in the teaching setting a number of aspects which bear directly on the larger confrontation between the two disciplines. In this sense medical teaching is only one of various new roles opened up by "medical anthropology", and all our questions as a teacher are dependent on the larger question: what do anthropology and medicine mean to each other?

In our thesis we shall contend that mutuality is the most important characteristic within which relevance is pursued. As in any relationship, communication is a two-way street. As anthropologists we must have something indispensable to communicate to doctors, but doctors must also have something indispensable to tell us about anthropology. Only when communication is two-way can we be sure that relevance is being achieved, and only in mutual relevance can we suppose that the anthropologist's new role as a medical teacher is beginning to take hold. If this mutual relevance is not achieved, one or the other of the partners in dialogue will inevitably retire, and communication will cease. The identification of mutual interests and benefits seems a necessary part of any new relationship, whether it be between persons, between roles, or between disciplines. We shall therefore look most particularly for relevance in the definition of these mutual interests and benefits, and the reciprocity they imply.

In Platonic terms we might visualize this mutually relevant relationship using the simile of two omni-directional beacons each with a different colour light. Where they cross a new colour appears which combines the physical characteristics of the two in exactly equal proportion. We cannot say that the resulting colour owes more to one beam than the other; one cannot cheer for one beam instead of the other. Their light simply falls simultaneously on a common ground. But when they do meet, the ground each beacon illuminates becomes coloured differently than those terrains illuminated by each beacon alone. An observer in either beacon would literally see a colour he had never seen before, and his spectrum of knowledge is thereby widened. This is, in ideal terms, the theoretical basis for all inter-disciplinary effort.

To apply the metaphor, we need only say that the beacons in our study are anthropology and medicine. The common ground we shall explore is the medical school classroom, and we shall look at it not from the viewpoint of the distant beacons but from the common terrain being illuminated. The new coloration which this common ground takes on when the beams of medicine and anthropology shine simultaneously in its windows will be the subject of our thesis, and we shall try to develop in our analysis a view which consciously utilizes the perception of their mutual influences as a basis for taking actions.

Choosing the medical classroom as an arena for exploring mutual relevance has both advantages and disadvantages. Obviously, other new roles might have served just as well. We must therefore be aware of the peculiarities and limitations of our own vantage point.

The principal advantages are that ultimately comparative data may be collected from many classrooms to see when, why, and how relevance is achieved. A field of educational anthropology already exists which can help us with this task. Moreover, in the medical classroom relevance is usually a conscious personal goal of the teacher. Medical students tend to be cold, calculating judges of whether their time has been wasted. Finally, the classroom is a real-world arena in which the anthropologists already feel at home, at least the vast majority of anthropologists who are professional teachers. What is different is not the function but the professional terrain.

The disadvantages are that the educational context introduces a series of independent variables which affect the perception of relevance, but which have nothing to do with the underlying issue. The skill of the teacher, the

level of preparation of the students, the availability of teaching materials, and the position of anthropological instruction in the curriculum (its immediate academic competition) will all condition the perception of relevance at the classroom level, but tell us little about the underlying relevance between the two fields. It is our intention in our thesis to treat these educational variables descriptively and not make them a point for systematic analysis. We will not attempt to determine, for example, what the ideal level of preparation for imparting anthropological instruction might be, or how anthropology should be taught. Assuming that such specifications could be derived from our field data, they would obviously be applicable only to that situation, as we hope to demonstrate. To concentrate on this aspect would be to convert our problem into a study in education rather than in anthropology, and to do it well would require other kinds of data than we have assembled. While our classroom observations occasionally address these pedagogical questions (and we shall mention these issues on occasion), we offer them only as evidence awaiting confirmation in other classrooms by educators concerned with the dimensions of effective pedagogy.

It also seems presumptuous for the anthropologist to pronounce on what the medical student should know within anthropology in order to be a better doctor. To do so would mis-represent the dialogue between the two fields by making all the communication unidirectional from anthropology to medicine. In truth, only doctors with considerable professional experience could be considered qualified judges of this kind of relevance. The real test of anthropological relevance for the doctor is obviously a long-term one which extends well beyond the training phase of medicine, and would therefore be invisible from the classroom. A longitudinal study of the conditions of

practice would be required. One can justifiably ask whether any component of medical training can specify precisely what ultimate value any given topic mentioned in a class might have ten or fifteen years after graduation. The standard seems overly restrictive, and tendentious.

We shall focus, therefore, on two facets of relevance which more accurately reflect the mutuality of the situation. First, what did the medical students find in anthropology which interested them, and which they thought might have some practical value in the future when they would be doctors? This is the key question for medical educators, for on it will depend their assessment of our relevance to the process of medical education as a whole. It will ultimately lead to a definition of our roles as anthropologists in the medical classroom. And second, to what extent is the medical educational setting capable of providing data of value to the anthropologist? To what extent can the anthropologist learn about a society or culture from this new vantage point? When the anthropologist can answer these questions, he will know why he wants to be in the medical teaching setting. He will know that his work is relevant to his own discipline, and not simply the fleeting product of accident or momentary convenience. He will have a reason for taking up a teaching role in the medical school which goes beyond the needs of medicine to the needs of medical anthropology, and anthropology as a whole. He will be just as interested in being in the medical school as the doctor will be in having him. These two questions thus represent dual facets of fundamental issues emerging in the new relationship between the two fields in which the goal of mutual relevance can be examined.

II. Anthropology and Medical Education

A discussion of the anthropologist's new role in the medical curriculum requires some preliminary background about the structure of medical education as a whole. For purposes of simplicity this discussion will be limited to medical schools operating in the Western tradition of scientific medicine, since this was the type of medical school in which our fieldwork took place. Other medical traditions obviously exist, and a fully comparative approach to medical education may some day include non-Western medical training as well. Rinpoche's description (1973:22-26) of Tibetan monastic medical training certainly offers a startling and contrastive example. But a synthesis of this type still seems a way off, and we chose therefore to confine ourselves by definition to the scientific medical school.

Within this tradition of scientific medicine, training is usually divided into two phases, or aspects: undergraduate study taught within the university classroom, and graduate study (internships and residencies) undertaken in clinical facilities of various kinds, frequently university-affiliated hospitals. These two phases correspond to different educational needs which must be met, the first providing theoretical and experimental training in basic biological sciences (anatomy, physiology, etc.), and the second the clinical applications of these sciences within medical treatment. Differences in setting and needs also imply contrasting teaching methods. Basic science teaching takes place within the university teacher-student relationship, while the teaching of clinical medicine follows an apprenticeship model (Becker 1961), establishing levels of clinical responsibility which gradually increase with experience. The duality between basic science and clinical training seems to be nearly universal to scientific medical

education. This has not led however to uniformity in the content of each phase, the articulation between the two, or the exact point at which the transition from one phase to the other takes place.

During the last two decades the practice of scientific medicine has come up against new problems which have generated a demand for different kinds of knowledge. In a profession which is dependent on carefully maintained cultural traditions (rules and procedures) and social institutions and arrangements whose life spans run into centuries, there is now a strong suspicion that major changes are becoming necessary and, in fact, unavoidable. Weaver has recently offered a cogent summary of these changes and their effects on the medical profession.

> Changes and trends in medicine include increasing specialization, the continued low production of physicians by medical schools, the movement of medical care away from the home to the office and then to the hospital, an interest in international medicine and in the medical economics of developing countries, and a concern for multiple disease causation, epidemiology, and psychosomatic medicine.
>
> The total effect of these changes has been a depersonalization of medicine, a greatly increased demand for services and for the application of the latest medical knowledge, and increased criticism of the physician, a greater number of malpractice suits, increased costs of medical care and medical education, fragmentation of communication between the doctor and his patient, and the segmented treatment of the patient by many different specialists. (1968:1-2)

A number of works by other social scientists (Goffman, Friedson, Illich) discuss these changes in greater detail, and take a more critical stance toward current professional practice. They reflect (and have contributed to) a deep undertow of self-examination within the medical professions. Weaver continues:

> As the physician and medical educator has become more concerned with the increasing complexity of these problems and

> the growing health needs of the nation, he has gradually turned to the behavioural sciences for help in obtaining useful information about social and cultural factors of human life which lies beyond the scope of the biological sciences. (Ibid.:2)

It is not entirely accidental, therefore, that the inception and growth of anthropological participation in medical training is closely synchronized with this growing state of professional ferment. The initiative for such involvement has come in part at least from the medical professions themselves.

Not surprisingly, many of the changes in medical practice mentioned above by Weaver have reverberated quickly within the curricula of medical schools. In most schools, clinical training is in the hands of practicing physicians, and basic science teaching is often done by doctors specialized in the respective sciences. The transmittal of changes from the profession to the school is almost immediate. As a consequence of the new professional demands curriculum revision has become a topic of open debate. Several major schools in the United States and Canada (Yale and McMaster Universities, for example) have instituted some far-reaching curricular changes, and other medical educators are watching closely to see how they turn out.

The nature of these curricular changes and the tenor of the debate about them is well expressed in some remarks by Dean Sherman Mellinkoff of U.C.L.A. Medical School in an address to the Association of American Medical Colleges in 1971.

> I sense a semi-religious verve in modern American education. Let me mention a few tenets: medical schools have been too much research-oriented. They should be more in the community. We should not be teaching about diseases, but rather about people ... We spend too much time in the basic sciences. We should start teaching clinical medicine right away. Ultimate members of the health care team (i.e. medical students,

> nursing students, and others) should be taught together as they will work together. Before students become hopelessly absorbed in such abstruse matters as electrolyte balance they should study and criticize health care delivery non-systems. Medical students should learn more about the social sciences. They should not study biochemistry to the exclusion of sociology and political science. Patients should be treated with complete acceptance of all their cultural preferences, even those which obstruct good medical practice, but patients have no right to expect us to cut our hair. Doctors should stop using the Hippocratic Oath and other trappings to set themselves apart from community manners and mores and absence of hang-ups, such as wearing shoes. (1971:1016-17)

As can be appreciated from Dean Mellinkoff's comments, revision of the medical curriculum involves questioning some basic assumptions (both educational and professional), and the social sciences (including anthropology) are quite central to this debate. The curriculum revisions instituted at different schools are not all alike in the ways they attack these issues. No final judgment on the merits or demerits of specific approaches has been taken, nor is it our intention to make one here. We confine ourselves instead to the role which anthropology as a discipline has played (wittingly or unwittingly) in fostering certain hoped-for changes, and will now look at some specific examples of anthropological participation in medical education to see how disciplinary theory and educational practice relate.

Two aspects of curriculum revision are of special significance in this context: the increased emphasis on community medicine, and the modification of the basic science curriculum to include at least some social science courses. Anthropological involvement in implementing both of these changes has been direct, and concrete examples permit us to see what kind of participation has been attempted. The examples also show how inter-related the two changes often prove to be.

Of the two revisions the movement toward greater medical involvement in

the community seems to take historical precedence. Physicians and medical educators working in various parts of the United States began to express concern about the disappearance of rural doctors, and family practice in general, during the 1950's. Becker's 1959 study of the University of Kansas Medical School documents show how this situation developed in one heavily rural state, and also shows very clearly how unsuccessful the school was in stemming the trend. The loss of rural and family practitioners is especially serious in sparsely-populated areas of the U.S. and Canada which are naturally more isolated from major urban centres. In areas such as Appalachia and parts of the intermontane West the crisis has been intensified still further by the already depressed economic level of the population, low quality housing and diet, and poorly developed transportation links.

One project undertaken by the University of Kentucky Medical School illustrates how one institution faced this situation by adopting a model of community fieldwork similar in some respects to anthropological fieldwork in order to expose medical students to rural practice in Appalachia. The project was developed within the Department of Community Medicine, whose stated objective was

> ... to prepare practitioners who will be competent not only in the medical care of the individual but also in the utilization of all health sciences for the benefit of the total community. (Tapp et al. 1966:225-26)

One means by which this objective was met was a rotating clerkship during the fourth year in which the student lived for about six weeks in a community away from the medical school and worked as an assistant to a local physician. During this clerkship the student "observes the doctor's practice and the hospital facilities in the area and writes a report for the Medical Center"

(Ibid.:228). This program was put into operation in about one-third of the counties in the state, mostly in the eastern Kentucky Appalachians. The reasons for this geographical distribution are quite explicit:

> Health personnel are not attracted to the area. Indeed, the maldistribution of physicians was one of the prime reasons for the creation of our medical school. (Ibid.:226).

The contrast between the urban medical centre and rural mountain practice was so great, however, that it approached in magnitude the anthropologist's experience of moving from one culture to another. "Our group has studied one small Eastern Kentucky neighborhood with features resembling those characteristic of underdeveloped countries," Tapp reports (Ibid.:226). As a result the students sometimes manifested the same psychological responses as the anthropologist in the field.

> During his stay, the student ... usually identifies rather strongly with the community in much the same way that students frequently identify with their patients in the hospital. (Ibid.:227)

Thus, the use of fieldwork helps to shift the medical student's perspective from an individual patient to a community orientation, and makes the student more aware of the social context of his medical ministrations. The fieldwork experience in a rural community raises this aspect to consciousness for the medical student much as it does for the anthropologist because both face the necessity of making new social relationships and dealing with new and different environmental conditions.

Besides this broad similarity it is interesting to note that more specific role similarities developed as well. One of the most intriguing of these is the role played by the medical students as "agents of change".

> The students, acting as liaison between the university and the community, become "change agents" influencing development in the community, and are in turn themselves changed through the process of relating medicine to the community. (Ibid.:229)

The conscious model for the students' role is not that of the anthropologist, however, but of the extension agent.

> ... the medical student in the community functions very much as the agricultural extension agent does. Just as the agricultural extension agent provides information on the latest developments in his field, so the medical student provides the physicians in the local community with information about the University Hospital and about medical education in general. (Ibid.:228-29)

What makes the role transformation a vehicle for change, then, is the difference in knowledge (medical culture) possessed by the student and his sponsoring local practitioner. The medical students, recently versed in the latest techniques, become instruments for augmenting local medical knowledge and changing the availability of health services in the community. Tapp offers one illustration of this process worth citing.

> One of the most important services rendered by the students has been the promotion of interest in utilization of available diagnostic tests ... In one case, when it was found that a practitioner had abandoned the cervical cytology test because he was not getting any positive results, the student tactfully pointed out that the practitioner was using an incorrect technique. The student then demonstrated the proper technique and in fact found an unusually large number of abnormal test results. (Ibid.:228)

The tact required of the student in this incident is not, after all, too different from that required of the anthropologist when confronting cultural differences. Although the conscious role model is the agricultural extension agent, at a profounder level it is the role of the applied anthropologist as well. Even the students' programmed six-week term in the community is not that far from the mean time spent in the field by many social scientific

expert consultants. A significant area of overlap seems to exist, then, between the two roles (anthropologist and community doctor) which can be exploited to the student's advantage, and contribute to mutual relevance. Although the direct participation of anthropologists was not sought in this training program, the structure of the teaching situation contains this important and more profound analogy with anthropology.

One interesting feature of this similarity between community medicine and anthropological fieldwork is that it is capable of conscious manipulation within programmed objectives. What happens, for example, if we increase still further the cultural differences between the students and the community, and remove the element of clinical responsibility which made the Kentucky students into "agents of change"? This model of the student's role is even more like that of the anthropologist in the field, and it is an option exemplified by the program of inter-cultural medicine at Yale University.

The Yale program was initiated in connection with a general curriculum revision, one of whose objectives was to advance clinical training to as early a stage as possible. In line with this objective the revised plan of studies provided for the student "to spend at least six weeks in a clinical setting where he can experience and begin to identify the many facets of the practice of medicine" (Kimball 1969) between his first and second years. This type of clinical observation had previously been reserved until the third year, but it was not the school's intention simply to replicate the third-year clerkships in first year. Rather, it wished to develop new and innovative training situations. One such situation involved a clerkship program in collaboration with the U.S. Public Health Service on the Navaho

reservation of northern Arizona. The reasons for choosing the Navaho setting are explicitly anthropological:

> It was anticipated that a student would be more apt to gain an appreciation for the environmental, cultural, and resulting psychological aspects of illness in a setting which was foreign to him and in which these relationships appeared more dramatically. (Ibid.:1032)

Because the students who participated had just begun their medical studies, it was deemed inappropriate for them to undertake clinical responsibilities. Instead, their task was to design the pilot phase of a research project related to the health needs on the reservation. It was not intended that the students carry out the research, since their two-month visit hardly allowed sufficient time, but the exercise of designing research was deemed of considerable value for the students.

> The health and social problems of the area were so ubiquitous and their investigation so largely undeveloped that it was thought that the student would have relatively little difficulty in selecting a novel albeit limited area of investigation which would serve as a focal point for organizing the impressions gathered from his general clinical experience. (Ibid.:1032-33)

Thus, the shift of the clinical field experience from the fourth to the first year required a corresponding reduction of the students' clinical responsibilities, and a resulting de-emphasis of their roles as change agents. The students became passive observers doing research -- learners rather than teachers. In this sense their field role approximated that of the field anthropologist more closely than did the role of the Kentucky students in Appalachia.

Likewise the manifestly greater cultural distance between the Navaho and the Yale students made more explicitly anthropological preparation

necessary. The Navaho clerkship program called for an eight-week (16 hour) orientation course for all participants prior to their field stay. This course included readings on the Navaho by noted anthropologists (Kluckhohn, A. Leighton), and the participation of an anthropologist on the Yale faculty (Kunitz) who had done fieldwork among the Navaho. The content of the course is described in considerable detail by Kimball (Ibid.:1033; cf. also Kimball 1972), and in it we meet professional anthropologists as medical educators for the first time.

The Kentucky and Yale programs point up some broad similarities between the doctor involved in community medicine and the anthropologist doing fieldwork. Both enter an unfamiliar socio-cultural milieu as outsiders with a professional commitment to make their work compatible with the needs of the local community. Both tend to develop (and to a certain degree require) local intermediaries to assist them in realizing their goals. And because of the cultural differences between themselves and the community, both frequently function as agents of change.

The other avenue of anthropological participation in medical education is the inclusion of anthropology as a course directly within the medical curriculum. In view of the already crowded program of medical studies, the real question becomes where one could possibly make the insertion. One alternative is as one of the basic sciences within the undergraduate medical curriculum, along with microbiology, anatomy, and all the rest. This solution, while perhaps the hardest to achieve, has the advantage of being applicable to all types of medical curricula. It was also the situation at the Mexican medical school in which our fieldwork was done. Another alternative is to install anthropology at the level of pre-medical training as a required-

or recommended course for medical school admission. This alternative, while perfectly feasible in developed countries where the costs of long professional training are less crucial, is not applicable in countries such as Mexico where professional training begins immediately upon entry into university. Still a third possibility is to teach anthropology in conjunction with specialist training at the level of internships and residencies. This alternative has been most actively explored in connection with family medicine and psychiatry residencies.

The choice between these alternatives is a difficult one. They represent radically different levels in the student's clinical experience, as well as differing levels of sophistication in general knowledge. It is quite obvious, therefore, that the same study program would not do for all three alternative slots. Each would require a different kind of anthropology course in order to be appropriate and relevant to the student's preparation at that level. From the point of view of course content, then, the choice of educational level is very important. With respect to certain other conditions, however, the question of the student's level of preparation is much less crucial, since these would be constant. Drs. Margaret Read and Dorothea Leighton have offered some valuable observations about these constants based on their extensive teaching experience in varied medical settings.

Dr. Read's teaching experience in the U.S.A. and Britain, extending over ten years, has been with a wide variety of students in the health field -- graduate students in medical school, medical and post-graduate nutrition workers, graduate nurse educators. This variety in itself helps to clarify and accentuate commonalities. She mentions first that "in the eyes of the faculty of medical schools and other teaching institutions ... medical

anthropology, and to some extent other social sciences, is very much a 'fringe subject'" (1970:163). Thus anthropology as an independent subject must struggle continually to demonstrate its relevance in the face of competition from disciplines with a much longer tradition of participation in medical training. This does not mean that anthropological relevance must be invented from scratch, but merely that the established links may still not free it from the stigma of marginality.

> It is in the fields of preventive and social medicine and of public health where the contribution of medical anthropology can be most clearly demonstrated. These subjects, however, in many medical schools are considered by most of the faculty and students as 'lower grade' subjects -- of less scientific and practical value than the other standard fields of study. (Ibid.:163)

The task then becomes how to overcome both the problem of relevance and the stigma of marginality at the same time. Underlying both of these is what Dr. Read calls a 'problem of conceptual transfer'.

> When the medical anthropologist meets his students for the first time, he has not only to get over the hurdle of teaching a subject of 'low esteem'. He is also aware that most students have little or no concept of social, cultural, or medical anthropology ...
>
> The anthropologist's non-evaluative, objective approach to all cultural phenomena is a new concept to most students, and this conceptual transfer though beset by difficulties is an essential step in teaching. (Ibid.:164-65)

In this situation the medical anthropologist often finds himself teaching basic anthropology in a highly condensed, abbreviated form along with medical-anthropological topics he may consider of special practical value for the group he is teaching.

Based on her own experience, Dr. Read makes two pedagogical suggestions for easing the problem of conceptual transfer. She favours the use of the

small seminar as the most auspicious environment for fostering the subtle re-orientation and re-integration of the student's knowledge which she proposes. She also emphasizes the establishment of a firm focus on medical problems within the student's own society as the basis for global comparison.

> I have found that students who have got as far as wanting to understand the health problems of poverty areas and 'deprived' communities in their own society, find stimulus and genuine interest in cross-cultural studies of societies in developing countries. They discover that they have no idea how the 'other half of the world lives', without the technological facilities which they take for granted, or without being able to meet the nutritional requirements for health as laid down in an affluent society. When they make these discoveries for themselves, they are quick to relate them to their growing interest in their own society. (Ibid.:165)

Dr. Read then goes on to outline in some detail the content of the seminar courses she has taught. (Briefly, the course deals with the hospital as a social institution, the social roles of members of the health team, the medical culture of the community at large, and the ways that health programs and services function as agents of social change.) We need not consider the outline in the same detail as she does, but the pedagogical suggestions provide a useful glimpse into the question of cultural relativity as applied to medical education.

How useful are Read's pedagogical suggestions in the Third World, outside the context of the developed industrial nations? Would they be applicable, for example, in our field situation in Mexico? When examined in this perspective, Read's premises turn out to be culturally relative in part. The problem of conceptual transfer continues to exist, but the content of the information to be transferred changes considerably. The problem of poverty, to take one case, has different dimensions in the United States than in Mexico, and studies of poverty have occupied social scientists in

Mexico intensely. A study in Monterrey in 1969 by Puente Leyva shows over half the population of this relatively affluent Mexican city classified as "poor", "indigent", or "poor in transition" (Puente Leyva 1969:21). Moreover, many of the Mexican poor live in conditions of far greater deficiency than American poor. Mexican students cannot escape the problems of poverty as readily in their country as can American students in theirs; it is to close to be that invisible, even if they come from relatively affluent families, as was the case with our students. Poverty provides a different lens and raises different issues for the medical student in Mexico than it does for a student in a developed nation such as the U.S. or Canada. Nevertheless, as we shall see in Chapter 4, exposure of the students to fieldwork in poor colonias played an important part in our fieldwork situation as well, and provided many insights into cultural differences.

Under these circumstances the problem of cultural comparison, and the relevance of global ethnography to project it, changes greatly. Mexican students are much less interested in studying problems in other developing nations when examples are so abundant in their own; their ties to developing nations are different from those of the developed industrial giants. For these students, the problem of conceptual transfer is reversed in a certain sense. They must be brought to the difficult realization that the problems of medical practice continue to exist in the developed nations as well, and that the much-extolled goals of social development in the field of medicine do not necessarily abolish the problems with which they are presently struggling. In this case, selected studies of medical practice in developed countries might be much more relevant to the Mexican student's needs than studies from the traditional societies of the "primitive" world. Looking

from the other end of the pole, they help to establish reasons for the persistence of these problems, and their effect on medical practice at both levels.

A similar proviso about cultural relativity can be made in connection with the suggested use of the seminar as a teaching environment. In affluent countries where many well-trained teachers are avialable, the expensive luxury of low student-teacher ratios and extensive personal attention can be achieved with little special effort. But in developing countries such as Mexico, teachers are scarce; students almost never study their subjects in small classes, and the true seminar is unfamiliar and almost unknown in Mexican education. Seminars provide much less of an advantage when students are already accustomed to working in larger groups, and classroom interaction can become hopelessly disrupted in small-group teaching if the teacher does not use the "greater intimacy" with care. In sum, the seminar teaching environment, based on the obvious value of low teacher-student ratio, presents some new problems in Mexico at the same time that it resolves some old ones, and is hence less feasible and appropriate than one might ideally expect.

These reflections point out in a general way an important lesson in medical curriculum design which is fundamental to this thesis. Both medicine and education are culturally relative and context specific, just as any other part of a given culture. This situation challenges the medical anthropologist as a newcomer in medical education to come up with inputs which are appropriate to each of many teaching situations, and makes us realize that the task at hand is more difficult than one would first think, rather than less so.

Another recent commentary on the place of anthropology in medical education has been offered by Dr. Dorothea Leighton (1975). Dr. Leighton, herself a psychiatrist by training, has been an instrumental force and a major contributor to the development of medical anthropology. Her comments on teaching anthropology derive from over ten years' experience at the University of North Carolina presenting the discipline to a wide variety of health-oriented professionals. Because of her stature as a researcher and the depth and breadth of her teaching experience, her comments merit attention. We are also in basic agreement with many of her conclusions, so they provide some useful points of reference to our research problem.

Dr. Leighton prefaces her remarks by noting that "both anthropology and medicine are good examples of over-specialization" (1975:499). In her opinion this over-specialization has occurred despite the demonstrated value of multi-disciplinary research in both fields, and has worked to the detriment of their development. She correctly traces this to the circumstances in which academic research is undertaken.

> As horizons widened, each of the many professional disciplines tended to set up boundaries, cutting out a piece of the action for its meticulous and private investigation, feeling less and less kinship with other territories, making little effort to see what was going on elsewhere that might be relevant to its interests, or trying to communicate its findings to other disciplines. (Ibid.:478)

The resulting increased production of experts has tended to cut off the disciplines from each other still more, and has made it increasingly difficult to produce a competent generalist in either medicine or anthropology. This creates a conflict between the interests of the professional anthropologist as a teacher and his development as a researcher, since the student frequently wishes to learn general knowledge rather than replicate the

prized expert knowledge cultivated by his teacher as researcher.

In Dr. Leighton's view the overspecialization of anthropology and medicine is not irremediable. "The time is approaching when these two disciplines, at least, should make an effort to communicate and to enrich each other by doing so" (Ibid.:480). But for the moment the solution to the problem requires some utopian thinking, so that a better state of affairs may be contemplated to replace the present disjointed contacts. The long-range objective requires

> ... considerable collaborative thinking and planning so that (1) fully trained social scientists will be able to learn enough about the structure and culture of the health care systems, and (2) fully trained physicians will be able to learn enough about cultural and social factors in health; both will then be able to work together effectively. (Ibid.:480)

This is basically the same idea we presented earlier in discussing reciprocity between the two fields. For Dr. Leighton, the anticipated rewards from such cooperation more than justify the effort. "It behooves anthropology to pull together its experience vis-à-vis medicine, in our society and elsewhere, and to determine its most telling contributions for this purpose" (Ibid.:481). Three things are needed. First, medical anthropologists are required who combine competence in their own discipline and talent as teachers with a familiarity "through personal participation" with the professional and institutional aspects of medicine. Second, opportunities are required within the health curricula on many different levels "to teach health professionals things they need to know" (Ibid.:481). Here Dr. Leighton's emphasis is not so much on the exact point at which anthropological participation takes place as the relevance of the material presented to that stage of professional preparation. Finally, she sees the

participation of medical anthropologists in case conferences and patient rounds as a valuable way to maintain and enhance the relevance of his knowledge in the eyes of medical professionals.

Dr. Leighton then goes on to present a sample outline of a course in medical anthropology aimed at the level of the pre-medical undergraduate and the anthropology undergraduate with an interest in the area, and offers some interesting comments on the presentation of this material to students. The course was originally designed by Dr. Charles Hughes, and has been used to teach nine groups of students. While the course's positioning within the pre-medical curriculum makes its student audience somewhat different from ours, in other ways the pedagogical options explored in the course design are strikingly similar to ours. The real age of the students and their relative commitment to medicine is quite comparable, and most importantly, the over-riding concern to make the material presented relevant to the student is shared. Other similarities are pointed out in Dr. Leighton's words of advice on how anthropological material can best be taught.

> Technical anthropological terminology and concepts should be shunned -- after all, nearly anything concerned with human behaviour can be explained in everyday English (or whatever the local language might be). Medical people will not be interested initially in kinship systems, linguistics, house types, ethnic myths, or other non-medical esoterica. On the other hand, they will commonly be fascinated by the kinds of diseases encountered in a given group, means that have been devised for treating diseases, contributing factors from the environment, from usual activities, from beliefs about causes and cures, and so on.

Likewise, Leighton's comments on the different reception the course received from a group of graduate public health students is in accord with our view of the variability of educational needs from one group of health professionals to another, and at different levels of clinical preparation. In

this case the students were older, and all had had some prior experience working in the public health field.

> To me, the most curious reaction, and one that seemed impossible to overcome, was a pragmatic focus which made some students quite impervious to any subject which they did not see as of some immediate practical consequence to their future careers. They seemed unable to translate findings from an Indian tribe, for example, to black people, Chicanos, or other disadvantaged groups with whom they might expect to work. (Ibid.:484-5)

This pragmatic focus, derived from professional career commitment, parallels our experience with Mexican medical students very closely, although perhaps the reasons for the similarity are not the same in each case.

One small pedagogical feature of the course design deserves special comment because of its relevance to our teaching experience. Although Leighton makes no explicit mention of it, inspection reveals that the course deals amply with her own fieldwork among the Navaho as a means of generating ethnographic comparisons. Another section on social psychiatry also appears to draw upon her own research interests. As we shall describe in Chapter 4, we found that fieldwork material provided a similar bridge with our Mexican students, even though the material itself referred to an ethnographic setting totally remote from their experience.

Although Dr. Leighton's course was not designed for the medical curriculum proper, she offers some valuable comments about the peculiarities of teaching in the medical environment, and the role the medical anthropologist can play.

> At the medical school level, it is probably unrealistic to hope to teach medical anthropology as a discrete subject -- rather it must form a part of other courses and, above all, the medical anthropologist must be on hand to bring up his set of topics whenever opportunity presents itself. This will be the most difficult task of all -- how to insinuate and integrate subject matter not seen as very important by

> those in charge, and in competition with topics believed by staff and students to be of much greater significance. The medical anthropologist can only bide his time, persistently cultivating medical acquaintanceship and devising medical-anthropological exercise or researches which will catch the imagination of at least some of the students. (Ibid.:405)

Due to the peculiarities of the Mexican educational system, our field situation provided the hoped-for status as a discrete subject in the medical curriculum, and the support of high level administration in the school, which lessened the difficulty of insinuating anthropology considerably. But the task of choosing appropriate content and establishing relevance in the face of typically stiff curricular competition was still, as Dr. Leighton suggests, most difficult.

In the face of such obstacles, what stands to be gained by teaching anthropology to medical students? Here we must agree with Dr. Leighton that the effort would not be worth it "if the only outcome were to force some useful information on unwilling listeners". But Dr. Leighton really expects that the benefits of more open communication will accrue all around. On the anthropological side, she says

> It is my hope and belief that, in becoming familiar with the medical setting from his background in anthropology, the medical anthropologist will see ways in which the whole health field can readjust itself and its values in order to cope more effectively with the health-related problems of citizens. (Ibid.:485)

For the medical student and the health professions as a whole, the study of anthropology introduces new possibilities not made available through the investigations of other disciplines. In comparison with sociology, for example, Dr. Leighton comments that

> It seems to me that training in anthropology is more likely than sociology to sensitize a student to the important inner meaning of human phenomena which motivates

> people and either alienates them or enhances the social and interpersonal support systems which are so important in the illness and wellness of humanity. (Ibid.:485)

Dr. Leighton's final emphasis on anthropology's ability to confront questions of meaning brings us full circle to the element around which we have oriented our research: the question of relevance. How we achieve and develop this relevance to medical activities remains the final issue.

It is worth noting that in Leighton's comments this relevance is still primarily oriented by what anthropology can teach medicine -- not what medicine can teach to anthropology. Despite her recognition of the "two-way street", she still does not explore what anthropology will receive from participation in the medical setting, and how these inputs might change the discipline itself. We submit that the detection of these relevances for anthropology are of equal and primordial importance.

Our review so far of anthropological participation in medical training has served to establish several unexpected characteristics of the current situation. Two of these merit special attention at this point.

First, we have seen that the initiative for anthropological teaching involvement has come primarily from recognition within the medical profession (or certain segments of it) of changing needs within the populace which the practicing physician serves. Because many of these new demands seem to relate intimately with socio-cultural as well as biological factors, the services of anthropologists have been sought on occasions such as the ones we have just reviewed. Their role has been either to explicate the socio-cultural aspect of these demands, or to take direct action through participation in specific programs.

Attempts at communication in the medical school setting have been

confounded, however, by a fundamental difference between anthropology and medicine which has gone unnoticed amidst the practical problems requiring immediate solutions. While scientific medicine operates on the basis of a universalistic model of the human body derived from biology which says that disease and treatment must everywhere be the same, the anthropologist stresses a culturally-relative view of both disease and treatment. The anthropological literature systematically stresses cultural differences, not biological similarities, and thus puts into question the view of man which scientific biology imparts to the medical student. The individual medical student may or may not be aware of this discrepancy, but it lies latent at all points of interaction between medicine and anthropology.

Moreover, the anthropologists' relativism is both temporal and spatial. In historical terms the medical view of the process of change is usually governed by a conception of unilinear progress akin to the classical evolutionists. Classical texts in the history of medicine are usually presented with this structure (cf. Barquin, Hayward). Hardly any anthropologists could accept this conception of temporal process, yet the differences are not insuperable, since anthropologists have investigated the issue of evolution intensively. Also, the history of medicine does demonstrate that changes in what is considered "good medicine" do occur over time. . .

On the other hand, a view of scientific medicine as relative to the place, or cultural tradition, in which it is practiced seems particularly alien to medical thinking. Perhaps it is because it conflicts so diametrically with the universalistic view of the human body, but whatever the reason, for most doctors "good medicine" is everywhere the same. Differences in medical practices from one place to another can only be explained

acceptably in terms of different rates of changes; some places just haven't "caught up" to the technical advances in the more modern nations. Yet the anthropologist looks at the same map and sees hundreds of different cultures and societies, each of which contains countless contrasting customs and beliefs. For him, the immediacy of place is a primordial postulate; the natural scientific approach to fieldwork created by Boas obliges him to see and feel this immediacy of place. Few anthropologists could help not taking cultural-social place into account in their observations, yet for the doctor scientific medicine is (theoretically at least) everywhere the same.

The importance of this issue is underscored when we turn to two recent accounts by anthropologists who have taught in medical schools in the Third World (Hafer 1977; Nelson and Olesen 1977). Hafer worked in an experimental community medicine program started by the Medical School of the National University of Mexico in Ciudad Nezahualcoyotl, a slum community on the periphery of Mexico City. In most respects the plan followed was very similar to that used in the Fieldwork classes in Monterrey to be described in Chapters 4 and 7, the major difference being the much greater amount of time and degree of commitment dedicated to the community. The plan was ultimately terminated due to political pressures within the medical school which neither the teachers nor students involved could resist. Hafer's final analysis of the situation is an eloquent testimony to anthropology's failure as a change agent when it does not take the immediate circumstances of the medical school into account.

> Our task as social scientists -- to arrive at meaningful generalizations about human actions on the basis of precisely summarized data, generalizations whose results can be projected to real or hypothetical situations -- served here only to explain the death of a worthwhile project. The important

> compromises of real life impel us to do certain things thinking that this is the best way to serve human interests. In this sense we can contrast the attitude of the baker unconcerned with biochemistry who knows that his bread should taste good, and the nutritionist who can't bake a cake; anthropological action goes beyond the simple explanation of what people do, it tries directly to change both the structural and cultural controls of human action; the use of previously acquired anthropological knowledge correctly applied can affect the causality of actions ... While hierarchical structures pressure us and their power forces submission of any form (and this compromises and enfuriates us), our efforts will only have served to harvest the wind. (Hafer 1977:433-34; Author's translation).

Whether an analysis of the power structure within this medical school might have altered this pessimistic end result is difficult to say, but it is clear that the immediate socio-cultural context of the school turned out to be a key element whose influence could not be escaped. This suggests that the ethnography of medical schools is just as vital to the development of mutual relevance as the ethnography of medical practice, once we have opted to enter into this new context. Nelson and Olesen's comments about their difficulties in organizing course materials for an Egyptian medical school makes the same point.

What seems to be confusing the current interaction between anthropology and medical education is a great deal of "talking past" each other, even among those anthropologists and doctors most dedicated to opening up the dialogue. Because of an overly sanguine view of medical realities, anthropology has been led into a "utopic" position, where its purported influences over medical education and the development of scientific medicine itself have been minimal and peripheral indeed. This view may seem cruel to the many medical anthropologists who have worked hard to foster connections, but it is a truth we must admit each time we face the urgency of the medical

student's prodding questions. Are we addressing the basis of our differences, or are we simply taking up his time telling him things he doesn't need to know?

It is also a bit discomforting for the anthropologist to find that his difference with the doctor lies at the very foundation of the anthropological endeavor -- the fieldwork paradigm itself. One might hope that the difference lies in one of the narrower sub-specialties which Leighton so aptly identifies as characteristic of contemporary anthropology. Instead, the biologic view of man which dominates scientific medicine challenges the anthropologist to look at basic principles underlying the discipline as a whole in order to determine how relevant the knowledge of each is to the other. One sub-specialty, medical anthropology, has been especially affected, and seems to be suffering a kind of identity crisis as a result. A final alternative to the introduction of anthropology into the medical curriculum illustrates the nature of this crisis most effectively.

This alternative ties anthropology into the introduction of courses in "medical behavioural science", a change which has taken place in many medical school curricula during the last decade. The issue raised by this development is whether anthropology should consider itself part of the behavioural sciences, and expect to make its basic education contributions to the medical curriculum through such courses, a position advocated by a number of behavioural scientists (Pattishall, Weidman). The contrasting position suggests that anthropology is sufficiently unique and different from the other behavioural sciences to warrant a separate forum of its own within the medical curriculum, wherever it might fall. It eschews reliance on medical behavioural science courses because they select certain limited

anthropological problems and perspectives, while ignoring or excluding others which have received equal attention within the discipline. For some, in other words, medical behavioural science is already too "sectarian".

Weidman (1971) has made the most systematic attempt to establish the relationship between anthropology and medical behavioural science. Since she also served as acting chairperson for the steering committee which founded the Society for Medical Anthropology, her views on the topic are doubly significant. They have also been the springboard for executive action, such as the participation of anthropologists in preparing questions for the new Medical Behavioural Science section of the National Board examinations, first instituted in 1971. Weidman sees such cooperation with other behavioural scientists as part of a new emerging synthesis within anthropology itself, and suggests that medical anthropology may find itself in the vanguard of the synthesis.

> Most anthropologists in medical settings realize that medicine needs more from the social sciences than anthropology alone can offer. Seeing this need and responding to it, the anthropologist in such settings becomes a different kind of anthropologist, indeed, a different kind of medical anthropologist. He becomes, in a sense, a behavioural scientist, utilizing theory and data relevant to the educational and research problems before him from whatever field offers anything of value in that particular context. He synthesizes to whatever extent he is able, and uses this synthesis creatively, adding new insights and new hypotheses which eventually become formalized, codified, verified, and therefore part of a developing behavioural science theory which has relevance to general anthropological theory. (Ibid.:20)

Beyond the medical field the behavioural scientific position has very able spokesmen who have sought precisely to foster this relevance to general anthropological theory (cf. Arensberg 1972).

Looked at more closely, this ambitious program of anthropological

participation in medical behavioural science really involves a special definition of the field of anthropology. Weidman has outlined the emergence of this definition by distinguishing five phases in the development of "the convergence of interest areas and theory which is now occurring in the social sciences and medicine" (Ibid.:17). These phases are simultaneously a summary of the historical development of medical anthropology, and a series of alternative definitions of the range and nature of the field. The primacy of the behavioural science approach is asserted because it is the final phase of the five, and therefore the most recent and fully developed.

In Weidman's first stage medical anthropology is conceived of as "a substantive and theoretical area which has developed from an anthropology which looks at health, disease, and medical systems in both evolutionary and cross-cultural perspectives". She calls this approach the "anthropology of medicine", thereby signaling the predominantly anthropological orientation of its concepts. From the substance of the definition, it can be related to "ethnomedicine" as defined by Fabrega and others (cit), although Weidman herself does not make this connection explicit. Although the strongest emphasis is cultural, the inclusion of the evolutionary perspective affirms the connection with physical anthropology.

The second stage, according to Weidman, sees "medical anthropology as an applied field which involves the introduction of anthropological concepts and methods into our own Western medical system and thereby contributes to the development of a more social science oriented medicine". She calls this the "anthropology in medicine" approach, and its relation to applied anthropology is evident. There is also an implicit sense of being "within" the Western medical tradition, in contrast to the comparativist approach

cultivated by ethnomedicine. Studies of the social structure and operation of medical institutions (Salisbury, Caudill), and the general field of health care delivery are the best examples of inquiry carried on at this stage. In our thesis its relationship to community medicine is also explored.

The third phase develops medical anthropology as "a highly specialized substantive and theoretical field involving the integration of concepts from particular facets of anthropology and a particular branch of medicine". This combination creates what Weidman calls a "dualistic orientation". She mentions her own field of psychiatric anthropology as one example of this dualistic integration, and fields such as ethnopharmacology (relating medical pharmacodynamics, botany, and cultural anthropology) and nutritional anthropology (relating nutrition -- itself a composite field -- to cultural anthropology) offer additional examples of dualistic fields which have achieved some recognizable identity.

Beyond these three phases Weidman distinguishes two other phases which are more projected than real at this time. Examples of research are therefore more difficult to supply. The fourth phase considers medical anthropology as "a substantive and theoretical area which draws from medical behavioural science through exposure to, confrontation with, and integration of various conceptual approaches and methodologies, thereby becoming capable of making unique contributions to general anthropological theory". It represents the stage of a "synthetic discipline". In the fifth and final phase medical anthropology becomes a "substantive and theoretical area resulting from the integration and beginning synthesis of anthropological and medical concepts". This synthesis, which is "medical behavioural science" as such, is at the same time a new kind of anthropology which, having been forged in

the crucible of medical-anthropological confrontation, develops its own theoretical perspective based on the resolution of tensions between the two fields. (A la Wilson's "sociobiology", perhaps?)

In Weidman's favour we must note that her exposition of medical anthropology's evolution and present predicament recognizes that differences do exist between the medical and anthropological perspectives. Her schematization confronts these differences, yet their resolution remains on the planes of the utopic fourth and fifth stages, when a common intellectual language may have developed. Medical behavioural science becomes a grand "master theory" which forges this synthesis.

Although Weidman and others have been careful not to link medical behavioural science too closely with the broader socio-psychological theory of behaviourism as developed by Skinner, Watson, Hebb, and others, the name itself makes the connection obvious. Perhaps for this reason some anthropologists adhering to other theoretical persuasions have felt discomfort at the too-hasty marriage of medical anthropology into behavioural science. In commenting on Weidman's phases, for example, Colson and Selby (op cit:246) state:

> One senses that a definition inclusive of stages one through three would be widely accepted. Stage four expresses an unrealized aspiration. Stage five, though an aspiration of some, would exclude many self-identified medical anthropologists on the basis of their training and research interests.

We shall therefore make use of the widely accepted first three stages in organizing our view of medical anthropology, but will leave the fourth and fifth stages in the realm of utopia.

When one turns from the theoretical level of behaviourism's place in anthropology to the real content of behavioural science courses in medical

schools, the identification of the subject with psychological behaviourism becomes more evident, and the reasons for anthropological discomfort more obvious. The plan of these courses usually presents the student with a life-cycle model of individual psycho-social adaptation to an environment. Since this environment is both socio-cultural and bio-physical, a measure of integration is achieved between these various spheres, but ultimately it is the individual psyche which provides the fulcrum. Many medical behavioural science courses are taught by psychologists or psychiatrists; very few by anthropologists. Clinical applications presented in class are frequently psychiatric. Here again, the links between medical behavioural science and behaviourist psychology are manifest; the psychiatric theory of behaviour modification provides the clinical link. Medical behavioural science courses, then, have become a vehicle for introducing medical students to the psychological dimensions of their work with patients, and laying a groundwork for those headed toward psychiatry to assimilate at a later stage. Although anthropology is invariably mentioned as one of the behavioural sciences included in the synthesis (Pattishall), the anthropological contribution to these courses is invariably minimal in quantity and naive in content. If such courses are to become the major vehicle for presenting the findings of the discipline within the medical curriculum, they seem to place anthropology firmly on "the fringe of the fringe" -- a not too inviting prospect. Medical behavioural science represents, in our opinion, a fatal dilution which leaves anthropology with very weak medicine to offer the future doctor.

This quick look at medical behavioural science may not have revealed the way out of anthropology's problems of educational identity, but it does

serve to show how important the relationship between anthropology and medical anthropology is in defining the possibilities. A solution to the question of relevancy necessarily implies a look at this relationship. At an early stage in our research, it was our express intention to use "medical anthropology" as the theoretical framework for our research. It is also logical to assume that any anthropological pedagogy within the medical curriculum would necessarily make use of the literature of this field, and the courses we taught during fieldwork sought quite consciously to communicate its research perspectives and results to the medical students. We even hoped that our research would constitute a contribution to the further development of medical anthropology in some way.

The difficulty of using this framework arose only when we had to face the question: which medical anthropology? As Weidman's list of stages suggests, there were many medical anthropologies available rather than just one. The importance of defining the relationship between anthropology and medical anthropology -- the discipline and the specialty -- thus seems crucial to any determination of the relevance of anthropology to medicine. We must now turn to the question of exactly what kind of knowledge anthropology has to offer.

III. Anthropology and Medical Anthropology

We owe to the historian of science, Kuhn, the introduction of the concept of scientific paradigms into anthropological thinking. Kuhn's major work (1962) suggests that sciences and scientific research in general are governed by reigning paradigms, or models, at any given point in time. These paradigms are almost universally accepted as true and become a "given" in the formulation of further research questions, which usually seek to demonstrate the truth of the paradigm by developing its implications in concrete situations and finding the model's predictions fulfilled. These paradigms are the "great ideas" which organize the discourse of scientific inquiry, and "ordinary" scientific research is often almost unconscious of their existence. They form a common ground of communication, and it is only when their fertility has been exhausted (or when the historian of science views their succession over long periods of time) that the paradigms themselves come forcefully into view. According to Kuhn, the history of science is not one of slow gradual accumulation but a series of leaps and bounds. Periodically, scientific "revolutions" occur, and theoretical concerns shift suddenly from the old reigning paradigm to a new one. Kuhn convincingly traces this process of paradigmatic change in the history of several Western sciences, and amply demonstrates its explanatory power. Moreover, the occurrence of such paradigmatic changes in several sciences during the past fifteen years (e.g. the revolution in geology as the theory of continental drift has replaced the stable continent theory, and the effects of data from lunar and planetary explorations on many different sciences), leaves little room to doubt that sciences are governed by dominant paradigms which yield periodically one to the other.

Kuhn's background in the physical sciences did not lead him to include anthropology among the sciences to which he applied his paradigmatic historical framework. Perhaps he doubted the scientificity of anthropology (and hence the applicability of his paradigmatic approach), as have many anthropologists. Or perhaps the inapplicability of the model rests on more fundamental issues, as Mead suggests:

> The data /of anthropology/ can never be re-collected in the light of later paradigms. Thomas Kuhn's illuminating discussion of the way paradigms are finally replaced in the natural sciences simply does not apply to any branch of anthropology, and only to a limited degree to some of the other human sciences ... The anthropologist must take earlier data into account; he cannot simply wipe the slate clean and begin all over again as the physical scientist can, and he must therefore continue to use the kind of tools and understandings that will enable him to work with data collected under very different conditions in the past. (1973:7)

Despite these strictures, Kuhn's work has had a very wide dissemination among anthropologists. Wallace (1972), for example, uses paradigmatic analysis to explain the historical revolution which took place with the industrialization of Pennsylvania in the 19th century. There has also been a broader, more diffuse use of Kuhn's concept to disentangle the present complexity of anthropology's inter-disciplinary relationships and the hyper-specialization which Leighton condemns. It is in this latter sense in which we wish to use Kuhn as a way of understanding the paradigmatic quandary in which medical anthropology finds itself.

The first use of the term "medical anthropology", while a little hard to pin down, seems to have occurred rather suddenly in several quarters in the late 1950's, as if it were a designation which had suddenly come of age for a number of researchers in different areas of the discipline. This

sudden rapid development suggests that a new paradigm à la Kuhn may have been in formation. Since that time the development of a progressively more distinctive literature has been steady. The first systematic reviews of medical anthropological research appear in 1963 (Scotch and Polgar), and subsequent reviews (Fabrega 1971; Colson and Selby 1974) amply document the growth and breadth of content which medical anthropology has come to represent. Institutionalization of the field began with the formation of an ad hoc group in 1967 which subsequently became the Society for Medical Anthropology. The first publication in the field -- the Medical Anthropology Newsletter -- was initiated in 1969, and a look at its contents over the years reveals immediately that the spectrum of medical anthropology continues to expand apace. The current membership of the Society is over 1000, and the appearance of newer, more specialized groups within it is still continuing.

This increasing breadth in medical anthropology has given it an acute problem of definition of identity. To the best of our knowledge the only attempt at a formal definition of the field is one proposed some time ago by Hasan and Prasad which illustrates this problem as much as it resolves it. The authors suggest that

> Medical anthropology may be defined as that branch of the 'science of man' which studies biological and cultural (including historical) aspects of man from the point of view of understanding medical, medico-historical, medico-legal, medico-social, and public health problems of human beings. (1959:9)

This definition sets out a tall order, and other writers such as Colson and Selby and Kiefer prefer to acknowledge simply that no formal definition of the field is yet possible. Kiefer summarizes this state of affairs by

suggesting, that there is still no "official" medical anthropology.

> The words "medical anthropology" appear to apply to a broad group of activities, each of which has a traceable history, so that we can list a series of events and call it the foundation of our discipline. But somewhere along the way the list gets very dense and at the same time begins to spread out all over the academic map, so that the search for roots gets more and more frustrating. The medical anthropologist may feel sure he knows the outline and location of the forest he is in, but he wants to know how he got where he is, and what other beasts share the habitat. (1975:1)

Other studies of the field, such as Fabrega'a various articles (Fabrega 1971; Fabrega and Silver 1973) attempt not so much to define medical anthropology as to group the laundry list of topics considered into some general areas showing degrees of internal consistency, and to point up the overlaps between one area and another. This exercise, while not yet a definition, is extremely informative, especially in showing how competing paradigms, both within anthropology and between anthropology and other disciplines, have generated the present diversity. Lieban's (1973) historical analysis reveals many unexpected contacts between anthropology and medicine, and shows how these earlier influences have affected present-day medical anthropology. His near-definition of medical anthropology, illuminated by this longer perspective of medical-anthropological dialogue, is the only one which stresses the importance of mutuality within the discourse.

> Medical anthropology, then, encompasses the study of medical phenomena as they are influenced by social and cultural features, and social and cultural phenomena as they are illuminated by their medical aspects. These distinctions may be seen as two facets of a set of interrelated phenomena. But depending on the nature of the study and the interests of the investigator, one or the other at times may receive greater emphasis or be the focus of attention. (1977:15)

This definition is substantially in harmony with the assumption of mutuality

which underlies our concept of relevance, and it will be appreciated that our thesis topic can be seen as an example of the second type of research, seeking to use the medical school as a lens through which one can view social and cultural phenomena.

Lieban's study demonstrates that contacts between anthropology and medicine reach back to the earliest stages of anthropological research. Influences from medicine have played a major role in anthropology's development far more frequently than many anthropologists would suspect (Hasan 1975:7).

The oldest and most important theoretical contact between anthropology and medicine derives from the Darwinian theory of evolution, whose application to historic and prehistoric man gave birth to anthropology as a science in the mid-19th century. The development of this concern is responsible for the basic division of the discipline into physical anthropology and sociocultural anthropology. The continuous active participation of medical scientists in physical anthropology testifies to the ample collaboration which has been achieved. The anatomist, Dr. W.H.R. Rivers, whose contributions to the Torres Strait expedition are well known, provides an early example, while Dr. Carleton Gajdusek, Nobel Laureate in Medicine in 1977, who visited our field site of Norogachic, Chihuahua and whose works on the Tarahumara were consulted while preparing for the field project to be described in Chapter 4, is a more recent one. A physical anthropologist viewing such topics as population genetics and human racial differences, human ecological adaptability, and the applications of Darwinian biological theory to human prehistory can turn to over a century of accumulated research literature. Physical anthropology unquestionably continues to be the best

developed research link between the medical sciences and the anthropologist, but it is not the principal one developed in medical anthropology.

The very longevity of the connection between physical anthropology and medicine points out the corresponding disinterest and lack of participation of the social and cultural anthropologist in medical studies until recently. Physical anthropology is dedicated to the study of biological man, and is therefore a legitimate specialization within anthropology -- only a piece of a larger whole. Coincidentally it finds the physician a useful ally in research. But to the extent that physical anthropology deals exclusively with bones and bodies, socio-cultural anthropology can contribute very little to the discussion. Mind and body are seen as inherently separate in this model, and their inter-relationships a problem to be explained. This has been the traditional view put forward in physical anthropological research, and as we noted in the previous section of this chapter, it is consistent with the prevalent stance in the medical profession as well. But as a result, physical anthropology has suffered a kind of intellectual marginalization within the discipline as a whole. The physical anthropological literature at the interface with medicine is confined to a narrow band of research topics, which medical anthropology has inherited in part without really knowing what to do with them.

Another new focus within biology has found a rapid response in medical anthropology, however: the new science of ecology. Ecology has affected diverse areas of anthropology beyond medical anthropology (e.g. cognitive anthropology à la Lévi-Strauss, archaeology, human evolution, etc.), because its research paradigm is globalizing. It is evident that many health problems, such as population planning (Polgar, Scrimshaw, Urdaneta), the effects

of specific diseases on the adaptation of human communities (Gwaltney 1970), and the effect of social change on nutritional status (Gross and Underwood 1971) can be better understood when related to a total environment which includes both nature and culture. Ecology accepts and exploits this overlap. It has the additional advantage of being able to draw upon an extensive literature in physical anthropology on the limits of human biological adaptability (Paredes et al.; Damon 1975).

After Darwinian evolution, which created physical anthropology, the next oldest intellectual contact between anthropology and medicine occurred between psychoanalytic theory in psychiatry and cross-cultural studies of childhood socialization. Freud himself gave impetus to this collaboration in Totem and Taboo (1913), and his famous exchanges with Malinowski over the universality of the Oedipus complex during the 1920's set in motion a long chain of investigations by Mead, du Bois, Kardiner, Whiting, and many others during the 1930's and 1940's. These studies were concerned primarily with normal socialization, and form the essential background for the development of psychological anthropology and the so-called "culture-and-personality" school in the subsequent two decades (Hsu 1961; Barnouw 1973). Some early investigators noted abnormal behaviour as well, however (e.g. Devereaux 1937, 1940, 1961), and provided links with culture-and-personality (Parker 1962) which initiated the development of ethnopsychiatry and transcultural psychiatry, both areas of very active medical-anthropological collaboration at the present time (Wittkower and Prince 1974).

Another overlap has developed between anthropology and medicine around the categories of illness employed in different cultures, and the comparability of these diagnostic concepts with those of scientific medicine.

Stemming originally from the linguistic work of Sapir, these investigations have more recently been absorbed into the "ethnoscientific" approach. Fabrega has popularized the term "ethnomedicine" to describe these investigations, and makes the links with broader ethnoscience most explicit. In the strictly linguistic sense, anthropologists have demonstrated that diseases, symptoms, parts of the body, and even medicine itself may be classified differently in different cultures (Frake 1961; Glick 1967; Lucien et al. 1971), and that these differences have broad implications for the practice of medicine (Nash 1967; Fabrega 1970, 1972; Colson 1971). Beyond the verbal sphere, the focus on ritual language of all kinds (objects, actions, myths) has provided new clues as to the meaning of "symbolic healing" and the reasons for its efficacy on some occasions (Turner 1969; Kennedy 1967; Janzen 1978). This has led to a greater appreciation of the role beliefs play in determining how physical illness and healing are understood in given cultures (Paul 1958; Prince 1971; Logan 1972; McCullough 1973). By considering them simultaneously in both biological and socio-cultural terms, ethnomedicine has produced many new insights into facets of traditional ethnology which have always interested and perplexed field researchers: witchcraft (Nash 1960; Freeman 1967; Castaneda 1968, 1971) and the "evil eye" (Reminick 1974), the use of plant medicinals with mind-altering properties both in the past (Campbell 1958; Adovasio 1972) and the present (Opler 1970; Furst 1972; Dobkin de Rios 1972), and the social position of the healer as leader or deviant in his own society (Silverman 1967; Edgerton 1971; Appel 1977). Ethnomedicine has increasingly become the trunk from which social and cultural anthropology have explored the comparative aspects of medicine, and several of its inquiries, such as ethnopharmacology, have almost crystallized into separate sub-fields within medical anthropology.

A number of the pioneer ethnomedical studies derive from physicians who attempted to practice scientific medicine in the colonialized areas of Africa and Asia. Perhaps the most famous example is Cannon's 1938 report on the phenomena of "voodoo death", which integrated a physical-biological explanation to the cultural frame of reference provided by earlier studies. Recent studies (Lester 1972; Lex 1974) have re-opened this inquiry in the light of current physiological and ethnological knowledge. In psychiatry Bleuler used the newly-developed Rorschach tests to identify the personality traits of Morroccans in 1935. Although his analysis might be viewed with skepticism by the contemporary anthropologist, the Rorschach test became a prominent focus for culture-and-personality research for the two decades following. In the history of medicine Ackerknecht must always occupy a special position (cf. Wellin 1977; Ackerknecht 1971) as a pioneer in using ethnological data to enrich the history of scientific medicine, and establish its historical relations with other medical traditions. Trained in the Boasian tradition, Ackerknecht developed comparative data from many cultures from bibliographical sources. Due to the deficiencies of these sources, many of Ackerknecht's conclusions have turned out to be mistaken in the light of later research, but they were precursors to a rapid expansion of contacts between ethnology and medical history which have merged into the field of ethnomedicine in medical anthropology.

A final area of overlapping interests stems from the belated recognition within anthropology that the social institutions associated with medical practice can be fruitfully studied from a cross-cultural perspective. Interest in this topic within the "sociology of medicine" predates anthropological concern, and the exact relationship between medical anthropology

and the sociology of medicine in the study of such topics seems still a matter of active debate (Foster, Olesen). At present liberal poaching seems to be going on from both sides of the disciplinary boundary, however. Comparative studies of the delivery of health care have been attempted on the macro-social level of national health planning (Danielson, Raikes), and on the micro-social level of the roles of doctors and clients in specific treatment settings (Lewis 1954; Ordoniz et al. 1968; Press 1969a and b; Edgerton et al. 1970). Social problems such as alcoholism and drug addiction which have been studied intensively by North American sociologists for some time are now being given cross-cultural treatment (Heath 1974; Dennis 1975; Angrosino 1975).

This brief review does not do justice to many more specialized topics which have become part of medical anthropology, yet already we see what an omnibus affair it is. Nearly every major theoretical trend within the discipline has come to be represented; nearly every methodology in the social sciences is encountered in one or another investigation; and the subject matter is as diverse as anthropology itself. This helps to explain why some medical anthropologists, such as Kiefer, take the defining of their field as an insoluble problem.

> ... Nobody (and least of all an anthropologist) knows conclusively what anthropology is, except that it is the serious study of Man. Our discipline visibly shrinks whenever we try to draw its outlines clearly ....
>
> The best the medical anthropologist can do, then, is to demonstrate the value of eclecticism and self-consciousness -- to stoutly insist on the idiosyncratic character of knowledge. Perhaps we should begin by refusing to define medical anthropology. (Op cit:1-2)

Anthropologists working in other sub-fields of the discipline might be more confident of the intellectual unity of anthropology, but the range of

paradigmatic alternatives which confront the medical anthropologist gives cause to reflect. Perhaps this breadth is part of the reason why comprehensive textbooks of medical anthropology have not appeared, or why medical anthropology is rarely if ever mentioned in general anthropology textbooks (Weidman 1971:23). Instead, collections of readings, which provide snapshots of a diverse range of topics, have come to dominate the market. At the present time we would agree with Kiefer that "non-definition" is the only honest position to take, and support his conclusions entirely. But this is a disquieting situation for research which seeks to use medical anthropology as a theoretical framework.

On the descriptive level, the situation can be resolved simply by specifying what was taught. Any course represents a selection of topics, and as we have seen, the medical anthropologist has a wide range to choose from. In our course we opted for the eclecticisim which Kiefer urges. Readings representing nearly all of the different trends and interests within medical anthropology were used at one time or another. Likewise, we did not practice theoretical exclusiveness, and following Leighton's advice, as a general rule tended to de-emphasize theory as much as possible. It will not be our intention to pass judgment on the greater or lesser relevance of any one of these topics or theories in our new medical forum, since classroom experience suggests that all have something to say. The problem lies in their integration.

On the theoretical level the consequences of medical anthropology's disunity are more crippling. We find that despite its recent surge, medical anthropology has not developed a unified paradigm, and therefore can provide only limited guidance in establishing the general relevance between the two fields. As Kiefer suggests, anthropology as a whole -- and not just medical

anthropology -- must be relevant. The disunity within medical anthropology is merely a reflection of the larger disunity within the discipline, and medical anthropology has so far failed to provide a Kuhnian-type paradigm which resolves this disunity. The anthropologist ultimately enters the medical classroom with not just one message but many.

CHAPTER 2

MONTERREY AND THE MEXICAN NORTH: THE ETHNOGRAPHIC CONTEXT

I. Introduction

Our ethnographic frame of reference suggest that in order to orient our investigation properly in space and time, we begin by establishing some broad socio-cultural features of Monterrey and northern Mexico in general. Unlike the practice of medicine and the content of medical education, which are mainly traditional and universal in scope, the context of any given medical institution is inherently unique and specific. To understand the institution, we must understand first the socio-cultural world of which it forms but a part. It will be the purpose of this chapter to develop this kind of synthesis around the medical school of the University of Monterrey.

Monterrey and northern Mexico is a peculiar region to approach ethnographically. Until very recently, it has been so totally ignored by anthropologists that one might almost think a plot had been hatched to obliterate it from the anthropological map. To the best of our knowledge, except for some isolated archaeological studies, no anthropological literature exists on Monterrey, or any part of its extensive hinterland in northeastern and north central Mexico, until the 1960's, and even in the recent "surge", only four investigations have been undertaken, our study being the fifth to be carried out in the region. This neglect is all the more extraordinary when we realize that Mexico as a whole has produced literally thousands of anthropological studies by both foreign and national scholars. The anomaly almost screams for an explanation of some kind.

Obviously our paradigms of research have deflected our attention elsewhere. Our disciplinary lenses have been focused more intensively on small clusters of Maya villages in the highlands of Chiapas than on the characteristics of Mexico's third largest city and industrial capital, and the not-very-exotic borderland between Anglo- and Latin America which surrounds it. But a complete exploration of the reasons for this neglect would take us far afield.

The anthropological studies which have been produced in the past two decades help somewhat to remedy the previous drought, and illuminate certain aspects of our field situation at the medical school quite directly. None of them even attempt to develop a comprehensive picture of the urban area and its region, however, and a great many gaps still remain even for the limited ethnography which our study requires.

Hopgood (1976; 1977 a & b) reports on his fieldwork in a squatter settlement on the city's periphery, and is the only one of the four recent studies to deal directly with Monterrey. His descriptions of living conditions and social networks in these squatter communities are completely applicable to the communities in which the medical students carried out their fieldwork class projects. The view he develops of the urban area, however, is almost exclusively from the position of its poorest and most marginally urban members, and would be a total misrepresentation of the socio-cultural world of the middle and upper-class medical students who form our study population. Hopgood's work, therefore, while valuable in its own right, illuminates only one small facet of our field situation.

For the surrounding rural areas of Nuevo Leon, northern Tamaulipas, and eastern Coahuila, we have only Olson's (1972?, 1977) studies of

Mina, N.L., a small town in the harsh semi-desertic area 50 km. northwest of Monterrey. Olson gives much attention to the interaction between Mina and Monterrey in defining the perception of economic and social alternatives in Mina, and documents very clearly how the tapping of the region's underground water for the rapidly growing needs of metropolitan Monterrey has led to agricultural decay and political turmoil. Relationships between the two poles are inherently disequal, however, as Olson's later study of the election of a woman president in the municipio shows very clearly. Power of ultimate control always lies in the metropolitan centre. Monterrey means very much to Mina, but Mina, except for its vital water, has very little visibility in Monterrey.

Nor would it be fair to judge all of Monterrey's hinterland as Mina. Clearly Mina represents a classicly norteño rural life pattern, found throughout the desertic inland meseta, but other areas of Monterrey's hinterland are very differently endowed. Mina, with a population of about 1,000, is hardly typical of the larger towns, such as Sabinas Hidalgo, N.L. or the small cities such as Linares and Montemorelos in the citrus belt, with populations from 20,000 - 50,000. As we shall mention shortly, there is a rich texture of ecological variation within the region, and its full effects over human life are still not fully documented.

An additional factor which reduces the utility of Olson's study for ours is the notably limited emphasis on rural practice of medicine, and the disinterest of the students in general in the rural milieu - a clear reflection of their own background and professional values and attitudes. To the best of our knowledge, Mina's direct relations with the medical school we shall describe are virtually nil. (We shall discuss the

students' attitudes toward rural medicine at greater length in Chapters 5 and 6 in connection with the Tarahumara field project.)

Two other anthropological studies in northeast Mexico deal with little known cultural phenomena of topical interest. The LaTorre's have conducted research for the last ten years on the Mexican Kickapoo, located some 300 km. north of Monterrey in the Muzquiz valley. This cultural isolate maintains only limited contacts with the surrounding Mexican population, however, and is hardly a significant factor in the total cultural picture of the region. Similarly, Macklin's studies of the Fidencista healing sect deal with a little known facet of the region's rural sub-culture (Macklin and Crumline, 1972). The healing aspects of this sect, centered in Espinazo, N.L., proved a useful example of many problems in ethnomedicine in our course, but the importance of the sect in the region as a whole is minimal.

As can be seen from this brief review, anthropological research in northeastern Mexico still leaves many holes. Studies have dealt only with isolated phenomena, and an integrated picture of the region is still difficult to see.

Nor is it our intention in this thesis to remedy all the deficiencies of the ethnographic literature on northern Mexico, or provide a complete ethnography of Monterrey, its regional capital and largest city. Such a task, while obviously worthwhile, would take us well beyond the limits of our thesis problem. Instead, we shall confine ourselves to only three aspects of the field setting which bear most directly on the medical school and the practice of medicine: the physical setting and ecology of the metropolitan area, its historical development over the past 300 years,

and the special characteristics, interests, and values of the city's industrial upper class, the so-called "Monterrey Group". The first topic provides necessary information on the ecological space and economic resources with which the city and its hinterland is endowed, the problems which the environment has posed for human exploitation, and the implications of environmental conditions over the health and medical problems of the population. The other two document the city's peculiar historical development, and its emergence in this century as one of Latin America's earliest and most important centres of private capitalist industry. The implications of this unique position within Mexican society for the immediate background for the foundation of the University of Monterrey, ~~which~~ will be the subject of the subsequent chapter, and help to explain some of its most important institutional characteristics.

Due to the lack of appropriately synthetic anthropological sources, even this limited ethnography has required consultation in a variety of other disciplines. Regional geographers (Dicken 1939, Megee 1958) provide the most synthetic economic and social descriptions, while local and regional historians (Montemayor, Roel, Saldana, Vizcaya) have provided the time depth to these descriptions which allows the anthropological reconstruction of many important changes. Studies of recent urbanization and rural-urban migration by sociologists and demographers, summarized in Balan, Browning and Jelin (1973), offer impressive insights into the present-day regional dynamics, while the economist Peunte Leyva (1969) shows the effects of these processes on the social class structure of the urban area. Two sources in the form of historical commentaries (Fuentes Mares 1976, Garza 1950) are especially useful in establishing the dominant feature

of the business ideology of the Monterrey Group, and will be quoted more extensively. Natural scientists (Jauregui and Klaus 1976, Muller 1939, Vivo Escoto 1964, Wallen 1956) have contributed vital information for understanding the region's ecosystem, particularly in relation to the crucial hydrologic regime. Yet, taken together, these sources still do not sum up to a complete ethnography of even the limited aspects we intend to consider. As a result they have been supplemented by personal observations, comments of informants and friends, and myriads of informal, non-academic sources of information whenever necessary.

II. The Ecological and Historical Context

The regional Historian Isidro Vizcaya, commenting on Monterrey's historical development, has stated that "neither the Location of the city itself nor its natural environment have favoured in any way such extraordinary development." (cited in Fuentes: 46) In one sense, this statement is undoubtedly true, for the city's immediate environment does not contain any obvious natural resource capable of feeding such industrialization. This should not blind us, however, to the important influences the natural environment has exercised over the cultural uses which have been made of it. While perhaps not ultimately decisive, both location and ecology have played an unmistakeable role in Monterrey's development as a major urban centre in modern Mexico.

The city of Monterrey (see Figure 1) is located at the border of two major ecological zones within Mexico, the sub-tropical Gulf coastal plain and the high desert of the Central Meseta, precisely at the mouth of one of

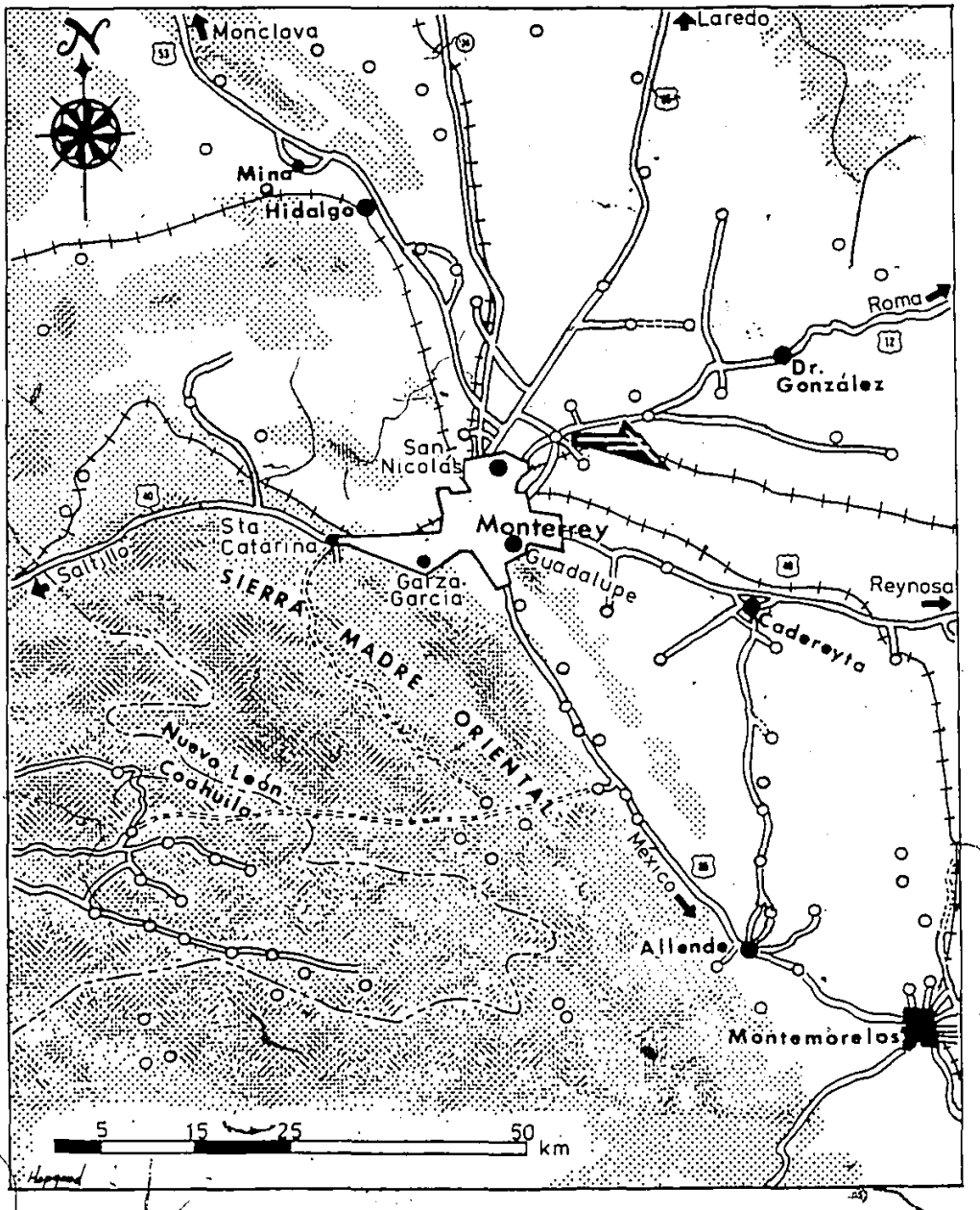


Figure 1: Monterrey metropolitan area and environs. Redrawn from a map by Guia Roja, S.A.

of the broadest and most transitable canyons connecting the two, approximately 250 km. south of the present U.S.-Mexican border, and about 200 km. inland from the Gulf of Mexico. This strategic location provides the city with easy access to large hinterlands in both zones, and creates a surprising ecological diversity within its immediate environs.

While the city is located at about 600 m. elevation above sea level, it abuts the front range of the Sierra Madre Oriental, which rise in almost sheer faces to the south and west of the city, and reach elevations of 1800-2000 m. This jagged crest dominates the skyline of much of the city. Isolated outlier peaks of the Sierra Madre chain rising to nearly equal elevations enclose the metropolitan area still further to the east (Cerro de la Silla), north (Topo Chico), and northwest (Cerro Las Mitras, El Fraile). In addition, a series of low hills (lomas) particularly prominent along the course of the seasonal Santa Catarina river complicate the urban terrain still further. These mountain ranges create a complex pattern of temperature variations and orographic rainfall patterns within the urban area, with corresponding differences in soil conditions, natural vegetation cover, and economic uses. In a classification which combines climate and natural vegetation, Mueller (1939) distinguishes eight distinct ecological zones in the state of Nuevo Leon. Of these eight zones, six can be found within 30 km. of the centre of the city, the approximate extent of its present urbanized fringe. These range from high altitude pine forests, which are well developed on the upper slopes of the Sierra Madre to high desert conditions which are found in the rain shadow areas immediately behind it. Of Mueller's categories, only the sub-alpine and alpine ecosystems are missing, these being limited to a few peaks in the southern

portion of the state above 3000 metres elevation.

As can be seen, elevation is a key determinant of the dominant ecology. For purposes of our discussion we may simplify Mueller's classification to distinguish four major ecological zones within the metropolitan region. First, on the slopes of the Sierra Madre Oriental above 1000 m. elevation, we find an almost continuous band of mixed pine and deciduous forest. This high-altitude forest is missing at similar elevations on some of the outlier peaks, such as Cerro de la Silla, and is minus the pine component on others, such as Cerro Las Mitras, due to different rainfall and soil conditions. Next, on the lower slopes of the Sierra Madre and on the other mountains we find an ecological zone dominated by smaller trees and shrubs. This ecosystem is basically adapted to periodic intensive run-off conditions, and varies considerably in composition according to local soil conditions and gradient. Below this, on the 600 m. floor over which most of the city is built, drier and hotter conditions prevail, and the natural vegetation is almost exclusively scrub vegetation with a fairly sizeable component of desert succulents and cacti. This vegetation has been highly altered by subsequent urbanization, but is still present on the city's periphery in various directions. Finally, along the river bottoms and around natural springs, a dense oasis-like vegetation occurs, which exploits the more continuous underground water supply, and usually includes a tall tree component. In Monterrey proper this ecosystem has been almost completely obliterated because of the total use of ground water supplies for urban domestic purposes, but we can infer its original presence from many colonial descriptions before the city had grown to its present size, and by comparison with nearby locations (such as Sabinas Hidalgo and Bustamante

just to the north) where urbanization has not been as extensive. This fourfold classification still ignores certain microenvironmental variations, but is useful for our purposes.

Besides elevation, water is the key force and determinant of the regional ecosystem. The presence or absence of water at certain times of the year, determined by the prevailing hydrologic regime, is crucial to all other ecological variables. As Balan and his colleagues nots:

> Unlike the central region, where scarcity of land has been a factor since colonial days and where that pressure has increased with the recent rapid demographic growth, water, not land, has been the main determinant of wealth in the North. (1973: 35-36)

While Monterrey receives as much total rainfall as Paris, this precipitation is concentrated in heavy downpours during the short season (September and October) when the climate is dominated by tropical storms from the Caribbean and Gulf of Mexico. (Jauregui and Klaus 1976) While winter rains may extend this period somewhat, all of the vegetation must be able to survive a 4-6 month drought period in the spring and early summer, and this favours the invasion of desertic vegetation from the interior throughout most of the region. Monterrey is also at the very northern extreme of the tropical rainfall belt, and there is another weather cline running from south to north which reflects the amount and duration of the rainfall received during the fall rainy season. Taking these two factors into account, the general rule is that the further north and the further toward the interior one moves within the region, the drier and more desertic will be the environment. (Wallen 1956, Vivo Escoto 1964)

The stability of this hydrologic regime over time has been called into question by recent paleoecological studies. Investigations of periglacial

morphology on the volcanic peaks of central Mexico (Lorenzo 1969) indicates much cooler conditions throughout the area during the Wisconsin glaciation, with extensions of ice down to 2800 m. In the northeastern region, this would imply permanent snow on most of the higher peaks, alpine and sub-alpine vegetation across most of the inland meseta, and a downward invasion of pine forests from their present remnant locations at higher elevations. Data from contiguous areas of the U.S. Southwest (Martin and Mehringer 1964) support this interpretation, as does the existence of an island remnant of alpine and sub-alpine vegetation on the peak of Cerro del Potosi (12,182' elevation). At present, the nearest alpine and sub-alpine vegetation is far to the north in the mountains of New Mexico. Following the retreat of the glaciers, the present climatic regime seems to have been established very quickly, but there are indications that periodic oscillations have occurred toward cooler and wetter conditions. Epstein (1972) found evidence for one such oscillation in Cueva de Derrumbes, in the main canyon above Linares, N.L., 200 km. south of Monterrey. It occurred from approximately 3000-2700 B.C., and brought pine forests into the mid-canyons, as well as massive inundations in the canyon floor which left almost 2 m. of gravel between two radiocarbon-dated occupation floors. Closer to Monterrey, a site in the Huasteca canyon in the Santa Catarina river drainage, presents petroglyphs of Great Basin Archaic type which have been heavily eroded by water, which had eroded away at least 2-3 m. of gravel on presently dry stream beds since the petroglyphs were executed. Finally, we have Alonso de Leon's description of Monterrey's climate in early colonial times, which reports a climate very much colder than the present one, with nightly freezes from November through late February, and snow for a month or more in

mid-winter (Garcia 1909). All of these data suggest that Monterrey's position at the edge of climatic and vegetational zones may have given it a much greater variability over time. While the basic components of each ecosystem have probably remained the same, their relative distribution appears to have altered considerably in the post-Pleistocene, and the present relationship may well be the product of the very recent past.

The hydrologic regime has presented human occupants with a number of problems since the region was first settled more intensively, and two of these problems deserve special mention because of their effects on urban development.

The first of these problems is the result of the marked seasonality of the rainfall, and affects especially the run-off zones and valleys. During heavy downpours flash floods sweep down the slopes, and fill the dry valleys with raging torrents within a matter of hours. Damaging floods are recorded in the area as early as 1612 (Roel 1958: 27), when over 7000 stock animals recently imported from Spain were carried away in a single inundation. These floods are reported periodically thereafter up to modern times. Buentello (1970) documents the most damaging modern flood in 1909, which swept away thousands of homes, and toppled the city's first iron bridge across the Santa Catarina river from its foundations.

This persistent flash flood danger caused the city's early settlers to abandon the arroyo bottoms, where vegetation and water were sometimes more abundant, in favour of higher, more protected locations nearby. This pattern of settlement has persisted to the present day, when only the city's poorest and most recent migrants occupy the precarious shacks at the edges of arroyos. This settlement pattern is replicated in other cities of the

Mexican North with similar rainfall conditions; D'antonio and Form (1965: 32-33) present an especially clear example for Ciudad Juarez, Chih.

In recent years another flood danger has come into play in the urbanization of the region, as the city has gradually extended up the slopes of nearby hills, and into the forested fringe of the Sierra Madre. In this zone when the natural vegetation is disturbed, heavy rains produce massive slides, sheet erosion, and rapid gullying. Urbanization has been modest because of these conditions, but increased demographic pressure has pushed some recent arrivals into this zone on Cerro de la Silla, Mitras, and Topo Chico Hill. Along the Sierra Madre, however, it is the very wealthy who have moved up the slopes, seeking to escape the smog and summer heat of the inner city.

Periodic efforts have been made to reduce the flood hazard, but none to date have been completely successful. Recently completed deep wells in the Huasteca Canyon, tapping the Santa Catarina river drainage for the city's water supply, are the latest effort, and certainly reduce the danger of flash floods somewhat. Experience is already showing, however, that it does not completely eliminate the problem.

The other major ecological problem facing the metropolitan area is the total dependence on underground water sources. Under semi-arid conditions surface water evaporates rapidly, and standing bodies of water rarely persist year round. Within the region there are no natural lakes, and only a handful of permanent streams, none of which carry more than a trickle in the hot summer months. Ground water (often at considerable depth) and a small number of natural springs which flow from the porous limestone underlying the city, must cover all human water needs. The quantities of

water available from this source are obviously limited, and the water table can be rapidly drained if use is intensified beyond a certain threshold.

Modern industrialization and explosive urban growth has created ever mounting pressures on this slender reserve, and it is now clear that some kind of a water crisis is near. One of the most abundant natural springs in the area is located under the present city centre, and was the reason for selecting that site for the new city. Yet paradoxically, these same springs now must provide the water supply for Mexico's largest brewery, and a source of employment for thousands. Many of these same workers return to homes without running water during the summer months. Whole sections of the city must be covered by water trucks because pressure is inadequate to maintain flowage. Only those who live near the main storage tanks and distribution lines have water in their homes all day during this hot period before the first rains arrive. Official estimates confirm that the city can cover only 80% of its minimum needs in this season, and for those who are left without, the danger of death from dehydration is very real. Thus, depending on transitory climatic factors, the slender water resources in the metropolitan area will most assuredly become scarcer and more valuable still, and it appears that only prudent management and large capital overhead investments will be able to stave off a major water crisis.

The hydrologic regime is also directly implicated in the commonest illnesses which affect the population. Monterrey, unlike most urbanized industrial centres, continues to present a morbidity and mortality picture in which environmental factors play an important role. Gastrointestinal diseases are the commonest cause of mortality in the state of Nuevo Leon, and are the direct result of contaminated water consumption. Even the

treated municipal water can become contaminated when pressures fall for long periods. In the marginal zones which do not receive treated water, parasitic and amoebic dysenteries are endemic, and they are often complicated by dehydration during the hot summer months with fatal results, especially among small children. The dissipation of more exotic modern industrial wastes through the aqueous strata promises to complicate this water contamination problem still further. In the winter rainy periods, bronchio-respiratory infections are extremely common, and in the absence of adequate shelter and heating often become complicated, and prove fatal. Thus, we see that only substantial investments in environmental modifications can provide protection from the commonest health risks which affect the population, and we can appreciate still more why the local environment is a factor of major importance in the practice of medicine.

According to ethnohistorical sources from the colonial period (principally Alonso de Leon) and modern archaeological investigations (Taylor 1966, 1972) the aboriginal inhabitants of the Monterrey area were scattered bands of nomadic hunters and gatherers who built only rude temporary shelters, and appear to have been fragmented into myriads of small groups of diverse linguistic and cultural affiliations. Epstein's work at San Isidro (1972) and Nance's excavation at La Calsada (Nance 1974) document the presence of Paleoindian hunters in the region by 8000 B.C., and MacNeish's celebrated studies in the Sierra de Tamaulipas just to the south shows that the important New World cultigens were brought into domestication there from 5000-2000 B.C. Nevertheless, in Nuevo Leon, for reasons still not completely understood, the new agricultural economy apparently never took hold, and no impressive ruins of sedentary aboriginal

settlements have been found anywhere in the state. Due to the paucity of these remains and the turbulent contact situation which developed, many cultural details about the aboriginal inhabitants, such as linguistic relationships and religious beliefs, have almost certainly been lost forever. Great gaps persist in our knowledge of aboriginal culture, and many puzzling questions remain to be answered (cf. Epstein 1974, Murray Ms.), but scholarly interest in the area seems to be languishing.

The Spaniards who first reached the northeastern frontier in the late 16th century regarded the indigenous inhabitants as little better than animals of the forest. Most of the Spaniards were soldier-adventurers who held little sympathy for clerical arguments to the contrary, and fled to the North when protection tightened in central Mexico and made slave-raiding difficult. At least some of the first settlers appear to have been suspected Jews escaping the Inquisition. They vigourously hunted down and enslaved whole bands, to tend their herds of cattle, sheep, and goats imported from Europe and central Mexico, and to be worked to death in Spanish mines elsewhere in the North. De Leon, our principal source on the early colonial period, was one such rancher, and his accounts, despite pious and erudite analogies from the Bible, show little sympathy and only superficial interest in the culture of the native population. Rather the principal theme seems to be that they were too few in number to fill the manpower needs of the new ranching and mining economy, and too rebellious to ever be fully trusted. More recent historical analyses of other sources (Montemayor 1970) serve to quantify and confirm this picture. Despite heroic uprisings against the Spanish slave raiders under the Guachichil leader Huajuco in 1624, and again in 1637 (Heurta and Palacios 1976: 291-94,

302-05), these indigenous groups were either completely exterminated or absorbed into mestizaje by the end of the 18th century. By 1785 the indigenous cultural presence in Monterrey was reduced to "Indian dances" performed as part of the city's Patron Saint's Day celebration. (Montemayor 1971: 80) The major indigenous component which survived in the region were not the native inhabitants, but thoroughly assimilated Tlascaltecans sent to the North to provide stability and protection to the hostile frontier (Cuellar Bernal 1972). Thus, in discussing Monterrey and the northeastern region, unlike many other parts of Mexico we are dealing with a region without a rich indigenous tradition, whose aboriginal inhabitants are all but forgotten, and whose development has therefore been based largely on the application of European models and techniques to the new and challenging environment. (Fuentes Mares: 50 ff.)

With the advent of European settlement the region was quickly converted to an economic base of agriculture and pastoralism. Although some mining was initiated, the ores proved low in precious metal content, and mining has never assumed major economic importance in the region. (It was not until the development of advanced energy systems that the region's considerable wealth in oil, coal, and natural gas has become of economic significance.) Lacking this incentive, there were no rapid influxes of European colonizers, and population growth was slow but steady throughout the 18th century.

Monterrey was not especially prominent among the newly-established towns of the northern frontier, being completely overshadowed by Saltillo in the early colonial period. By the latter decades of the 18th century, however, its natural and strategic advantages for trade between the Gulf

and the interior were becoming obvious. In 1783 the second Bishop of Linares, then the episcopal seat of the region, asked his superior for permission to change the official residence to Monterrey, considering it the only worthy settlement in the region. Although he later repented after his first hot summer in Monterrey, and asked for another change to cooler climes, his request was denied, and the episcopal seat has never changed thereafter. By 1800 the town's population can be estimated with considerable accuracy at about 7000, and the stage had been set for the city increasingly prominent role in the turbulent frontier politics of the 19th century.

The basis for this role had been laid with the establishment of Monterrey as a commercial distribution point for goods moving from the Gulf coast to the interior North. Monterrey's commercial advantage in this traffic was enchanced still further with the opening of the Port of Matamoros at the mouth of the Rio Bravo (Rio Grande) in 1821 in the dying moments of Spanish colonial control. Besides the burgeoning commerce, population growth was further encouraged by the policies of the newly-independent Mexican government, which persistently sought to attract immigrants to the North in order to contain the American expansion into Texas, a part of Monterrey's natural hinterland until its loss after the War of 1847. Indian raids by Apaches and Comanches forced out of Texas by the Americans weakened the Mexican settlements shortly before this War, however (cf. Vizcaya 1968), and during this War Monterrey fell to the American troops under General (later President) Zachary Taylor after a spirited three-day battle. Emerging from the War, Monterrey found its political position on the continent permanently changed. The new frontier 150 miles to the north deprived it of part of its natural hinterland, but it also

provided Monterrey with a new political context in Mexico which has shaped the city's history ever since. In the long run the political change proved highly favourable to its commercial and industrial development.

The first experience of the new political context came during the U.S. Civil War shortly thereafter. The Confederacy, of which Texas was a part, found its ports blockaded very early in the war, and was forced to turn to Mexican ports to move vital exports and imports in and out of its territory. Monterrey and the entire border region experienced a windfall commercial boom trafficking across the Texas border, and the fortunes made, added to previous commercial wealth, created a fairly substantial pool of accumulated capital in Monterrey after the war.

At this juncture a curious mutation occured in the city's development. The traditional outlets for capital investment in land and mining presented an unattractive picture in the northeast, since the region possessed neither mineral ores nor good agricultural land in abundance. Finding these outlets blocked, the wealthy merchants began to invest in industrial machinery in order to mass produce basic consumer goods. In the second half of the 19th century, at a time when the rest of Mexico was still dominated economically by semi-feudal agriculture and resource extraction, Monterrey very quickly made the transition to a fundamentally industrial economy.

The first major industry established was textiles. Cotton cultivation was introduced into the nearby Laguna region of Coahuila in the 1850's, and the raw cotton was shipped to La Fama, N.L. (just west of Monterrey) to be woven into bolt cloth and finished apparel. (Vizcaya 1971: 29-31) All of the investors in these initial enterprises were Mexican, and considerable fortunes were made throughout the latter half of the century. This provided

seed capital for more ambitious industrial ventures when railroad connections were completed to central Mexico, the Gulf Coast ports, and the U.S. border in the 1870's and 1880's under the benign business concessions of the Porfirate. In 1889 a foundry was established which became the base for what is now Latin America's largest private steel company, and a year later another company was founded which was to become Mexico's largest brewery. Following the principles of vertical and horizontal integration characteristic of laissez faire capitalism, each of these companies re-invested and spawned a host of subsidiary industries which in time grew to be as large as their parents. By 1900 Monterrey, with a population of about 100,000 had firmly established its present commercial role as Mexico's major port of entry from the eastern half of the continent, and had laid a firm basis for its spectacular industrial growth in the present century.

The first seven decades of the 20th century have seen the continuation and expansion of the basic trends intitated at the close of the previous century. These trends have catapulted Monterrey into a peculiar position of leadership within Mexico. Political stability along the border throughout the century and the vitality of U.S.-Mexican trade has made the city's commercial functions steadily more important to the Mexican economy, and early industrialization has given Monterrey a lead of several decades in capital formation, business organization, and the implementation of advanced technology over competing regions within Mexico. (It should be recalled that the total urban population in Mexico surpassed the rural for the first time in the 1970 census, and then by only 5%.) Although Monterrey is only Mexico's third largest city in population - a mere 2% of the national total and less than one-sixth the size of the federal capital, it

produces approximately 30% of the national output of manufactured goods according to recent statistics. The scope of its industrial activity has become steadily broader and more sophisticated, and now includes a wide range of steel-using industries, such as truck and tractor manufacturing, steel tubing, and pumps, as well as other industries such as plastics, synthetic fibers, petrochemicals, cement, electronics, and food processing, to name only a few of the areas of the Mexican economy in which Monterrey firms hold commanding positions. Most of this industrial development has been financed by private banking and credit institutions controlled by these same industrial consortiums, whose collective assets represent the largest pool of private capital in the country - and possibly in all of Latin America. Investments by Monterrey firms have constituted an important force in Mexican national economic development in the last two decades. Within the national context the owners of the city sometimes called "the Chicago of Mexico" have come to be known as "the Monterrey Group", and have emerged as a unique economic and political force.

Because of their immense influence in shaping the life of the city, the nature and composition of this Group, its guiding philosophy, and the institutions it has created provide a useful means for understanding the most important peculiarities of Monterrey as an urban centre in contemporary Mexico. As we shall see in the next chapter, there is also a direct connection between the Group and the foundation and program of the University of Monterrey.

III. The Monterrey Group

In sociological terms the "Monterrey Group" refers to a group of families who collectively control most of the city's major industries. Although individual families and firms are recognizable within the Group, a number of factors, including inter-family marriages (especially important in the Mexican bilateral kinship system), cooperative patterns of investment, and interlocking directorates within the major firms have tended to blur major distinctions between them, and re-affirm instead the Group's fundamental unity and homogeniety. For our purposes, they can be treated as a single social entity: an industrial elite.

Just as the differences between families within the Group have become blurred, so the distinction between family and firm has also become fuzzy. A reference to the Group almost always implies family and firm simultaneously, so inseparably are the two linked. Unlike many U.S. and European industrial giants, who employ a purposely heterogeneous cadre of professionals to administer their activities, Monterrey industries tend to be highly personalistic. Family members within the ownership group normally take an active and determining part in the management of the firms they control. In some families this tradition of managerial involvement now extends over four generations (cf. Fuentes Mares), and has almost acquired the quality of a patriarchal hierarchy, which distributes key posts within the industrial consortiums from fathers to sons.

Focussing on the aspect of industrial organization allows us to make some internal distinctions within the Group, however, which are hidden if only family is considered. In economic terms the Group is divided into

four sub-groups, each consisting of a major company in a basic industry, plus from twenty-five to thirty subsidiaries operating in other areas of the economy, or providing services needed by the parent company. "Grupo Cerveceria" is organized around Mexico's largest brewing company (with seven plants throughout the country), and includes a development company for urban subdivisions, a manufacturer of cork bottle caps, Mexico's largest producer of toilet bowls and washstands, and one of Mexico's largest banking consortiums, to mention only a few. "Grupo Alfa" is even more diversified, since its industrial centre, Latin America's largest steel mill, was recently nationalized by the Mexican government, leaving the group with only its specialty and sheet mill. To this has been added two companies engaged in tourist developments on Mexico's West Coast and elsewhere, a television and radio manufacturer producing the "Philco" brand, and a 25% participation in Mexico's largest television network - all as recent diversifications, as well as older investments in corrugated boxes, nylon fibers, and mining. "Grupo Alfa" is Mexico's largest privately-held firm, and ranks 28th in size of all companies in the developing nations of the world. "Grupo Vidriera" is built around Mexico's largest producer of glass and glass products, and includes another of Mexico's major financial and banking consortium, as well as mining and machine tool manufacturing. "Grupo Cydsa" is based on the major producer of synthetic fibers in Mexico, and has expanded heavily into the plastics field (tubing, packaging, etc.), fertilizers, printing, and pharmaceuticals, where they are co-owners with the German Bayer firm. (Ortiz Pinchetti 1978)

The present configuration of the "Grupo Monterrey" is a recent development, and should not be interpreted as indication of fundamental

differences. It will be noted, for example, that only in rare and exceptional cases (banking for instance) do the firms of one sub-group compete with another sub-group. The general configuration of all four consortia is complementary, and the division into sub-groups basically obeys the needs for efficient administration, rather than competing or conflictive factionalism. The links and similarities between all four sub-groups are far more impressive than their minimal differences. Nonetheless, some minor differences have begun to appear, as we shall see shortly.

Perhaps the most outstanding similarity between all of the Monterrey firms is precisely this avoidance of competition and conflict. In contrast to peasant Mexico's "Image of Limited Good", which Foster has so aptly identified, industrial Mexico sees unlimited prospects, and no need at all to struggle over the spoils. There is always room for more firms, and always new industries opening up for development. Under these conditions competition is a vice, rather than a virtue, since it puts off the day that Mexico will catch up to its industrial neighbours and competitors in its own national markets. Cooperative, rather than competitive, investment patterns, "cooperation" with U.S. and other foreign firms in joint ventures, cooperation with government-sponsored economic development plans are all tendencies in the Monterrey firms which underscore this fundamental value.

Another lens through which we can inspect this value is in the area of owner-worker relations. A sense of personal involvement with the success of the firm is cultivated among workers and employees at all levels. To enter the firm is to enter a family, and mutual obligations of a very personal nature are contracted. In order to fulfill these familial obligations for

its workers, many Monterrey firms initiated private welfare programs for their workers very early in their development, offering services such as free medical care, reduced-cost housing, recreational centres, and credit facilities. (Cf. Fuentes Mares: 128 ff. for a description of the "Sociedad Cuauhtemoc y Famosa", one such institution.) The actual operation of these institutions is often organized along the lines of a cooperative, and tends to cement the allegiance of workers to the firms, even after government-sponsored programs have subsequently made the same benefits available to the general populace through public subsidy.

The operation of these welfare programs is often shared with company unions to which most Monterrey workers belong. These so-called "white" unions do not participate or pursue the same policies and goals as the Mexican mass labour movement, the C.T.M. (Confederacion de Trabajadores Mexicanos). C.T.M. leaders often attack the white unions as being management-controlled, and there have been periodic incidents of industrial violence when attempts have been made to gain collective-bargaining representation. Indeed, most labour problems in Monterrey derive more from inter-union conflicts than from labour-management differences. The strike record of most Monterrey firms is enviable indeed, and might tend to bear out the C.T.M.'s charges. Yet, the upward mobility provided by almost continuous industrial expansion has given the Monterrey worker a generally higher standard of living than other Mexicans, and testifies amply to the success of the Monterrey Group's labour relations formula. In the end personal allegiance to a firm which accepts family-like obligations towards its employees is more important to the Monterrey worker than the economic rationale of national collective bargaining, and the existence and

membership of the "white" unions serves to mark out with pencil-sharp accuracy the sector of the Mexican economy in which this special relationship prevails.

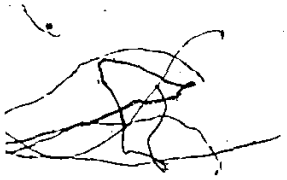
In broad terms, then, the Monterrey firms can be characterized as personalistic and paternalistic in structure, projecting the traditional values of the family setting into the new industrial environment. They emphasize cooperation and collective sharing among members of the industrial in-group, and stable and mutually-recognized obligations between owner and worker. These characteristics suggest a greater similarity to the giant family consortiums typical of Japanese capitalism than to the anonymous conglomerates and massive multi-nationals which have come to dominate American capitalism. This alerts us immediately to the danger of assuming that private capitalism in Monterrey is a mere extension of the U.S. model into Mexico. In fact, the relationship between the two, while obviously present, is much more complex.

Monterrey private enterprise most closely approaches American capitalism in what might be called its business "ideology", which stresses rugged individualism and the value of hard work in a way hardly distinguishable from the Protestant Ethic and the Horatio Alger myth. "Liberty and savings are the two elements - one intangible, the other tangible - destined to foment investment", Monterrey industrialist Eugenio Garza Sada is quoted as saying (Fuentes Mares: 95), expressing with pragmatic clarity the essence of these values. Both elements serve to affirm the right to private property, and the freedom to enjoy the benefits derived therefrom. Another member of this influential family has described these values in terms of an idealized portrait of the immigrant to

Monterrey. He is "a strong, dissatisfied man, who has faith in himself, is not afraid of the future, and is ready to work and struggle," (Garza 1950: 101) a portrait not unlike that of the American pioneer. Such people have created in Monterrey "a tradition of tenacious work which measures the results in proportion to the difficulties which had to be overcome." (Ibid.: 100) Virgilio Garza concludes that

> Monterrey owes much of its prosperity to those who, having been born in other places, chose Monterrey as the scene of their efforts, the place where they could succeed by the sweat of their brows or by the force of their intellects, wherein they could establish their homes, and where they would leave, when answering the last call, a factory, a shop, a center of creative activity as a token of gratitude and descendents able, willing, and determined to carry on a tradition of honest labor and effort, which in the course of time is building a city and making a country prosperous. (Ibid.: 101-102)

Such values are clearly the ideals of American free enterprise too, and it is natural that Rotary Clubs, Lions Clubs and Chambers of Commerce have become the natural meeting places and networks of communication for those within Mexico who profess them.



In more concrete historical terms, however, the number of American immigrants to Monterrey has been very small, and there is no "American" colonia as has formed in some other Mexican cities. Those Americans who come to Monterrey do so usually as technicians, and they have made some significant contributions to Monterrey's industrial development. To cite just one well-known example, the construction of Monterrey's first rail links was financed primarily with American capital, and was almost entirely carried out by the railroad's first general manager, Joseph A. Robertson, an American engineer. Robertson is also credited with introducing orange cultivation into Nuevo Leon (Garza op. cit.: 98), oranges being today one

of the state's major agricultural crops. Many other examples of this type of contribution could be mentioned. It is not the presence of a large American population, or the contributions of individual Americans which gives Monterrey its distinctively American cast, however.

It is rather the indirect American influences involved in the movement of thousands of Mexicans across the border to work in the United States, the continued presence of a large Mexican-American population in south Texas with kin ties across the border, and the constant flow of American-made goods through Monterrey to the rest of Mexico which exercise an important cultural influence. The combined effect of these and other contacts has produced a whole series of minor imitations of the U.S. and American culture which gives Monterrey the superficial appearance of an American city, especially when compared to the older colonial cities of central Mexico. Mexican visitors to Monterrey often comment on this apparent Americanization, and it is probably the most widely known stereotypic trait of the city noted in other parts of the country.

Like all stereotypes, this one distorts the real situation somewhat, even while it contains a grain of truth. It is true that Monterrey, by reason of its greater proximity and familiarity with the United States, often does act as a filter through which American influences pass into the broader Mexican society and culture, but this role as cultural intermediary does not imply abandonment of Mexican identity. Ultimate control of the processes of American acculturation has always been in Mexican hands, and those American goods and institutions which have gained acceptance have received it because they fitted Mexican needs and interests. The cultural trait goes through a subtle process of transformation from its American

prototype into something with superficial resemblances but profounder differences. Take the case of American football, for example.

In the last two decades American football (like its predecessor American baseball) has gradually developed into a sport of some significance in Mexico. It is still far less popular than soccer football. Due to the smaller size of most Mexicans and the lack of technical preparation, the level of play is well below U.S. standards, and there is no professional league to project the sport systematically on a national level. Still, in many parts of Mexico, including Monterrey, there are youngsters who simply like to play it, and grassroots leagues for youngsters of all ages from 6-18 have sprung up in most of the middle and upper class colonias of the city. The city's university level teams are habitual champions on the national level, and are fed in great part by this infrastructure of juvenile leagues. Yes, American football is big in Monterrey, yet how strange it is to see a 7-year old clad in full gear take a blocked punt on the helmet before his beaming parents, who find him that much more adorable because he runs around just like the American football players on T.V. Somehow the sport has become transformed principally into a game for pre-pubertal youth, when in the United States it is principally a game for adolescents and young adults. The rules of the game continue to be the same, but American football fits into a different social function in Mexico than it does in the United States. It has been socially transformed.

While Monterrey industries are operated on capitalist principles, the form they take of "family capitalism", as Balan and his associates have called it (1973: 40) is fairly rare in the present U.S. economy, although not unknown. Monterrey firms generally direct the bulk of their production

to the Mexican market, and are in fact less dependent on export markets in the U.S. than many of the resource-extraction sectors of the Mexican economy. The Monterrey Group is unanimously committed to a staunch Mexican nationalism, and see themselves as natural beneficiaries and contributors to Mexican national economic development. Far from being a foreign encroachment, Monterrey private capitalism is a home-grown model with the Mexican flag literally wrapped on its chest.

Those Americans who have stayed and have achieved recognition have done so by becoming well-integrated into local society, and by having contributed positively to Mexican interests. J.A. Robertson, the American engineer, is memoralized in modern Monterrey by a street named in his honour, a distinction which places him symbolically in the pantheon of Mexican heros and benefactors of the nation, but he enters in the company of his business partners, the Garzas, Sadas, Zambranos, and Trevinos who built Monterrey's great industries, and whose names grace the other nearby streets. Whatever its apparent Americanization, Monterrey remains functionally very much a part of Mexico, and it is a grave error to think of it as a little bit of the United States transplanted south of the border. As Balan, Browning and Jelin note: "From the very beginning Monterrey's industrial destiny to a large extent was in local hands." (Ibid.: 39)

The peculiar values of capitalist production help us to understand another stereotype of Monterrey widely-known in other parts of Mexico. Jokes and anecdotes often depict the "regiomontanos" (Monterrey natives) as codos, which literally means "elbows", but refers metaphorically to a common gesture meaning that the person is tight with his money, in much the same sense as one might call a person "Scotch" in English. (Cf. Balan op. cit.:

37) This stereotype attempts to account symbolically for the relative prosperity of industrialized Monterrey in terms of the values of the peasant economy, where limited goods make redistribution of wealth more important than production and re-investment in capital goods. Within the redistributive economy the only way a person can become more wealthy than his peers is through hoarding, which in effect abrogates the redistributive rules and places the individual in a highly stigmatized pariah position vis a vis his former dyadic partners. By this reference to hoarding, then, other Mexicans put forward their stock explanation of any accumulated wealth. We submit that most of the jokes serve to discharge hostility at the very real disparity, and determine the extent to which pariah conditions should be imposed on the "cheaters". The real cultural distance between the two views can be better appreciated knowing the Regiomontano's counter-image, however. While gracefully accepting the jokes about being codos, hardly any Regiomontanos accept the stereotype as literally true. The native explanation is that while one may save for a long time and appear to be tight, when the moment comes to enjoy the fruits, one spends all recklessly in lavish display or conspicuous consumption - gambling, fancy cars, and expensive weddings being among the preferred and most respected display items.

Through a complicated series of official arrangements, Monterrey private capitalism has always remained structurally integrated into Mexican national economic and political institutions, but at times the Monterrey Group has found itself very isolated within the country, and a continual process of adjustment goes on between the public and private sectors. When the Mexican government moves toward nationalization of industries and

greater public intervention in the marketplace, the Monterrey Group has invariably offered spirited resistence, regarding such moves as direct attacks on their interests (which they often are), and as vehicles for Communist agitation and armed violence. Clashes of this sort were particularly tense during the Cardenas regime in the late 1930's, and again more recently during the Echeverria administration. The ambush slaying of Monterrey industrialist Eugenio Garza Sada by urban guerrillas in 1973 left a pall of suspicion of government complicity in the matter, and the subsequent policies developed by Echiverria left little doubt as to his hostility toward the Monterrey Group. This was the tense relationship between the public and private sectors which prevailed during our period of fieldwork, and anti-Echeverria comments and jokes were exceedingly common in Monterrey throughout this time. Normally, political confrontations between the public and private sectors are avoided, however, and the official government ideology is that both capitalist and state ownership can and should exist as long as they serve the interests of national development, a position which leaves ample room for negotiation.

This state of political truce is aided by the notable apoliticality of the Mexican private businessman in general. Experience teaches him that contacts with the government bureaucracies are always costly, and the view which develops of the public sector is unrelentingly negative. Fuentes Mares describes the situation as follows:

> ...It is a typical trait of the Mexican businessman - and not just of the Monterrey entrepreneur - to renounce the normal exercise of political rights. The Mexican businessman is sure that "politics is not his calling", and he is sincere because he is convinced not only that it is not his calling but also that those who ordinarily practice it are not people very much to his liking. So common is this attitude in the business

> sector that at election time it is common for them to declare that 'they have no candidate', without even taking the trouble to clarify whether they speak as a group or as individuals. (Ibid.: 104, Author's Translation)

Only in the face of dire emergencies does the Monterrey Group abandon this traditional political neutrality, and when it does, it often acts through business spokesmen or trade organizations rather then through opposition political parties. The principle of allegiance to the good of the Mexican nation is the basis for political negotiations when such conflicts occur between the public and private sectors, and this principle transcends mere politics. Nevertheless, recent conflicts have forced ever greater polarization, and some of the ambiguities of the resulting situation are aptly illustrated in the recent political history of the state of Nuevo Leon and the Monterrey metropolitan area, especially as it relates to the interests of the Monterrey Group.

As in most parts of Mexico, the government is synonymous with the governing party, the Institutional Revolutionary Party (P.R.I.), which has held continuous control of both state and municipal governments since the Revolution. Within the Party structure, all sectors of the population (including entrepreneurs) have formal representation, and "candidates" are put forward by mutual agreement between these sectors. It is here within the Party apparatus that most "politicking" goes on. The importance of elections against the opposition parties is ephemeral; these parties are tolerated, and even subsidized, precisely because they provide no real political threat.

Given the hierarchical nature of the party apparatus, the commonest sources of conflict are between different levels of the hierarchy. When

conflicts of this type appear, the usual solution is for both disputants to be removed by the next higher level politically within the party or governmental apparatus. Now leadership is then sought among those not involved in the earlier dispute. (Cf. Schryer 1976; Olson 1977) Under normal conditions this assures the continuity of the party organization, and prevents factionalism from producing fissions within the party itself. Some conflicts are not so easily handled, however, and produce permanent schisms. Especially at the municipal level the dissident faction may become identified with an opposition political party. In this case the election process becomes a real test, and the opposition parties even win office occasionally.

Such division of control has been the case recently in the five urban municipios comprising the Monterrey metropolitan area, where the opposition National Action Party (P.A.N.) has held control of at least one municipal government at all times during the past decade. They have never won the core municipio of Monterrey, but during the period of our fieldwork two other municipios (Garza Garcia and San Nicolas) were in P.A.N. hands, and in a third municipio (Santa Catarina) the elections were so hotly contested that the final decision had to be rendered by the Mexican Supreme Court, which judiciously awarded the victory to the P.R.I. The secret to these election disputes is the political position which the P.A.N. represents: pro-Catholic, favourable to private enterprise, and anti-revolutionary. The incipient two-party struggle thus represents to some extent the more general schism which was developing between the public and private sectors, when the government was seen as being anti-Catholic, anti-business, and pro-revolutionary. This situation shows, then, that in times of stress the political apparatus can be mobilized to express dissent, and that the

political apparatus can be mobilized to express dissent, and that the period of our fieldwork was one such period.

It would be wrong to portray the Monterrey Group only as an economic and political force, however. They are also a powerful educational and cultural influence within the community. Fuentes Mares has aptly pointed out how each generation of Monterrey entrepreneurs has taken up a different challenge, and identifies the third generation, in control since World War II, as the one which has taken up the challenge of education. With this he refers most preeminently to the Instituto Tecnologico de Monterrey (Monterrey Technological Institute, Mexico's M.I.T.), the "ninth and most dearly loved child" of Don Eugenio Garza Sada. Don Eugenio was educated himself at the Massachusetts Institute of Technology, graduating in 1914, and as the story goes throughout his long business career he dreamed of one day creating a similar institution in his home city. Such plans had to wait for their consummation until 1943, when the Tecnologico first opened its doors, but once started the school was a complete success. Industrial benefactors have provided fine libraries, excellent laboratories, and an outstanding faculty in all the fields of science and engineering, and there is no doubt that the Tecnologico is one of Latin America's outstanding schools in this field.

It would be naive in the extreme, however, to see the Tecnologico's development as merely disinterested philanthropy. As Fuentes Mares indicates (Ibid.: 101), Don Eugenio was never one to confuse social convenience with traditional charity. The Tecnologico obviously serves interests. The quality instruction which it offers keeps the Group abreast of developments in competing nations, and prepares the next generation for

key leadership positions. The Tecnologico's top graduates are rapidly recruited into the city's large firms. Moreover, it attracts students from all parts of Mexico and many other Latin American countries, and has created a large student market for rented apartments, and goods and services around the campus area. In this sense the Tecnologico is an investment like any other - and an enormously successful one at that. There are even those who say that considerable fortunes have been made by some of the original "investors" which more than offset their donations to the Institute's patrimony. Whether this is true or not is hard to say, but it is clear that the Tecnologico is a natural extension of the Monterrey Group's business interests, and it is not therefore inappropriate to apply capitalist criteria in assessing its operation.

The Tecnologico is, in fact, the prototype and only the first step in a series of ventures by the Monterrey Group into the field of education. The latter phases bring us to the founding of the University of Monterrey, whose characteristics and development we must now trace.

CHAPTER 3

THE UNIVERSITY OF MONTERREY AND ITS MEDICAL SCHOOL: AN INSTITUTIONAL PORTRAIT

I. The Establishment of the University of Monterrey

If the founding of the Instituto Tecnologico was a singular work by a singular man with visions far ahead of his time, the founding of the University of Monterrey must be characterized in comparison as the result of systematic changes which inevitably forced its creation, a less heroic beginning, perhaps, but nonetheless an interesting one for the anthropologist. The proper framework for understanding these forces requires that we examine the peculiar strains being felt in the educational sector in Mexico, because it is in response to these strains that the private sector has reacted.

The source of these strains is not too hard to discern: the explosive expansion of the school-age population in the post-World War II years, and especially in the last two decades. This rising demographic curve has strained Mexico's educational facilities at all levels. The bulk of the educational effort in Mexico is carried on in the public sector, and the funds available have simply not permitted the expansion of educational plant and personnel at the same rate as the flooding enrollments. The end result is that more and more students are crowded into the same facilities, and there is a rapid dilution in the quality of instruction, both circumstances which are particularly disastrous at the university and professional levels. King (1972) admirably documents the resulting educational conditions in a comparative study of nine Mexican universities, one of which was the University of Nuevo Leon. Teaching methods designed for small groups, such

as laboratory experiments, seminars, and dissections, lose their effectiveness when classes swell beyond a certain threshold. Examinations become a poor measure of the student's capacity when the textbook assigned is too expensive to purchase, and library copies are available only for the lucky few who arrive first in the morning. Under these circumstances the student often finds his education frustrating and meaningless, and feels defrauded of the very opportunity he has worked so hard to achieve. Discontent naturally becomes directed at the system itself; political radicalization of the universities takes place, and in 1968 the radicalization of this discontent burst dramatically in view.

In the spring of that year, shortly before Mexico was to host the Olympic Games, a still undetermined number of students demonstrating for educational reforms at the National University of Mexico were killed during a disturbance in the Plaza of the Three Cultures in Mexico City. (Semi-official sources have acknowledged over 30 students killed, but informal estimates have run as high as 3000. The exact number may never be known, since it has been government policy ever since not to make direct mention of the incident.) Despite official silence, the Massacre of Tlatelolco, as it has come to be known, is well known and continues to affect university-government relations to this day. The immediate impact of the incident was a wave of similar disturbances and sympathy strikes in other universities throughout the country, all of which were energetically suppressed, but without further loss of lives. Over the longer range the political costs were higher. In Nuevo Leon, for example, the student violence in 1968 set off a process which led ultimately to the destitution of the Governor of the State and the Rector of the University of Nuevo Leon some two years later.

It is here that the Tlatelolco Massacre enters into the historical background of the University of Monterrey, for the deposed Governor granted the University's charter, and the school's early development was dominated by the growing conflict.

The issue of university reform is deeply impregnated with politics in Mexico because most of the larger universities enjoy a special legal status before the national government. "Autonomous" status has been granted to most of them which guarantees them special rights, extending from tax exemptions to the right to be governed under its own charters without federal interference. The University also provides legal sanctuary, since public police forces (including the Army) are prohibited from entering University precincts. In effect, the autonomous universities form small "states" within the state, and the University Rectors are often very powerful political figures for whom the University is a stepping-stone to bigger things. A continuous push-pull goes on between the universities and the government over autonomy, and one such controversy developed at the University of Nuevo Leon in the wake of Tlatelolco. A group of students pressing for curricular reforms provided the spark.

When the students did not receive satisfaction from the University Rector that their demands for academic reforms would be met, a series of violent confrontations developed at the University of Nuevo Leon. Both the Governor of the state and the University Rector were in agreement with the students that some kind of reform was necessary. The curriculum of the medical school, for example, was still substantially identical to French models established in the dying years of the Porfirate. But exactly what changes were to be made, and how they were to be carried out, fueled an

increasingly intense dispute between rival factions within the University, and between the University and the state government. One faction, supported by the Rector, insisted that an open admission policy be maintained, and pressed for a greater financial commitment by the government to pay for the needed expansion. The other faction, supported by the Governor, pressed for restrictive admissions as the only way to restore educational quality. When the Governor sought to impose his own solution over the objections of the Rector, and the Rector received support in his opposition from high educational officials in the Federal Government, the dispute reached a crisis stage. The Governor reacted by removing the Rector, and replacing him with the Governor's own hand-picked candidate, an Army colonel, who established martial control over the University in the face of violent conflicts between students and police over the imposed solution. In the midst of the violence, the Governor was removed from office by Presidential edict, a more conciliatory interim governor was named, the Rector was restored to office, and the army was retired from the University precincts. This resolved the violent conflict for the moment, but after-shocks continued for the next several years, and the political price attached was stiff: direct opposition to the Monterrey Group, and another step in the deteriorating relations between the public and private sectors.

The deposed Governor enjoyed the complete confidence of the Monterrey Group from the start to the bitter end. He was a member of an old and distinguished Monterrey family, and had been named to the Governorship precisely because of his excellent connections with the Group. His solution to the University crisis was their solution, and there were even those who accused him of being a mere tool of the Group, and saw his plans for University

reform as an attempted takeover. Such affirmations are hard to confirm, but what is clear is that there was a rapid change in the attitude of the private sector toward education as conditions deteriorated at the State University.

Through the mid-1960's the Tecnologico had remained as the only private institution of higher education in the region, and one of the few in the country. Although it had grown into a school of considerable prestige, it was a special school, and had spawned no broad upsurge in private education. Yet its success had not gone unnoticed, and a marketing survey conducted in the mid-1960's revealed that in the Monterrey area alone four new universities would be needed to handle the anticipated increase in enrollments. Education came to be seen as a "growth industry" of considerable importance by the Monterrey industrial groups. Don Eugenio Garza Sada had expressed his own love and faith in technology in erecting the Tecnologico, but the next generation of private schools were an investment secured by Mexico's rising demographic curve. As the conflict at the State University deepened, the Governor granted state charters to four new universities in short order, who proceeded to divide up the private educational market -- present and future. One of these four schools was the University of Monterrey, and its "share" of the market included a new Faculty of Medicine, both of which were founded in late 1968 after the Tlatelolco Massacre but before the Governor's final fall. To appreciate what this change meant to the educational picture as a whole, we may look closer at the constituent elements which merged into the creation of the University of Monterrey, and see how they were transformed.

In the Mexican educational system schooling is normally divided into

four phases: primary (grades 1-6), secondary (grades 7-9), preparatory (grades 10-12), and university (varying in length according to each profession, but normally 4-6 years). The preparatory school does not normally exist as an independent entity, being affiliated directly with a university to which its plan of studies is geared, so in effect the system divides into two basic phases. Until the creation of the new universities, private education (with the exception of the Tecnologico) had been limited to the preparatory level, and all of the private preparatory schools fed their graduates into the state university for professional training. But the increasing turbulence in many faculties made it difficult to assure whether there would even be classes, and this created a practical crisis for the private educators in which the creation of a university seemed an eminently sound solution.

One of the most important groups of private schools were formed by six institutions operated by various Catholic religious orders -- three for men, and three for women. Because of Mexican laws obliging separation of church and state, none of these religious schools received public subsidies of any kind, and depending on the political winds they have been subject to other kinds of legal harrassments at various times. The religious schools survived mainly through the charitable donations of the faithful, and pay-as-you-cost tuition rates which were approximately ten times the tuition in the state educational system. This price differential ultimately transformed into a class differential as well, since only the upper-middle and upper classes could afford private school tuitions, and ended up by creating a firm marriage between the Monterrey business elite and the Catholic teaching orders in the area of education. The curriculum and operation of the schools

remained firmly in the hands of the clergy, but increasingly a lay management group took control of the schools' financial affairs. They were the businessmen parents of the students enrolled in the schools, and were most concerned that the money they paid be used efficiently to provide their children with the quality education they would require in order to assume leadership positions later in life. This led them to think of the schools in more broadly social terms, however, and not merely as vehicles for religious indoctrination.

To the best of our knowledge no serious consideration had ever been given by the Catholic teaching orders of the possibility of creating a university to go along with the preparatory schools they operated. Perhaps they felt they could not provide enough teachers to sustain the institution. But, as businessmen, the secular managing group were especially struck by the low utilization of classrooms, most of which remained vacant in the afternoons and evenings at a time when the state university classrooms were filled to overflowing. As parents, they were personally concerned about the unsettled conditions at the state university. The creation of a private university to make use of these facilities and provide an institutional alternative seemed to them not only attractive but necessary. Arrangements were made to "rent" the preparatory schools' facilities from the religious orders in the afternoon and evening hours, and in each of the six institutions locate one or more of the faculties of a new university. Certain members of the secular managing group who were also in touch with the developing political situation provided the contacts needed to obtain a state charter from the later-deposed Governor, and the University of Monterrey was officially launched in late 1968, with its first class entering in January, 1969.

II. The Formal Structure of the University

In broad terms, we see that the University was a new institution created in response to a crisis, but its continued viability depended upon its ability to harmonize three different social groups whose interests in other institutional spheres might be quite different or opposed. For purposes of convenience these groups may be called "controlling groups", since each possessed a sphere of decisive advantage if not exclusive control of resources essential to the institution's survival, and may be contrasted with other social groupings within the institution, such as the students and teachers, who did not have any such control. The controlling groups do not form true factions within the institution, however. Each group fits into the larger society differently, and the same individual may belong to all; what is important is his position within relationships. As a result each group exercises a different control over the institution, and the institution provides a minimum common denominator of agreement of interests, rather than an avenue for arbitrating open differences. With this lens we can identify a management group, a religious group, and a professional group as controlling forces within the new University. A closer examination of each of these groups allows us to see how this process of agreement was carried out, and the results of their influences on the University's institutional structure.

The most important of the three was the management group, since they were the formative group whose initiative created the University, and who ultimately held the power of the purse. In legal terms the University was a holding corporation, the sole property of Fomento de Educacion, A.C., whose shares were held by owner-investors. This ownership group was linked to the

University administration through an Administrative Council which hired and fired university employees, and defined policies and objectives for the institution as a whole. Its ultimate control of the University administration was unquestionable, and its financial contacts provided the loans which allowed the University to operate at first.

The management group's view of the University as an institution was strongly influenced by their experiences in capitalist business enterprises; nevertheless, it is very hard to determine to what extent they really intended to operate on capitalist principles. Whether the owners genuinely expected to make a profit from the operation of the University, for example, is hard to say. The profit motive was not strongly stressed, and familiarity with the University leads us to believe that little or no real profit was achieved or expected during the period of our fieldwork. Yet this does not invalidate the view that profits might be expected over the long run. Business managers recognize that the first few years are always the hardest for any enterprise, and may have viewed the University in a similar light. There are also many kinds of profits to be made indirectly from the University's operation through sales of books and supplies, rental of quarters, patronage of sports teams, lotteries, and the operation of professional facilities which provide practical training for students. Nevertheless, the University management group made little attempt to develop these facilities, or the other money-making sidelines.

Where the principles of capitalism were more visible was in the financial administration of the University, the hierarchical rather than collegial structure of the administration's lines of authority, the use of contracts (usually annual or semestral) in teacher hiring, and the identification of

the institution with Monterrey's "private" sector. Short periods of deficit led to energetic interventions to control costs, just as in any business enterprise. This type of control must be carried out from within the central administration, and with limited money available, all projects within the University were ultimately subject to the balance books. Power flows to the accountants who are ultimately responsible for the institution's solvency. Stress on the "private" nature of the University underscored the relationship with private capitalism in ideological terms, and conferred on the owners the liberties of an entrepreneur in operating the University. The teaching faculty were in effect employees, and the concept of academic tenure -- so inherent in the university structure of Canadian and U.S. schools -- was totally absent. In all of these senses the University acquired features of an educational corporation, whose principal asset was the university charter. Nonetheless, this view of the University remained latent, and a different image of the university was consciously projected by the managing group.

Family capitalism contains two constituents, and it is the familistic aspect which predominated at the University. The University was viewed as an extension of the family, rather than the factory, and the most important group to which it directed itself was the parents. Teachers were expected to take a consciously paternal role with their students in many situations, and their authority in the classroom ultimately rested on parental approval of the education their children were receiving. The University was frequently conceived of as a large "family". The basic link of communication was often that between student and parent in taking key decisions, and the "fathers" of the Church were there to impart an appropriately moral quality

to institutional life. In all these sense "family" was stressed, and it is not the artifical family implied in the "alma mater" tradition of Canadian or U.S. education but a direct extension of the biological family into the sphere of education. Education is still conceived of as a parental function, and the teacher functions as a father-designate in fulfilling it.

In summary, then, the management group provided the University with several ingredients of its public image, and being the most powerful of the controlling groups, they developed its structure along the lines of family capitalism -- the system which they knew from their business experience. At its best the University would be like a well-run household.

Besides being "private", however, the University was also "Catholic", and the role of the "religiosos" within the institution, while not decisive, was of considerable consequence. The religious orders continued to own the buildings, and operated primary schools in them in the mornings. Residences of the orders were present on the grounds of many units, and there is no question that historical tradition within the community identified all of these schools as religious. Thus, even though the actual number of religious involved in teaching or administrative functions within the University was small, the identification of the University with the Church was clear and unequivocal. A nun served as academic head of the University for much of the period of our fieldwork.

It would be wrong to think that this implied a high degree of religiosity among the students, or a religious intromission in the curriculum of studies, however. While some students were manifestly Catholic, many others were indifferent, and some were even mildly hostile to religious influences. The degree of religious commitment was highly variable and highly personal,

and most of the students did not go to the University because it was Catholic. There were no courses in Religion in the University curricula, and outward symbols of a religious nature were absent in classrooms. The curriculums which were imparted were determined primarily by the professional information and skills which the student was expected to acquire, and was eminently practical in most cases. Each faculty responded most clearly to the professional interests of the groups into which the graduates of the faculty would ultimately be incorporated. The situation of the Faculty of Medicine illustrates this principle perfectly, and introduces us to the third group with controlling influence in the University.

In Monterrey, as elsewhere in Mexico, the practitioners of scientific medicine can be conveniently divided into two constituencies: the private practitioners, who operate on a fee-for-service basis, and the salaried doctors of the various government-sponsored health facilities, the Instituto Mexicano del Seguro Social (I.M.S.S.), Instituto de Seguro Social de Trabajadores del Estado (I.S.S.T.E.), and the public clinics operated by the Secretaria de Salubridad y Asistencia on both the national and state levels. These two components were not necessarily as antagonistic as they might first appear, due to the fact that both were drawn from a common pool of medical graduates who learned to practice the same kind of medicine, and were linked by professional associations of specialists as well as regional medical associations and semi-official accrediting groups. Moreover, many doctors worked in both sectors simultaneously, attending public patients part of the day, while seeing private patients on the side. Despite these links which served to maintain professional unity and uniform medical services, certain differences between the two constituencies must be noted in

order to appreciate how professional interests shaped the University of Monterrey's new medical school.

Of the two groups, the private doctors definitely formed the smaller component. The income structure of the population does not provide a sufficient number of patients who can afford the fees charged for private attention for the sector to grow beyond a certain limit. But despite their numerical inferiority both in total numbers and in the number of cases attended, the private doctors tend to set the standard of what is considered "good medical care", in much the same way as Press (1971) reports in Seville, Spain. Because of the intense competition, only the best doctors survive over the long run in the fee-for-service marketplace. Many received their training outside of Mexico, frequently in the United States or Europe, and were therefore beneficiaries of the latest advances in medical knowledge and techniques. Some even owned and operated their own clinics, and invested in facilities and equipment much as private capitalists would in other sectors of the economy. Others worked in private hospitals founded by the Catholic religious orders. Whatever their chances of success, a private practice tended to be the aspiration of any doctor, and the fact that only a few would achieve this goal only served to spur the aspirations of young doctors or medical students entering the profession. Private practice thus served to model the profession for patients and doctors alike.

In contrast, the government doctors attend the bulk of the population, and constitute the dominant force in health care delivery. Salaried employees of all categories are automatically enrolled in the public social security system which includes medical care. Coverage is not universal, therefore, as in some countries, such as Britain or Scandinavia, where

fully-socialized medicine is the rule, but it has been steadily expanded over the years, and it is probably fair to estimate that about half of the population in Monterrey was enrolled and entitled to public health care at the time of our fieldwork. The principal groups excluded were at the two socio-economic extremes: high-income self-employed entrepreneurs and professionals, and non-salaried workers, such as domestic servants, day-labourers, etc., and the unemployed.

The facilities and personnel available in public sector medicine are not in themselves inferior to those in the private sector, but social forces have served to blunt their usefulness somewhat, and have given public sector medicine a "bad name". The need to attend larger numbers of patients tends to create a far greater impersonality in the doctor-patient relationship. A five-minute consultation is about average, and the length of all consultations tends to be standardized. Moreover, bureaucratization (and perhaps political pressures in some cases) tends to eliminate those innovative doctors who cannot conform to the prescribed system of care. Standard medicines are used over and over as a measure of cost control, and expensive laboratory procedures are limited to only those cases where it is absolutely indicated. Under these circumstances the doctor's attention is often symptomatic, consultation is often long and time-consuming for the patient who must wait his turn, and the ability to try out new techniques or get to the bottom of an unusual case is very limited. Nearly all the doctors who work in the public sector are well aware of these deficiencies (as are their patients), but are powerless to modify them due to the immense administrative apparatus which must be confronted. Private practice, or a private consultation, provide a necessary safety valve in the face of this

potentially explosive situation, and it is probably safe to say that the vast majority of private patients are already covered by social security, and choose not to exercise their benefits.

There are also some important ideological differences between public and private medicine. Since much of their work relates to populations which correspond to a given clinic, the public doctors tend to be more oriented to community medicine, public health, and preventive medicine -- the areas in which social sciences, such as anthropology, might be expected to make more tangible contributions to health care. This tendency is further reinforced by the political ideology of the ruling P.R.I. party, which stresses service to the community, and through its control of the administrative bureaucracies of the public medical services keeps broad health policies in line with the position of the Party and the government as a whole. In this sense, public medicine is more politicised. In contrast, the private doctors tend to think in terms of individual cases, emphasizing curing rather than prevention, and prefer to stay out of politics, just like their colleagues in private industry, as noted in the previous chapter. It is against this broad background that professional influences over medical education must be viewed.

Just as in the case of the University of Monterrey as a whole, the founding of the new medical faculty was intimately tied ot circumstances at the state University of Nuevo Leon, where conflicts had crystallized the public and private sectors in open opposition. The Faculty of Medicine at the state university was (and continues to be) its largest and most influential component. Operation of the university hospital is an important source of its revenue, and both the displaced rector and his successor were doctors

and former directors of its medical faculty. The policy of open admission had created especially acute problems at its medical faculty, however. The displaced rector responded by turning to the public sector for support, and formed an auxiliary medical faculty for the literally thousands of students who piled up in the early phases of the curriculum when the medical teachers (mainly private doctors concerned with maintaining standards) began to stiffen their examinations. The state university medical faculty had always enjoyed a high reputation for quality, both nationally and internationally, and they did not wish to see it go down because of increasing enrollments. This created a large reserve "army" of discontented students, and the medical faculty was definitely the centre of armed conflict which resulted, and which continued well into our fieldwork period. The auxiliary medical faculty was tarred as a school for drop-outs by the regular students at the state university, who defended their school morally and physically on more than one occasion. Into this fray the new University of Monterrey entered with a new third alternative, ostensibly for those who wanted a quality medical education without Molotov cocktails.

The founder of the Faculty, and architect of its curriculum in large degree, was a private doctor who had trained at a prominent U.S. medical school, and subsequently founded a very successful private clinic. He was also an initial share-holder in the University's holding corporation, Fomento de Educacion, A.C., a Vice-Rector within the University, and an active member of the lay Catholic action group Opus Dei. He, and the other doctors in the founding group, saw their efforts quite consciously as aimed at breaking the monopoly of the public sector over medical education, which they succeeded in doing, and correcting the abuses which had developed at

the state university, many of which they had experienced at first hand. The effort was two-fold. First, quality was to be restored to medical training without resort to arbitrary examinations, and second, the medical student was to be politically neutralized so that studies would again assume first place in the student's concerns. This did not mean, however, that they were planning to train only private sector doctors (an obvious impossibility), use only private hospitals for training, or in other ways polarize themselves against public medicine. Quite the contrary. The new medical school required the assistance and support of the public sector if it was to survive, and provided a new arena for conciliation between the two, fostered in this case in the interests of professionalism.

The controls which the public sector exercised over the private medical school were many. First, they controlled the largest job market into which its graduates would be incorporated. Secondly, according to Mexican law, all medical graduates must perform one year of "social service" before their titles are officially recognized by the State. This social service program is directed by the Ministry of Health and Public Assistance, who accredits and designates the places and types of service which are accepted. Finally, and most importantly, the new medical school had no clinical teaching facilities of its own, and the private hospitals to which many of the doctors belonged could absorb only a fraction of this clinical teaching load. This implied that the bulk of clinical teaching and practice had to be carried out in public clinics and hospitals, and that the model of clinical practice which the students would learn corresponded to the needs and conditions of the public sector. In effect, the University limited itself to providing classroom instruction in the basic sciences and clinical theory. This kind

of conciliation permitted the new medical school to operate. It is not surprising, therefore, that during the period of our fieldwork the Director of the Faculty was also a high official in the state health department with ample connections in the public sector through which he could defend and advance the interests of the new school.

Another aspect of conciliation between public and private sector medicine was also institutionalized in the curriculum adopted for the new school. Neither sector was satisfied with the curriculum at the state university, and the new medical school provided an opportunity to experiment with innovations which both considered desirable and necessary in an environment in which political pressures over the curriculum (the weight and power of vested interests) were minimal. The resulting curriculum (see Figure 2) incorporated at least four innovations favoured by both, and absent -- at least at the time the new school was created -- in the state medical school. A closer look at these innovations permits a better appreciation of the process of conciliation, and the peculiar circumstances which led to the inclusion of anthropology in the plan of studies.

First, the new school accelerated the curriculum by one full semester, shortening the state university's medical curriculum from twelve semesters to eleven. In fact, the acceleration was even more drastic, since the last two semesters were dedicated to a "pre-internship" which put the student directly into the hospital work environment full-time albeit with minimal clinical responsibilities. This acceleration was achieved principally by "loading up" the first four semesters, creating a powerful filter for those students who did not measure up, and preventing their entrance into clinical work entirely. Closely related to this was a second innovation: the almost

total separation of basic science and clinical teaching. All basic sciences were studied together in the first four semesters, rather than being spaced out over the entire curriculum as they were in the state university. In the fifth through ninth semesters clinical "blocks" exposed the students to the various medical specialties one by one in short concentrated courses. By way of contrast, the state university's curriculum put the students into clinical training almost from the moment they entered the Faculty, and they carried only three-four subjects per semester. The change to the University of Monterrey pattern was favoured by the public sector because it assured them of better-prepared student trainees in the clinical setting, and theoretically at least, accelerated the production of doctors at a time when the country as a whole was still experiencing shortages of personnel. (This situation has altered considerably since then, and Mexico is presently observing an over-saturation of physicians, especially in the urban areas, but for the period to which we refer there was unquestionably a certain deficit.) Private sector doctors also favoured the innovations because they viewed them as an assurance of higher quality medical training, especially in the professionally vital area of the clinic.

The other two innovations were directly related to the community medicine approach, about which we have already commented. Because of its own structure, the public sector of medicine was especially interested in projecting this approach, and in providing doctors capable of functioning in a wide variety of social settings. The "winds of change" in medicine, about which we commented in greater detail in Chapter 1, were also being felt in Mexico, and charges of "elitism", the medical marginalization of ample sectors of the population from medical services, etc., were especially

important to the public sector. And in truth, the private sector doctors were also aware of these pressures and not entirely unsympathetic to some re-orientation. They knew the "facts" about the distribution of doctors within the country, and knew where the deficits of personnel occurred, too. The problem was not so much a difference in principles, as a difference between theory and practice, and the difficulty in devising appropriate means for reconciling the obviously laudable objective with the realities of students' attitudes and expectations. Here the new medical school of the University of Monterrey undertook to experiment with two changes. First, a period of "field work" in the community was programmed for each of the nine semesters of academic instruction which put the student directly in the community working on a supervised project geared to his level of medical training. And secondly, a dose of social science courses (which included psychology and social anthropology at first, and later medical sociology as well) was added to the curriculum in the first two semesters to provide the student with more tools with which to analyze and understand the community setting and the different personal commitments which community practice implied. Fieldwork was officially conceived of as the "backbone" of the curriculum, which provided continuity between basic sciences and clinic, and the aforementioned director of the medical school, who also held an advanced degree in public health and taught that course throughout his tenure in the University, gave it great emphasis. We can also begin to appreciate that the inclusion of social anthropology in the curriculum was no accident, and obeyed deep-seated agreements between the various controlling groups.

The picture which emerges of the medical school, then, is of a triadic agreement between the three controlling groups, in which the religious

orders provided a new and conciliatory arena in which the other two groups (the private sector business management on the one hand and the public sector doctors and institutions on the other) could work out their differences and reach agreement as to what should be done in the field of medical education. Certainly the three components were sometimes in opposition to each other over many issues, and in many other arenas, such as the state university. But these conflicts were made reconcilable because they could be focused within a specific new institutional framework, whose history thus became a continual testing of the viability of possible solutions. Individuals came to represent "interests" within the conflict, and the flexibility of their actions demonstrated the amount of accomodation which was being established.

In some ways the balance of interaction between the controlling groups resembles the triadic alliance formations described by Caplow (1968) and others. The major difference is a cultural one: the preference within Mexican society to resolve most conflicts on the basis of a lowest common denominator of mutual acceptance, rather than through competitive alliance formation which leads to open imposition by the dominant group. In broad terms this principle of "unanimity" requires universal (or nearly universal) acceptance of a given course by all concerned before any specific decision or action can be taken, and its operation can be seen in many other areas of Mexican society: the internal operation of the government (unified by the P.R.I. as "ruling" party), the economy (unified in most sectors by public and private cartels and monopolies), and religion (unified by the Catholic Church). It is in this sense that we can see the Medical School of the University of Monterrey as a paradigm in miniature for the larger Mexican society in which it participated, and, although it is beyond the scope of

our thesis to detail these relationships in the other faculties of the new University, a similar analysis could be developed of the other schools created, and for the University as a whole. The power and positions of the controlling groups varied from faculty to faculty, but all responded to the same principle of alliance within a common institutional framework. This framework was founded on a very "Mexican" form of social relationship, whatever the content of the education imparted.

III. The Informal Structure of the Medical School Environment

Our comments so far have sought to demonstrate how the formal structure of the University, and more particularly of the medical school, derived from specific forces and groupings within the larger Mexican society. We have also seen how this formal structure defined certain aspects of the teaching environment within which anthropology as a curricular offering would develop, a cultural setting for the teacher who would develop it. It goes without saying that most of this structure was initially imperceptible from the modest position of classroom teacher, and was reconstructed after the fact. Given the limitations of the teacher's status and the sources of power of the controlling groups, it is also obvious that the formal structure could not be altered over the short -- or even the long -- term. Its elements were tied to the place and time on a macrosocial level.

The informal structure, on the other hand, directs us to the more intimate side of the educational process, the part which determines the teacher's impact on real people. It is the lifeblood which flows through the teacher's hands, the facts of academic life which he or she must learn to live with while fulfilling the role of teacher. A consideration of anthropology's relevance in this sphere brings us up to the point where teaching becomes learning by means of an entry into the larger cultural setting. We must now look at the medical students face to face, see how they lived and what kinds of people they were. Here we will find another set of influences which must be taken into account in designing courses, and teaching anthropology.

We must begin by recognizing the majority of the students entering the medical school were adolescents, subject to the many doubts and uncertainties characteristic of this age (Diaz Guerrero 1955, 1970). The median age upon

entrance to the medical school was 18, but some students entered as young as 16. The number of students above 20 years was usually limited to 2-3 per generation, and married students were a rarity. Although romance often bloomed in the classroom, marriages between classmates were relatively few, and in general the school environment was not where one looked most intensively for girl friends. In the Mexican upper and middle classes the long courtship is preferred, and most of these long-term relationships developed under parental guidance in other contexts. Very few of the school generated romances lasted out the wait, since male students were generally expected to finish school before marrying.

In Mexican universities nearly all careers carry an implicit sexual label -- one sex or the other will predominate. These sexual etiquettes also correspond to job opportunities as professionals, but at the initial stage of the career to which we are referring they are simply labels. Thus, although the initial sex ratio of the entering medical school class usually showed only a slight predominance of men over women students (60-40 approximately), the career was definitely categorized as a male career, and the ratio typically declined to about 15% women students by fifth semester. The women students usually left not so much because of academic deficiencies as social pressures. The male students categorized these women students with a special label of their own: "mientras me caso" -- literally waiting for marriage, for while men wait until late to marry, the ideal marriageable age for the women is much younger. The other route of desertion was toward more traditionally feminine careers, such as psychology, or education, which are considered an appropriate university training for future wives and mothers. Even those women students who stayed on and finished the career

frequently did not practice medicine, or practiced it only as a sideline. The career of medicine thus remained an eminently male career no matter how it started out, or what the teacher's own evaluation of the women students might be. Social forces eliminated all but the most determined and dedicated women students.

Given the age of the entering students, it is not too surprising that they remained closely tied to their families throughout their university training. In contrast to the U.S. and Canada, where university is often the door toward greater independence from the family, very few Mexican students left their homes at this time. Students from Monterrey families nearly always lived at home while they studied, and even students from other parts of Mexico who attended the school often lived in family-like environments. A favorite arrangement was to have brothers and sisters of school age live together in houses or apartments rented by the parents, with the older students taking the parental responsibility over their younger brothers and sisters. If this was not possible, arrangements might be made for the student to live with relatives, or board with a personal friend of the family. As a last resort, students from the same town whose parents knew each other might rent an apartment together. In all cases, however, parents exercised direct control over the students' living arrangements, and only rarely allowed them to live with virtual unknowns, or in apartments of their own. Such situations were looked upon as food for potential scandal which might damage the student and the family as well.

The ultimate power of the parents during the student years was financial. None of the students paid for their own educations, and they generally remained totally dependent financially until they became professionals

themselves, married, and established their own household. In Mexico these middle and upper class students are called "ninos popis", an idiom which can be roughly translated as "daddy's boys". The expression contains more than a bit of envy when used by students from the lower and lower-middle classes who must pay their own way, but the truth of the matter is that the Mexican upper class do not regard work experience as a necessary part of their sons' formation, and the idea of the student working during his school years (except as an instructor in the school itself) simply does not fit into these familial norms. Given the cost of the school it would also have been impractical.

Financial stimuli were also used by the family to spur their sons in school on, in the case that they showed little interest or motivation for studies. A common practice was to reward students with expensive vacations, luxury articles, or automobiles if they passed their subjects, upon entering new phases of the career, or upon graduation. Such stimuli were regarded as appropriate by the families, and probably exercised a powerful influence on most of the students who received the presents. Graduation might also result in the family's intervention in placing their son as a professional in an appropriate job, and all kinds of informal networks might be invoked at this time to achieve the desired arrangements. Even after titular independence is achieved, and the student marries, the family connection is rarely broken; family is the longest and most durable thread throughout life at all levels of Mexican society. Many wealthy Monterrey families have even constructed family compounds on extensive properties, and sons or daughters who marry are given homes within these compounds. The idea of "breaking away" from the family lies somewhere between suicide and madness, since

family links are nearly always the most trusted ones at any point in life.

Family considerations also played an important part in the selection of careers in the first place. In Mexico a prestige-ranking of careers is widely held, and it is the aspiration of nearly any family to have their son in the most prestigious career possible. Within the health field medicine was the most prestigious career available, and nearly any family naturally wanted their son to give it a try whatever his natural inclination or aptitude for study. Only if he flunked out of medicine would less prestigious careers, such as dentistry or veterinary medicine, be considered, and changes to these careers involved considerable "loss of face" for the student and family alike. This heavy investment in personal prestige often created additional problems for the student who really did not like medicine and wanted to change, since he would be naturally constrained by his own family members, and be urged to stick it out to the bitter end. Students who could not confront their families on this issue often had to communicate their discontent or nonconformity by (consciously or unconsciously) flunking courses, and this prestige factor distorted more than one grade; in the course of our experience at the medical school, it was the commonest complicating factor for bright students who failed.

One factor which has been widely recognized in U.S. and Canadian medical schools did not play an important role, however: the pressure of physician fathers to have their sons follow the same career. True, some of the students were sons of physicians, and there is no doubt that some of these physician fathers influenced their offspring. But far more frequently the fathers were engaged in other lines of work, and medicine represented a shift in career between generations. Simple demography tells why, since in

the parental age group the number of doctors was still small. There were simply very few doctors in the first place. More typically, the fathers were wealthy businessmen or professionals in other lines, who wished one of their often numerous sons to take up medicine for the prestige and job security it offered. Business might turn bad, but people would always get sick, and a doctor son is an insurance policy against bad times.

The prestige of the medical career was also assured and established by the high level of competition, and the high drop-out rate due to academic failure served to reinforce this impression. At the state university approximately one entering student in ten finished the programme, and this high selectivity was taken as proof and assurance of the prestige gained by those who did finish. At the new medical school, competition was not so intensive; approximately half the entering students finished the programme. But the school had no time for laggards, and established a firm policy that those who flunked a given number of subjects were automatically dropped. Exceptions were made occasionally, but were rare, and the medical faculty maintained the highest drop-out rates for academic reasons of any faculty within the University throughout our period of fieldwork. Such high levels of desertion were considered normal and proper by family, students, and administration alike, since they re-affirmed the prestige to be gained by the lucky (or talented) few who did reach the goal.

This high level of competition also served as a justification for admitting foreign students, especially Americans, to the medical school, a policy consciously fostered during our stay. These American students were nearly always older, and had already finished B.A. degrees in the United States; some had even obtained advanced degrees in such diverse fields as

nutritional chemistry and microbiology. Their numbers were limited by school policy to 20% of any given entering class, so they did not become the dominant factor in the school, as has occurred in some foreign medical schools (cf. Mick 1975). Since most of the American students did not take anthropology (a revalidation process was instituted whereby previous courses in the social sciences could be presented in lieu), we shall not discuss the position of the American students in greater detail; they fall effectively outside our study problem. But it is worth noting that the justification for their presence most commonly offered by Mexicans was that they set a high standard of competition, and forced the younger, less prepared Mexican students to work harder, and contributed to the prestige of the career and the school. The relative success of both Mexican and American students alike in mass examinations in the U.S. tended to bear out this justification.

Although the Mexican students who entered the medical school had usually received superior training in private preparatory schools, other factors in the educational environment made such external stimuli as the American students necessary. The Mexican educational system is geared very heavily at nearly all levels toward rote learning, and in a field such as medicine this was often not enough. Moreover, the habit of reading is not well established, and the large amount of material to be read usually came as a shock to even the best prepared. The responses to this were many; cooperative study and working in teams (especially in laboratory courses) was one of the avenues most commonly used, and individual assignments were sometimes even considered unfair. Another possibility explored by some was "cheating" on examinations, a practice moralistically condemned in Canada and the U.S., but rarely viewed this way in Mexico. Rather, it was the teacher's

responsibility to detect and prevent cheating, and if the teacher did not do this job well, the student felt no guilt at taking advantage of the opportunities which presented themselves. Among the students the only ones condemned for cheating were those dumb enough to be caught in the act, and their condemnation was not moral but practical. All of these facts about educational habits placed additional burdens on the teacher, however, since he or she was necessarily the monitor to correct them.

The role of the teacher at the university level was thus a difficult one. It too conferred on the occupant great prestige and authority before parent and student alike. The parents nearly always supported the teachers in their efforts, and rarely criticized or interfered in the educational process. A protest to a teacher who flunked a student was almost unheard of (we can think of only one such case which occurred during fieldwork), since within the classroom the teacher's word was law, both in his subject and in the broader sense of the social controls exercised in the classroom. Only wanton abuse or strong bases for moral condemnation could undermine this position. The value of education is high in Mexican society, where only a tiny minority achieve university degrees, and the teacher is a custodian of these high values. Anti-intellectualism of the kind sometimes encountered in Canada and the U.S. is almost unheard of in Mexico, where the teacher is everywhere and always a respected and respectable member of the community.

The basic unit of student society during university years is the "generation", the group which enters together in a given faculty. Normally, this group takes all of its classes together throughout the entire university career. There is no mixing with students from other programmes, since each faculty is a wholly autonomous unit which contracts with teachers

independently for its own courses. The generation thus sees more of each other than of any other group, and develops a long-term relationship. This fact was further accentuated at the University of Monterrey because of the physical separation of one faculty from another in different buildings and different parts of the city, and the lack of any central facility (such as a library or student union) where students from different programmes might meet socially.

Long exposure to each other did not necessarily create social unity or foster close personal relationships within the generations, either. Instead, a kind of cycle of social familiarization was observed which was particularly important in the first few semesters, when the students first got to know each other. The cycle began with most students curious to get to know their fellow classmates. Social ties were fluid, and were reflected in frequent changes in seating patterns in classrooms, as the students explored the new social environment and tried out different groupings. This phase of the cycle usually prevailed during the first month or two of classes. By the end of this time, groupings tended to crystallize into more permanent forms which broke up the unity and homogeneity of the class, and established semi-factions who spent more time with each other, and less with other factions. Sometimes these groupings were based on new acquaintances formed during the first phase of the cycle, but more often than not they re-affirmed nascent groupings which already existed upon entrance into the school. Students from the same preparatory school, the same colonia of the city, or the same home town would form a more stable social nucleus, adding perhaps one or two new friends with whom they expected to form "trusting relationships" (relaciones de confianza). All of the students began to categorize

each other, and nicknames (apodos) were given to nearly all of the classmates which jokingly or aggressively pointed out their most outstanding characteristics. (Teachers were also classified and given nicknames at this time.) Most of these factions, or semi-factions, were uni-sexual. Those who did not get into one of these factions at this stage were almost always condemned to be "loners" within the school, although they might have perfectly solid social relationships in other spheres. Within the school, however, they were destined to a progressive marginalization. This second phase of the cycle usually extended throughout the remainder of the first semester, and on occasion into the second, but by this time other pressures were being felt and it was more common that the third phase of socialization was initiated. Second semester marked the beginning of intensive, competitive studies; it was a time when students began to turn to their friends for help, and to identify their rivals and enemies. The third phase was marked most precisely by the appearance of open conflicts between one or more factions, or groups of factions. Sometimes the election of student representatives, or the resolution of some concrete problem, such as examination schedules or conflicts with a given teacher, provided the spark. Other times it was simply the product of a drift away from each other, and an increasingly negative characterization of one group by the other which marked the separation. Once the process was initiated, however, there was no turning back, and each issue or point of conflict created further fragmentation. The students also began to perceive the decimation of their own ranks more clearly, as classmates began to abandon the programme, or see the handwriting on the wall. This also heightened tensions, and accelerated the process of re-fragmentation. Facing this heightened difficulty in

maintaining group unity, the students began to turn increasingly to former non-school social ties. Although some school friendships might endure, by the end of fourth semester most students had again become highly individualized, and no longer sought additional social contacts with their classmates. This marked the fourth phase in the socialization process, and continued throughout the duration of the programme. One student characterized this phase by noting that in first semester everyone was friends with everyone else, but by fourth semester they no longer even spoke to each other. By that time each knew what the other was going to say, and had already formed a firm and decisive opinion of him or her.

This complex of relationships between student-family and student-student also established certain social parameters on the intimacy of the relationship between student and teacher. While students respected their teachers, especially if they were esteemed for their knowledge of the subject and their fairness in grading, intimate relationships were generally avoided, and teachers rarely served as models of personal conduct. The teacher was in the position of an adversary who made demands on the students rather than in that of a friend to whom they turned for help or counsel about personal problems. The teacher who socialized with his students outside of class did so at the risk of losing the students' respect. In the most extreme cases a kind of social blackmail might even be attempted in which grades or academic favours were exchanged in return for a more open personal relationship. An invitation to student parties or outdoor barbecues was almost always offered as a courtesy, but the teacher who took the invitation up and attended often found it more difficult to flunk his student hosts, or to have traded away some of his or her disciplinary control in

the classroom. The amount of work demanded in a course and the grades given were frequently a subject of open negotiation between students and teachers, and the teacher who developed too close personal relationships with his students inevitably found his bargaining position weakened.

In summary, then, we can see that the informal structure of the medical school also exercised constraints on the kind of teaching which could be done. Deep-seated cultural values and long-standing relationships entered the school environment, even while the school environment itself was only of secondary social significance on the level of more intimate relations. The ability of the teacher to change these values, or re-orient the relationships in a different direction, was very limited indeed, and the best he or she could do was to learn to live within these restraints. The relevance of his educational contribution was judged by students, parents, and colleagues alike on these pre-established terms, and they formed another important component in the overall cultural setting.

CHAPTER 4

ANTHROPOLOGY IN THE MEDICAL CURRICULUM

> Eight years ago I told the late Bishop Manuel Larrain, the president of the Conference of Latin American Bishops, that I was prepared if necessary to dedicate my efforts to stop the coming of missionaries to Latin America. His answer still rings in my ears: "They may be useless to us in Latin America, but they are the only North Americans whom we will have the opportunity to educate. We owe them that much."
>
> Ivan Illich, The Celebration of Awareness (1969:12)

I. Introduction

Up to this point we have been principally occupied with establishing certain salient features of the institutional and community setting in which a particular medical school functioned. We have proposed that these features constitute a kind of ethnography of the medical school, since they include a broad panorama of historical influences, both long- and short-term, which affect the present in a tangible way, as well as geographical features, such as the local ecology upon which the economic base of the community has been constructed, and the place of the community as a regional centre within a national context. Taken together, these characteristics help to define in a holistic way, the place and time in which socio-cultural features of the school environment were manifested and for this reason we have called the portrait anthropological. All of these features can be seen flowing into the creation of an environment for medical education with peculiarities which distinguish it from other Mexican medical schools, and from medical

schools imparting the same or similar training in scientific medicine in other parts of the world. We hope to have demonstrated conclusively by now that medical schools are not all alike, that each moves within a culturally and socially specific environment just as any institution does, and that a holistic, anthropological view of this environment can detect and point out this integration.

All of this is not particularly startling news for the anthropologist. Despite the fact that anthropologists have not elaborated ethnographies of medical schools before (cf. Chapter 1), they remain committed by and large to the view that social and cultural specificity are important factors to be considered. Ethnographies of medical schools have always been "possible" within anthropology, although perhaps the limitations of time and human resources, and certain prejudices against the study of complex institutions in complex societies, have directed professional attention elsewhere. The objective of our effort, then, is not so much to inform anthropologists as to open up their communication with doctors.

Physicians are trained to consider "good medicine" everywhere and always the same, and for them the view of the medical school and the medicine it teaches as part and parcel of a specific socio-cultural milieu is a stranger and more alien concept. Medical practice in the scientific tradition is based on concepts of human biology which are universalistic in scope, the biological "facts of life". Until physicians can see beyond this view to the specific conditions of practice (and medical learning processes), we feel that their communication with anthropologists will be limited to tangential, technical details, rather than the broader general sense of significance which we have called "relevance". In this sense, the ethnography of

the medical school constitutes a fresh point of departure for seeing this basic difference in point of view, and we hope that the first two chapters have given cause for thought.

We must now turn the coin, however, and advance our argument for the relevance of anthropology in medical education in a different direction, a direction of greater interest and concern for the anthropologist. In this chapter, we hope to show that ethnographical knowledge of the context of the medical school can be used as a pedagogical guide for developing a relevant university course, a course relevant to the particular context which we have described. This involves putting ethnographic knowledge to use in an applied way to solve problems in effective pedagogy, and is based on the assumption that ethnographies are not done randomly about any place or anyone. They should help to clarify decisions which practitioners of anthropology (in this case a teacher of the subject) must resolve.

In the three chapters which follow this one we hope to take this argument one step further, and show how anthropological teaching in a medical school can be used to penetrate into certain facets of the socio-cultural environment itself. In this way the knowledge of the context, derived for utilitarian purposes, is turned around again to learn more about the context, this time from the point of view of the medical school, and new facets of the context, and the communication between anthropology and medicine are revealed. In this fashion we hope to show that the medical school environment provides a valuable point of entry for the anthropologist into the broader milieu, and can be used to generate new knowledge about that milieu. For this reason we have suggested that the present chapter marks a turning point to a different perspective.

The cultural influences on anthropological pedagogy can be conveniently subsumed into two problems: how to select what is to be taught, and how this information can be conveyed most effectively to the particular group of students being instructed (medical students). The first problem is curricular, and takes us into the question of course design and content. Here we must take into consideration a further distinction between general anthropological knowledge, a perspective of broad, ample dimensions, and contrast it with medical anthropological knowledge, which may have practical and immediate significance for the practicing physician. The second problem forces us to recognize a different distinction between anthropology as a crystallized body of knowledge imparted in the classroom, and anthropology as the active process of doing fieldwork far from the protective confines (and limitations) of the classroom. These two problems of anthropological pedagogy will be discussed in sections three and four of this chapter, respectively, and constitute the basis for an evaluation of anthropological relevance at the micro-social level of the classroom. Our objective will be to show how knowledge of the medical school's context helps to illuminate the choices which must be made.

The influence of the context is not limited to the micro-social context of the classroom, however, and we must begin by noting how macro-social influences work to create a specific "image" of the discipline, and a concrete relationship with other aspects of medical training. This will occupy the first section of this chapter.

II. The Image of Anthropology

In 1966 a conference was held in Bogota, Colombia sponsored by the Pan American Health Organization and the World Health Organization to consider the revision and modernization of medical curricula in the light of changing needs. The conference was convened by the rectors of the five medical schools operating in Colombia, but observers from many other parts of Latin America and the world attended. Among the recommendations for curricular revision presented at this gathering was the inclusion of anthropology at some point within the plan of medical studies. One medical anthropological observer who attended the conference (Read 1970) later expressed skepticism that the recommendation would bear any significant fruit, and one can think of many good reasons to justify this skepticism. Nevertheless, among the conference participants was a representation of doctors who would later become involved in the foundation of the new medical school of the University of Monterrey, and for them the recommendation was of practical rather than theoretical significance. They took the idea very seriously. There is no doubt that the idea of including anthropology in their curriculum came directly through their contacts with the Pan American Health Organization, like many of the other curricular innovations described in the previous chapter.

The final decision to include the subject, however, represented the same kind of accord between the three controlling groups of the University which we have outlined previously. If all had not been in agreement that it was a good step, it is highly unlikely that the subject would have been introduced. Each of these groups agreed with the idea for different reasons, and the recognition of these different motives helps us to understand how

different expectations were aroused, different views of the discipline implied, and thus put the problem of designing a specific anthropological course for a specific medical setting in perspective.

The ownership group (represented in this instance by the founder of the medical school and his colleagues) saw the inclusion of anthropology principally as a way of giving medical students a broader, more humanistic education. For them anthropology was primarily the study of culture, and merged imperceptably with history, art, philosophy, and the other humanities. Its breadth seemed to make it an ideal vehicle for giving medical students a little "culture" amid a curriculum heavily laden with laboratory sciences and clinic. For this reason the professional doctors who represented the owners supported anthropology whole-heartedly. Their support did not imply, however, that they saw the discipline as a "medical subject", nor even necessarily as a scientific discipline. In fact, given the breadth of their conception, anthropology could be almost anything, and could be taught by almost anyone.

The religious group within the University also supported the inclusion of anthropology within the curriculum, but their support was conditioned by a radically different use of the word "anthropology" within Catholic theology. For modern Thomistic theologians the word anthropology -- the study of Man -- is often used as a contrastive term for "theology" -- the study of God, and is principally encountered in religious-philosophical studies. In European and Latin American Catholic intellectual circles a distinct school of thought has even emerged which is known as "philosophical anthropology". It is obviously beyond the scope of our thesis to discuss in detail the philosophical suppositions of this school; suffice to say for our

purposes that its literature and concepts are sufficiently different from the scientific approach to anthropology to which our study refers that no-one with a knowledge of the two would ever confuse them, or take them to be the same. (In one philosophical anthropology work -- Bueno's Introduccion a la Antropologia Formal -- not a single scientific anthropological author is mentioned.)

The existence of these two kinds of anthropology would be immaterial to our study, however, had not one of the leading educators associated with the University in its inception, Dr. Augustine Basave del Valle, been deeply influenced by this philosophical approach. Partly through his influence, a course in "Philosophical Anthropology" was created, and included as a required course in many divisions of the University, although not in the medical school. Those directly conversant with the two fields were quite aware of the different use being given the term, but for others, such as the students, less familiar with either or both usages, the same word tended to blur the distinction and create a certain unity between the two fields "in-spite of themselves". This outsider's impression was further fortified by the incorporation of the "Social Anthropology" course which we taught into the Department of Philosophy where the "other" anthropology was also taught, rather than to other departments within the University, such as Sociology, with which most scientific anthropologists would recognize more intellectual kinship. (To the best of our knowledge, the University of Monterrey is unique among North American institutions of higher education in having established this kind of linkage. Briefly summarized, the reasons for it were more political than intellectual, and it has now been changed there as well.) This kind of "forced co-habitation" tended to reinforce the

identification of the two, however erroneous it may have been when examined in more detail.

The association between social anthropology and "philosophical anthropology" had both positive and negative implications for the "image" of the discipline. For the religious, it was highly positive, since it implied that "social anthropology" participated to some extent in the high esteem in which philosophy and theology were held. Emphasis on the association also provided a highly positive link with the ownership group's rather different view of the discipline, since it suggested intellectual compatibility, even if only at the symbolic level of names. This bridge, however rickety and spurious, certainly facilitated acceptance of the curricular innovation. On the other hand, among the students the association reinforced a rather more negative image of the discipline. When they arrived in "social anthropology" class, they rather expected it to deal with morality. Since they had come to study medicine, this immediately led them to question its relevance to their career, and encouraged them to place it well out on the fringe of their study priorities. It took considerable time, several semesters in fact, to change this view.

The third controlling group within the medical school -- the public sector doctors who represented the government position within the administration -- held an especially positive image of anthropology. Some of them, like the director, had received specialized training in public health which had exposed them to anthropological literature and concepts, and their image of the discipline was the only one which specifically connected it with medicine. They expected that anthropology would help project the community medicine approach to the students at an early stage in the programme, and

thus establish a more secure basis for their later participation in community clinics and mass public health activities which stressed preventive care. As we saw in Chapter 1, this view is based on real connections which have been explored in other medical schools as well, and as Hafer's exposition of the experimental programme at the medical school of the National Autonomous University of Mexico points out (Hafer 1977), they were not alone in Mexico in holding this view, or seeking to make the connection. They saw anthropologists as natural allies in their efforts to project an image of medicine which was little understood and not very popular with the students.

The image of anthropology held by the public sector doctors thus offered advantages and disadvantages, too. It insured high-level support within the medical school administration, but it condemned anthropology by association in the eyes of the students to a location far out on the fringe of student priorities, and put it under suspicion of being a tool of the administration. The effects of this on anthropological pedagogy were many, as we hope to show later in this chapter, and the sources of student discomfort with the community medicine approach were very complex, as will be demonstrated in Chapters 6 and 7, so this stigma proved an especially damaging, difficult, and dangerous one to remove, based as it was on an image of the discipline which was partly true.

Given such radically different (and in some instances highly contradictory) images of the discipline, it is hard to conceive how a single course could have satisfied all these expectations. Some, in fact, seemed absolutely contradictory. Two of the three controlling groups, for example (the religious and the businessmen owners) saw anthropology as essentially

part of general education and unrelated to any given professional field, such as medicine, while the third group, the public sector doctors, saw it as intimately related to medical training, part of the backbone of the student's educational experience in the profession. Each of these conceptions would imply a different balance and emphases presented within a course between the topics available within the discipline, the first emphasizing general anthropology, culture history, etc., and the second a healthy dose of medical anthropology in its various facets. They also suggest rather different teaching roles, one oriented to passive classroom learning, and the other stressing clinical applicability of the knowledge transmitted and a participant observer's knowledge of specific community settings. These ambivalences and contradictions were further accentuated by a more profound macro-social image problem which influenced and affected all three controlling groups. We refer to the "image" of anthropology as a discipline within Mexican culture as a whole.

In the United States and Canada, anthropology is a small, specialized, and somewhat exotic university career, often little known to the general public. In Mexico, however, anthropology is very well known, and almost any educated person has had some contact with it and formed an image of what it is about and what anthropologists do. One need only recall that one of Mexico City's top tourist attractions is the National Museum of Anthropology to appreciate this difference. Famous anthropologists such as Dr. Manuel Gamio and Alfonso Caso are among the countries most esteemed intellectual figures, and even though their numbers may be few, the visibility of anthropologists and public influence is disproportionately great. Gonzalo Aguirre Beltran, one of Mexico's most outstanding anthropologists, served as Rector

of one of Mexico's major universities (the Universidad Veracruzana), and was mentioned at one time as a possible candidate for governor of the state. It would be difficult to think of any other country in the Western world where professional anthropologists have achieved this kind of public projection. Far from being an exotic, escapist specialty practiced by rare academics, in Mexico anthropology is as close as the nearest indigenous community, and as visible as the ruins of Mexico's famous archaeological sites shown almost daily on national television. It definitely does have an unmistakable "image" which is known to almost everyone.

This image of anthropology is curiously limited and distorted, however, when compared to the image of anthropology in other national contexts. Mexican anthropology is eminently nationalistic, for example. Nearly all Mexican anthropologists have done fieldwork principally in their own country, even when they have obtained advanced training in other countries (e.g. Aguirre Beltran -- a student of Herskovits' at Northwestern) and maintain close contacts with non-Mexican anthropologists who come to Mexico to do their fieldwork. Mexico's own anthropological resources seem so great and inexhaustable that Mexican anthropologists do not feel they need to go outside their own boundaries to look for field opportunities. Moreover, Mexico's political stance has never given it a colonialist projection, even among other nearby Latin American nations (such as the Central American states) where its influence is in reality very strong. Intervention in the politics of other nations is literally forbidden by the Mexican constitution, and this attitude receives almost unanimous support from all sectors of Mexican society.

This orientation of Mexican anthropology has created a dual focus for

anthropological research: archaeology and indigenism (cf. Beals 1959). As one of the continent's principal nations with a sizeable indigenous population, Mexico has been an intellectual leader in fostering the indigenist movement. The Interamerican Indigenist Institute was founded in Patzcuaro in 1940, and has maintained its base of operations in Mexico City ever since. Even the most conservative estimates identify over 1,000,000 Mexicans who speak indigenous tongues as their first language, and in at least one Mexican state (Yucatan) indigenous peoples form an absolute majority. Moreover, the contributions of Mexican leaders such as Benito Juarez and Zapata, whose indigenous cultural roots are well-known, are lauded and linked to Mexican ethnic identity (cf. Aguirre Beltran 1976: 118-160 for an interesting discussion of the construction of this identity, especially in the post-Revolutionary period). Indigenous culture has provided a well-spring of inspiration for Mexican artists and writers, and a special sphere of political activity on both the national and international levels ever since the Revolution (cf. Caso 1971, and the interesting polemic contained in Ha Fracasado el Indigenismo? /1971/ for a more complete review). It has also provided the principal theory which has affected the development of Mexican anthropology (cf. Caso op cit:47-78, and Aguirre Beltran op cit:177-212), even though the Mexican anthropologists have been a bit more honest than some and have always called this "theory" an ideology.

Given the abundance and importance of archaeological remains in Mexico, and the obvious continuity of today's indigenous peoples with this heritage, it is not surprising that archaeology has accompanied and grown along with the indigenist movement. Mexico's strategic position in the evaluation of theories of cultural evolution hardly needs repetition (cf. Adams 1966 among

others), and gives its archaeology a special importance throughout the world. Moreover, its enigmas have challenged some of archaeology's best minds for over a century. Mexican archaeologists were relative late-comers to these archaeological investigations, but beginning with Gamio's excavations at Teotihuacan (cf. Comas 1974) they have been steady contributors ever since, and have promoted an increasing public appreciation of the significance of these prehistoric remains. Mexico's archaeological sites are now officially protected by federal law as part of the nation's patrimony, in the same category as oil, minerals, and underground water, and the Instituto Nacional de Antropología e Historia is the agency charged with their protection, maintenance, and exploration. Archaeology forms the other half of anthropology's public image.

As can be seen from this brief review, anthropology in Mexico has developed along intensely practical lines -- responding to needs felt by the government, and focusing quite consciously on "applied anthropology". It is not an academic career, but rather one of government service in one of the various agencies which manage programmes in indigenous areas, or preserve Mexico's many archaeological treasures. Whereas in the United States and Canada, some 85% of the professional anthropologists are employed in university teaching and university-based research, in Mexico a similar percentage work for the federal government. What is not of use to the government within the discipline has received very scant attention.

We can also appreciate that Mexican anthropology is different in its emphases than the anthropology developed in other nations. The existence of these national differences has been a recent and somewhat disquieting discovery. Nash (1975) has synthesized these emerging national perspectives,

and other recent studies have tried to document and analyze these national peculiarities in India (Sarana and Sinha 1976), Japan (Nakane 1974), and Great Britain (Kuper 1973). Their importance for the theory and practice of anthropology is obviously great, since they lead to a view of the discipline itself as culturally relative to the various and distinct national contexts in which it is practiced. Some recent comments by Cecil Belshaw, editor of one of anthropology's few "world" journals, point out this fact quite clearly.

> In anglophone countries ... we can lead our lives quite happily and creatively communicating only with other English speakers. It is easy for us to gain the impression that the most creative non-English anthropology is exemplified by the relatively few scholars who are translated or who contribute in English. But in practice, if not in theory, we discount the phenomenon that in the huge and complex worlds of the Soviet Union and of Latin America there are two bodies of Russian and Spanish speaking colleagues who can also lead their lives creatively communicating only in their respective languages. Inevitably this, together with differing social conditions, produces different anthropologies, with different preoccupations, different concepts, and differing approaches to the scope of the subject. (1977:7)

No one to date has attempted to synthesize the preoccupations, concepts, and approaches peculiar to Mexican anthropology, and it is not our intention to undertake the task here, but we hope that our limited comments and Belshaw's observations alert us to the fact that some such synthesis could be done, and would reveal a "national" anthropology in Mexico, too. Our interest is limited here instead to those aspects of Mexican anthropology which establish constraints on what is considered anthropology (and what is excluded from it) in the very concrete circumstances of our field setting. A number of such constraints can be detected.

First of all, Mexican anthropology, with its dual emphases on

archaeology and indigenism, has not developed many of the newer sub-disciplines which have attracted much professional attention elsewhere, or has assigned the investigation of these topics to other sister social sciences, such as sociology, rather than to anthropology. Urban anthropology, for example, does not fit within the anthropological emphasis on indigenous peoples, since most of these live in small communities isolated far from urban centres in "refuge zones". Investigations in urban areas are more often included in sociology, economics, or political science, and are rarely associated with anthropology. Those few anthropological studies which have been conducted in urban centres deal more often with the immigration of indigenous peoples to these centres (Butterworth 1962; O. Lewis 1965; Kemper 1973), and have been most often undertaken by non-Mexicans. (The outstanding exception is Bonfil's 1973 study of industrialization in Puebla.) Thus, this sub-discipline of anthropology, which is of increasing interest and importance in other parts of the world, has been developed only minimally in Mexican anthropology because it does not conform with the indigenist emphasis.

Unfortunately, a similar fate seems to have befallen medical anthropology as well. In Mexico anthropological studies of medicine have been limited largely to the ethnomedicine of the indigenous cultures, and the physical anthropology of the Mexican population. Most of the new emphases in medical anthropology which we mentioned in Chapter 1 have received only scant attention, have been investigated primarily by other social scientific disciplines, or by foreign scholars.

Both of these limitations on the intellectual image of anthropology tended to make it appear less relevant in the circumstances which we are

considering, a medical school in an urban centre. They also exercised very severe constraints on the literature available for inclusion in a medical anthropology course, much of which was either not available in Spanish, or had been translated from foreign languages (especially English). We shall discuss these curricular limitations a bit later in this chapter, and for now merely note that anthropology's image in Mexico did not make it appear as relevant to the average Mexican medical student, and further fostered many doubts as to why it was included.

These doubts were further supported by a second factor, also derived from Mexican anthropology's indigenist and archaeological emphases. As we noted in Chapter 2, the archaeology of northern Mexico is limited to the modest remains of nomadic peoples, which, compared with the spectacular temples and pyramids of the Mesoamerican heartland, seem almost inconsequential. The image of both general public and specialists alike in Mexico is that archaeology doesn't exist in the North. Moreover, the indigenous peoples of this region were exterminated over a century ago, and with the exception of an intrusive group from the United States -- the Mexican Kickapoos of Nacimiento, Coahuila (Latorre and La Torre 1974?) -- there are no sizeable concentrations of indigenous peoples within 700 km of Monterrey. The nearest groups are the Tarahumara and Tepehuanes in the high sierra of Chihuahua to the west, and the Huastecos in the sierra of Veracruz to the south. Thus, neither of the emphases of Mexican anthropology are available for study in the Mexican north, and the impression created was that there was no "anthropology" in the region, especially when compared to other regions of Mexico. We might say that the paucity of studies of northern Mexico owes mainly to its being systematically ignored, and given this

professional attitude, it is not surprising that the general public came to perceive the situation the same way. Anthropology was thus regionally irrelevant, too, and the controlling groups who installed it in the curriculum did so in spite of this factor.

One practical consequence of this image of anthropology was the difficulty of obtaining or attracting professional anthropologists to teach in Monterrey. Only a handful of anthropologists are produced in Mexico, and nearly all of them have been quickly absorbed by opportunities in other parts of the country. Only one of the teachers who taught the course we did before our arrival had any formal training in anthropology at all, and even his professional specialization (the physical characteristics of athletes) provided little meaningful definition of the field to the students, since it fell outside "normal" Mexican anthropological research interests.

Lacking a firm plan of study or precise objectives supplied by the controlling groups who designed the curriculum, or a professional anthropologist as teacher who could supply this orientation, the anthropology course fell prey to whimsy. The teachers (mostly non-anthropologists) were changed almost every semester, and there was little or no continuity in what was taught as anthropology from one semester to the next. One teacher who taught in the Medical School, for example, was categorically opposed to the Darwinian theory of evolution, and occupied many hours of class debating this point with the students. The end result of this situation was a very diffuse image of the discipline which was generally relatable to the low esteem in which the course was held by the students when we arrived. One of the first tasks set before us by our Mexican teaching colleagues when we arrived was to "win respect" for our subject within the curriculum.

This problem proved soluble once we were able to separate the course from the negative image of the discipline and respond to the professional opportunity to participate in the selection process for future doctors. We have already described in the previous chapter how the first four semesters of study served as a filter for the later clinical phase. Each generation was expected to be cut at least in half by fifth semester. Teachers in all subjects in the first four semesters were openly encouraged to apply rigorous standards in their courses, and a statistically high rate of failures demonstrated one's fulfillment of this task. The more the teacher demanded in his course, the more he participated in the professional selection process, and the more the students came to respect his subject, whatever prior image they may have had of it.

The use of such life-and-death power over a student's future career was obviously a two-edged sword. To the extent that the power was used fairly to eliminate the least apt, the teacher gained authority, and his subject came to be respected. But if the teacher's judgments were arbitrary and did not distinguish the student's real potential as a doctor, the teacher would soon be over-ruled, and if the abuse was flagrant might even lose his job. The power of failure was most effective when kept in reserve for those occasions which demanded it. Since anthropology was not a medical science, and seemed a poor barometer of many of the qualities which would be required of the physician, we made no attempt to make it the principal filter for the career. Nevertheless, we learned from experience that the fear of failing the course provided the most consistent motivation available for studying it, and that effective teaching required that one accept these terms. Awareness of this situation guided our search for course materials which would provide

the discipline with this credibility, respectability, and relevance for the professional selection process.

In summary, we have tried to show that the "image" of anthropology, derived from macrosocial influences well beyond the control of the classroom teacher, served to create many doubts about the relevance of such a course. This image influenced the attitudes of students who took the course, and the administrators and professionals who authorized its inclusion, and created very tangible constraints on the kind of teaching material available. This was the first hurdle to be overcome, and it was only the conscious awareness of this task of counteracting a negative image by participating in the professional selection process which allowed us to develop appropriate criteria for making the discipline more relevant at the microsocial level of the classroom.

III. Course Design and Content

A look at the curriculum of the Medical School, summarized in Appendix 1, shows clearly what a densely packed array of information it really was. This feature, which seems to be typical of most medical schools, created intense competition between courses for the student's attention. In reality, the competition was even more intense than the formal curriculum reveals, since many of the basic biological sciences included laboratory sessions which are not fully represented in the number of credit hours assigned. If we take these and other activities into account as part of the "programmed instructional time", i.e. the time which the student was expected to be in class, a more realistic picture of the student's work load is possible. It began with a modest 32 hours per week of programmed instruction in first semester, on the theory that students needed a lighter load while making their initial adjustment to the University, but climbed quickly to a peak of 48 hours per week in second semester, when the students carried four basic biological sciences with their respective laboratories simultaneously. Third and fourth semesters, with 44 and 40 hours of programmed instructional time respectively, provided only scant relief. This calculation of the students' work load helps us understand why they groaned under the load, and looked for any possible way to cut corners. By the middle of second semester even the healthiest, most strapping eighteen-year-olds began to look pale and haggard from all-day classes and labs, and late-night study sessions as they tried to digest this immense body of information. This was also the curricular competition for a three-hour course in Social Anthropology in first semester, and a two-hour course in second semester, and it made "winning respect" for the discipline that much more difficult.

What kind of course was finally developed? We shall now look at some thematic outlines of the courses we taught (see Appendix 2). Three such outlines are included, representing different stages in the evolution of the courses. The first covers the initial course taught at the beginning of our fieldwork, while the second and third present the two-semester sequence taught to the entering generation of August, 1974, a year and a half later. These outlines were prepared for administrative purposes, and do not necessarily reflect what was actually taught in the classroom. Rather they indicate the "ideal" course which we intended to teach. Some changes in this ideal course were always necessary, since the students' response to given material could never be anticipated completely. In the main, however, these thematic outlines were fulfilled, and they therefore provide an adequate benchmark of the evolution of the course which took place as we became more aware of the cultural influences which needed to be taken into account in order to make it more relevant.

The focus of our discussion will not be on whether these courses were good or bad in any absolute sense, but rather on what kind of decisions had to be made in formulating them, and how cultural knowledge of the context helped in making these choices. To take up the first question would reduce our exposition to an evaluation of particulars of interest to no one except the teacher who gave the course and his immediate superiors. We shall assume, therefore, that the course was at all times as good as it could be, given the limitations of resources which existed, and the personal capabilities of the investigator as teacher-anthropologist.

Course planning was influenced by the division of the curriculum slot assigned to Social Anthropology into two unequal and very different segments:

a three-hour course in first semester, and a two-hour course in second semester. Due to the overall curriculum design the first semester course competed only with non-medical courses, such as methodology, psychology, English, etc. The three-hour/week frequency also provided sufficient continuity from class to class to permit development of topics over several sessions. The two hours/week in second semester, however, competed with highly crucial and extremely demanding courses in basic biological sciences, and the frequency was insufficient to assure much carry-over. Each class session had to be largely self-contained, and in our experience the course was in reality a "throw-away". Even among the most interested and motivated students, attendance and attention were invariably poor, and there was no way to demand more intensive work without provoking a storm of protest.

This situation was doubly unfortunate, since we determined very early in our teaching that it was necessary to dedicate the first semester to a presentation of general anthropology, and had reserved the second semester course for topics in medical anthropology. A closer examination of the first course outline (A. in the appendix) -- our initial effort -- helps identify some of the reasons why this division was necessary.

When we began to teach, the students were already in the second semester, and we discovered upon our arrival that they had learned practically nothing about anthropology in the first semester course. The course had been "team-taught" by three teachers, a psychologist, a biologist who taught physical anthropology ("Social Biology" in the curriculum), and a lawyer who taught social anthropology. They had pooled their class-hours, and inter-changed primary teaching responsibilities. When all three appeared for the same class hour, the session frequently turned into a

rather contentious debate between them about some topic which one or the other had introduced to the group, and with which one or more of the others was not in agreement. In these class debates, the lawyer-cum-social anthropologist's principal contribution was an obstinate defense of the Biblical explanation of the origins of man in the face of the psychologist and biologist's equally impassioned advocacy of Darwinian evolutionary theory. Needless to say, the students had benefited very little from these debates, at least in terms of learning social anthropology, and it was into this gap that we were plunged. Under the circumstances it seemed advisable to try to present some minimal notions of the field before attacking more treasured topics in the specialized area of medical anthropology.

We selected a short but relatively recent and popularized account of the field (Pelto 1967) which had just appeared in translation to give the general coverage. We expected that it could be covered in 8-10 hours of classroom time, and would allow time for the medical anthropological topics to be developed subsequently. Since we were unaware of appropriate readings in Spanish on medical anthropology, we made a selection of articles in English brought from Canada, and requested students to make translations of these articles and present them to the class. We naively thought these translations might begin to form a bank of available readings which could be used in future semesters, depending on the interest which they aroused. In this way we hoped to cover both general anthropology and medical anthropology in one semester.

The actual experience of teaching the course showed how naive and baseless these expectations really were. First of all, at our request, the team-teaching plan was modified so that each teacher taught his/her subject

exclusively for a given period, and out of respect for our manifest deficiencies in the language our colleagues opted to teach their sections first. Our semester course was thus reduced in effect to six weeks at the end of the semester. Secondly, although in our opinion Pelto was manifestly a simple text, the theoretical and methodological basics it sought to put across went past the majority of the students like a shot across the bow. In this initial brush with reality we learned what Read and Leighton so aptly expressed (cf. Chapter 1): anthropological theory per se is not of great interest to medical students, and the non-valuative culturally-relativistic viewpoint it espouses is quite alien to their way of thinking.

Our handling of the medical anthropological topics was no more fortunate. Translation, we learned, is an art which requires considerable cultivation, and despite the fact that most of the students had received several years of instruction in the English language, they were able to produce translations which were only marginally coherent in Spanish. (We never used any of these translations in subsequent courses.) Moreover, most of the students chose to work in teams of 3-4, and since most were not particularly able teachers, their classroom presentations frequently degenerated into total disorder. The noise level approached that of a decent soccer game. How little was learned in these sessions was only revealed when the time came to present final examinations, i.e. after the damage was done. Under the circumstances it was hard to penalize the students for their ignorance, when most of the important errors had been made by their teacher.

This initial failure, however, led us to clarify many of the important issues which had to be resolved. From then on, we determined that an entire semester was needed to introduce the field of anthropology. Hardly any of

the students had ever studied social sciences before entering medical school, and it was necessary to equip them with the most basic concepts of anthropology first. Only in this way could they appreciate how medical anthropology fitted into the whole, and deal with the basic concepts which the medical anthropological literature took for granted. Hence, the first semester course should cover "general anthropology". Moreover, most of the medical anthropological literature took for granted that the students knew a great deal about medicine, and were well acquainted with clinical problems. This was simply not the case with our students, and made most of the research literature we were trying to have translated much less useful, because it was not backed up by real experiences yet. In the first semester the students were not even in the biological sciences; in second semester they began to carry these courses. This suggested that medical anthropology might be more effectively presented in second semester, when some of its topics could be linked at least to the biological sciences.

But perhaps the most important lesson was the cultural relativity of the anthropology we were teaching. The "image" the students had of anthropology did not fit with the materials we were trying to present. The most important absences in this first course outline are precisely archaeology and indigenism, the two most influential fields within "Mexican" anthropology. The course had to be made more "Mexican" in its emphases in order for it to be assimilated by the Mexican students, and deemed relevant to their cultural context. This problem can be detected in two fundamental areas which are reflected in the course outlines: selection of the general anthropological textbook, and selection of the medical anthropological readings. By comparing Course Outline A with Course Outlines B and C developed

a year and a half later, we can see how this problem was attacked, and how the cultural context came to be incorporated.

Our initial selection of Pelto as a general anthropology text was essentially a stop-gap measure, and perceiving the problems created by teaching a non-Mexican textbook, our further efforts were concentrated on locating an acceptable Mexican-authored text. To our dismay, however, we discovered that such a textbook did not exist. As we have already noted, the evolution of Mexican anthropology has made it pre-eminently a career of government service. In this professional environment, the production of university textbooks received low priority, and none of Mexico's pre-eminent anthropologists had produced anything approaching such a work.

What was available were a number of the older standard American textbooks (Beals and Hoijer, Hoebel, Herskovits) in translation, as well as some introductory works written for the general public by prominent British anthropologists (Leenhardt, Mair, Beattie). Since the obviously ideal solution was impossible, the choice narrowed down to these works, all of which admittedly suffered from the same defect. The job of selection was to pick the "less bad" textbook in terms of pedagogical needs and the cultural orientation of the discipline which each conveyed. In making this choice, pedagogical factors played the more decisive role. Most of the American texts were quite long and detailed, and were hard to fit into the class hours available. Mainly for this reason, our choice inclined toward the British authors, whose works had the additional advantage of presenting anthropology in relation to its central concepts, rather than as a detailed analysis and catalogue of its substantive information. In the second Course outline (B) our textbook was John Beattie's Other Cultures. To the study of the textbook

we added classroom comments which attempted to orient and apply the concepts presented in the book to the Mexican context. In this way we hoped that through a combination of the two techniques, the students would develop an adequate foundation for attacking the medical anthropological literature programmed for the following semester.

The results of an evaluation of this textbook, presented in Figure 2, show how short of this goal we fell, and how the problem of cultural inappropriateness persisted in spite of our efforts. The evaluation was accomplished by means of a simple hand-out to all students enrolled in the course at the time (March, 1974) on which the students were asked to mark whatever phrases or descriptions conveyed their opinion of the book. In order to focus the responses somewhat, eighteen phrases, mostly culled from the students' own verbal comments during class discussions, were supplied. A space was left for other reactions which did not fit into one of these expressions. (25 of the 65 respondents offered comments /not analyzed statistically here/ in this space.) At the time the survey was carried out, the class had finished studying the book about two weeks previously, and had been tested on its contents, so reactions to the book (and test grades) were fresh in everyone's minds. Anonymity of responses was guaranteed on the assumption that only in this was would students feel free to express negative comments openly to the teacher. The tactic apparently worked; because a generally negative evaluation of the book is clearly indicated.

Within the scale of 8 adjectives included in the options are four which can be scaled from "extremely interesting" to "boring" (indicated as A-D in the figure). On this sub-scale almost one-third of the class described the book in most negative terms, and virtually no one put it in the most positive

Figure 2: Medical Students' Evaluation of John Beattie's Other Cultures.

N of Sample = 65

A. Qualifying Adjectives.

Adjective (Spanish Equivalent)	N		%
1. Tangled (Enredado)	35		54
2. Too detailed. (Demasiado detallado)	26		40
3. Interesting. (Interesante)	22	B	34
4. Boring (Aburrido)	21	D	32
5. Mediocre (Mediocre)	14	C	22
6. Too theoretical (Desmasiado teorico)	10		15
7. Superficial (Superficial)	3		5
8. Extremely interesting. (Desmasiado interesante)	0	A	0
	131		

B. Phrase Commentaries.

Phrase (Spanish Equivalent)	N	%
1. I depended on the explanations in class in order to understand the ideas presented in the book. (Dependi de la explicacion en clase para entender las ideas presentadas en el libro.)	46	71
2. Insufficient time to read it (the book) well. (Tiempo insuficiente para leerlo bien.)	35	54
3. I didn't understand some parts. (No entendi algunas partes.)	32	49
4. Very different from any other book I have read. (Muy diferente de cualquier otro libro que he leido.)	23	35
5. I would have preferred more examples from medicine than this book includes. (Preferiria mas ejemplos de la medicina que incluye el libro este.)	23	35
6. I felt I was reading a translation from another language. (Senti que estaba leyendo una traduccion de otro idioma.)	21	32
7. The examples from African peoples didn't interest me. (No me intereso los ejemplos sacados de pueblos africanos.)	14	22
8. I agreed with his conclusions. (Estuve de acuerdo con sus conclusiones.)	11	17
9. A difficult book. (Un libro dificil.)	10	15
10. I did not agree with the theory presented. (No estuve de acuerdo con la teoria presentada.)	6	9
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category -- "extremely interesting". The dominant view was that the book was "tangled", and half of the group confessed that they "didn't understand some parts". The response to this dilemma was to turn to the classroom discussions (71%) for clarification, precisely that aspect of the course where we hoped to impart cultural specificity to the Mexican context. The reasons for the students' difficulties in understanding the book -- the cause of the tangle -- is relatable in a high degree to the differences between Britain and Mexico in "national anthropologies".

First, in teaching the book, we noted that nearly all the ethnographic information it contained referred to the classic studies of the British Africanists, reflecting accurately both Beattie's own field and the general orientation of much of British anthropology (cf. Kuper). Given the scant interest shown in the region in Britain, it seems quite natural that not a single ethnographic example at any point in the book is drawn from Latin America, let alone Mexico. This was a crippling deficiency in the Mexican context, however. Among the students prior knowledge of African culture was extremely minimal, and hardly any place in the world could have seemed of less intrinsic interest or importance. Lacking clear reference points to their own society, the students' cultural distance from the book substantially increased. 22% indicated this openly in the evaluation, and it was sensed frequently in classroom discussions. The unfamiliarity of Africa certainly contributed at least one strand to the tangle.

Another strand was intrinsic to the process of translation itself. In spite of the translator's personal skills, nearly all translations fall somewhat short of the original. It is almost impossible to capture idiomatic usages and replicate local speech patterns completely. The translation of

Beattie's book was no exception and these difficulties were heightened by the presentation of highly abstract concepts in "everyday" English. One clear example of this is the translation of Whitehead's concept of the "fallacy of misplaced concreteness" as "el paralogismo de las concreciones fuera de lugar" (Beattie:53). The literal rendering of English words hardly even hints at the pithiness of Whitehead's original expression, and becomes a clumsy and confusing collection of qualifying phrases bordering on linguistic unintelligibility. In Mexican usage, "fuera de lugar" is most often understood as "off-side" in football, and "concreciones" are nodules of hard rock. Many other examples of this kind of confusing translation could be cited, but our purpose here is not to make a systematic critique of the translator's art. We wish merely to note its overall effect on the students' comprehension: 32% of the students mentioned confusing translation as having affected their study of the book.

This brings us up to the thorny question of comprehension. 35% of the students queried found the book "very different" from anything they had ever read, and another 15% admitted that the book was "difficult". The students' reaction is best capsulized by an expression which appeared frequently in the optional comments: the book contained "mucho rollo". This highly idiomatic Mexican expression means literally "a lot of padding", and implies among other things that not much information is being conveyed, nor are any firm and consistent conclusions reached. Instead of the highly systematized and structured presentation of concrete facts, characteristic of the Mexican textbooks and of medical texts in particular, the student confronted a highly discursive and loosely structured "popular introduction" written in essay style. Even though systematic efforts were made in class to deal with

theory, only a handful of the students chose to comment on the theoretical content of the book. Class discussions made it clear that the parts of the book which the students considered "rollo" were mainly the theoretical sections. If Africa was geographically remote from the interests of a Mexican medical student, the niceties of anthropology theory and literary style were even remoter. The simple fact was that the book was unlike anything they had ever read before, and rather than providing a bridge, it merely heightened the students' distance from the subject still further.

One final way to perceive the influence of national traditions is in the content of the text itself. As we stated earlier, Mexican anthropology has come to be identified widely with archaeology and indigenism. Beattie, on the other hand (p. 34), following the British tradition, categorically excludes archaeology from social anthropology, a position which directly contradicts the image of the discipline which the Mexican students had already absorbed. Likewise, Mexican anthropology has dedicated itself almost exclusively to the study of groups internal to its national society, while Beattie's ethnographic illustrations follow the course of empire around the world, and lead rather easily to a discussion of colonial domination. While links on the theoretical level can be established between these two traditions, it is clear that they manifest basic differences in preoccupations, central concepts, and the scope of the discipline on precisely the terms which Belshaw proposes. While it may have been quite satisfactory in certain respects, Beattie's work was still culturally inappropriate; it did not go far enough in leading the student toward a critical view of his own society.

In summary, then, our teaching of general anthropology was largely

frustrating. While we remained convinced of the necessity of equipping the medical student with basic concepts, these concepts needed to be presented with ethnographically appropriate examples, and the publishing marketplace did not (and still does not) offer an appropriate vehicle. We subsequently abandoned Beattie, but found that other texts used (Leenhardt, Kluckhohn, Salzmann) trade one deficiency for another, and fail to attack this basic problem. Until Mexican anthropology produces a textbook of its own, it appears that the anthropology teacher must simply learn to live with this deficiency.

Our handling of medical anthropological topics met with somewhat greater success in achieving cultural relevance, as an examination of the readings in the thematic outlines reveals. With greater exposure to the available literature, we were able to substitute systematically articles in Spanish for articles in English. While the first outline includes exclusively medical anthropological readings in English, the second attempt (outline C) includes only one reading out of eight in English, and even this reading (which was taught by the teacher) deals with a Mexican setting. In one case (Rubel 1964) we even discovered that a Spanish translation was already available. Moreover, the selection of readings is primarily drawn from Mexican ethnography, the only exception being an article on family planning in Argentina, and the topics covered include many facets of Mexican culture, such as folk healing (Brown 1963; Rubel 1964) with which the students were already superficially familiar. In one case, it was even possible to use a work which related directly to the northeast Mexican cultural milieu (Garza Quiroz 1972). Naturally, the students were more interested in prehispanic Aztec medicine than they were in exotic African healing systems,

or even similar topics from other parts of Latin America, such as Dobkin de Rios (MS), and the course gained in relevance without necessarily achieving that goal of necessary and general connection which we have postulated as our ideal. The diversity of medical anthropological literature proved to be an unexpected boon which helped, however imperfectly, to overcome other deficiencies.

One other aspect of the course outline must be pointed out on the positive side. It will be noted that course outline B includes ethnographic units on the Eskimos and the Tarahumara, both of which were developed from materials collected in our own fieldwork in these regions. These units proved highly popular with the students, and the source of their popularity leads us to another question which we formulated at the beginning of the chapter: the choice of teaching methods.

IV. Fieldwork and Field Teaching in Medical Anthropology

Within the medical curriculum the basic biological sciences are normally taught in the classroom, and involve passive learning of principles and information. Their active aspect is made available in the laboratory through experimental replications, but the professional application of this knowledge must wait until the student enters the clinical setting. The bulk of the student's study time is spent in passively absorbing knowledge through detailed studies of textbooks and classroom expositions of the same. This feature of basic science teaching was further heightened at the University of Monterrey by the very limited laboratory facilities available, which forced the students to learn principally from books.

Nonetheless, the practice of medicine is not a laboratory experiment, and tends to require active participation. It attracts students with an activist orientation who are most impressed, as Leighton and Read have noted, with knowledge which can be put into practice. Teaching students things they need to know means in reality teaching them things they can use, and social sciences such as sociology and economics which deal primarily with abstract situations of global dimensions have struggled for just this reason in insinuating themselves into the medical curriculum. Students have difficulty in translating their knowledge into the day-to-day work environment which they face as professionals.

Fortunately for the discipline, anthropology includes an active component -- fieldwork -- which forces the anthropologist to put his own abstract knowledge into practice, too. This active component provides a kind of methodological bridge which permits him to appreciate the doctor's situation. Obviously, concepts and information must be learned, and they can be treated

adequately only in the passive learning environment of the classroom, but by judiciously supplementing these with experiences derived directly from the field, the anthropologist can go a long way toward demonstrating the practical utility -- and hence the greater relevance -- of his analytic tools.

We were first made aware of the importance of fieldwork experiences in conveying anthropological concepts from the responses of the medical students to slides of a Canadian Eskimo village visited during earlier fieldwork (cf. Murray 1976). We incorporated these into our course during our first semester teaching in Mexico quite by accident -- it will be noted that they are not included in course outline A, which was developed before the course began -- and the reasons for including them had nothing to do with anthropology itself. Rather, we found our knowledge of the language was deficient for classroom purposes, and that slides communicated non-verbally many things which we could not say for lack of vocabulary. Despite its geographical remoteness and cultural dissimilarity from Mexico, the unfamiliar Eskimo setting provided many concrete examples of such concepts as acculturation, social structure, status, and role which were introduced in the textbooks we used as well. And invariably, the students showed quicker recognition and greater comprehension of these concepts after viewing the slides. The images of this remote Eskimo village stayed with the students long after memorized definitions from the textbook had faded into obscurity. (Students have returned as much as 3-4 years later and described even small details from the slides with perfect recall -- even details which we did not consciously remember mentioning in class.) Ever since that first experience, we have included the Eskimo audio-visual materials in our course, and later included additional materials developed in our fieldwork in the Tarahumara

to be described in the next chapter. The students' response has nearly always been similar. The view of anthropology as an active process -- the undertaking of fieldwork -- which the slides projected was our first hint that fieldwork might provide a bridge between the medical students and anthropology which anthropological theory did not, and suggested some new avenues worth exploring.

The success of the Eskimo slides was in fact over-determined, since they incorporated two additional lessons to which we have already alluded. First of all, they dealth not just with anthropology but with medical anthropology. Their focus was on a psychiatric case, which we developed integrally with the presentation of the ethnographic community study. This helped to establish that broad cultural information and overall features of the community might have relevance to individual cases the physician might see in his clinical practice, and the discovery of this fact on such totally unfamiliar ground as the Canadian Arctic made the lesson all that more convincing to the Mexican students. The slides also provided a vehicle for introducing the students to the general field of ethnopsychiatry which, as we noted in Chapter 1, has been one of the important components of medical anthropology in the past few decades. Thus, not just anthropology but medical anthropology took on a more concrete meaning. In addition, our way of using the Eskimo slides in class was to spend a long time over each image, extracting as many associations as possible, rather than passing rapidly in travelogue form over many slides in succession. This pedagogical technique of "analyzing" each slide tended to fix details and was consciously modelled on the use of audio-visual materials in teaching the biological sciences. This converted the slides from a "trip" into a learning experience

which exploited the students' initial interest, but developed it in a consciously scientific manner.

Other factors can also be perceived which helped make the slides a relative success. The presence of their own teacher in some scenes promoted the students' identification with the process of fieldwork itself, and convinced them that this was really what anthropologists did -- in much the same way as the physician-teacher's anecdotes about his own patients lend credibility to his medical explanations. Moreover, the Eskimo girl whose case was portrayed was close to the age of the students, and this clearly promoted an empathic psychological response to the problems she faced. All of these factors enhanced the value of the slides for teaching purposes, and strengthened our conviction that audio-visual techniques, whose pedagogical value has been amply demonstrated in many other contexts, were especially appropriate for conveying anthropology, and made it more respectable in the medical students' eyes.

This modest success in awakening interest through audio-visuals led naturally to a consideration of a more ambitious alternative: the incorporation of fieldwork exercises within the anthropology course itself. Spradley (1969) has been one of the outstanding spokesmen for the use of fieldwork as a means of teaching anthropology, and his advocacy stimulated us to experiment more seriously with this method, which involved a still more active participation of the student than mere slides.

The curriculum of the University and certain traditional attitudes toward education in the Mexican cultural milieu had to be confronted, however, in planning the activity. As we noted earlier in this chapter, rote learning from books is the typical way of presenting topics in the Mexican

schools, and a certain reserve and distance in the teacher-student relationship is expected. Fieldwork teaching clashed with both of these. It was atypical and unexpected for students to learn directly from experiences outside the classroom, and the greater informality in the student-teacher relation had to be handled with care. Fieldwork exercises were not feasible, we surmised, with an entire class, and we opted to attempt them only with certain students who self-selected themselves for the experiment.

An assignment to write a short term-paper at the end of the first-semester course provided a mechanism for introducing the experiment. Most of these term papers were based on bibliographic research, but in introducing the assignment, we left open the possibility of doing a fieldwork project of modest proportions in lieu of library research, and made a few informal suggestions of possible topics in class. One of the most warmly received by the students was a project which combined fieldwork and library research. The students were asked to collect a sample of a common herbal medicine in the local markets, interview the shopkeeper or some other informant about its popular applications, and then investigate the available scientific literature about its pharmacological properties. This project exposed the student both to popular medical practices and the ethnopharmacological literature, and pointed out the applicability of ethnographic techniques in the students' own milieu.

Other more ambitious fieldwork projects soon appeared spontaneously, and put the students into more complex field situations. Discussion of curanderismo in class, for example, prompted one group to undertake a short film in which they interviewed a well-known faith healer of La Petaca, N.L., a town about 150 km south of Monterrey, and photographed her patients and

chapel. Another group spent a weekend at the Kickapoo village of Nacimiento, Coah., while others visited German Mennonite settlements near Monclova. An especially popular field visit was to Espinazo, N.L., centre of the faith healing sect which has developed around the figure of Nino Fidencio. These visits gave the students an opportunity to observe classic trance possession states, which were achieved by the "cajitas" who cured in Fidencio's name with incredible skill. In this case consultation of literature available (Macklin 1974; Crumrine and Macklin 1972; Garza Quiroz 1972) provided additional information and theoretical insights.

Whenever possible, we attempted to accompany the students on these field visits. Usually the students themselves extended the invitation of their own accord, and when problems were anticipated in handling the field situation, we occasionally made the suggestion more directly. (On only one occasion was a field project conditioned by our presence, however.) Direct participation in the students' fieldwork offered several advantages. It allowed for immediate interpretation of many questions which the experience raised, and detection of ethnocentric attitudes which might provoke hostile responses from informants. It also tended to calm the more exaggerated fears of parents who were not too happy to see their offspring exposed to such exotic and potentially perturbing experiences. More importantly, however, it allowed us to cross over from the passive role of classroom teacher to the active role of fieldworker along with the students, and learn more about the students' attitudes and interests in the cultural milieu in which they had grown up and would later work as medical professionals. The fieldwork projects opened up new avenues for more intimate communication through shared experiences, and introduced us to many new aspects of the cultural

context. All of these experiences (and many others which we have not detailed) demonstrated the rich possibilities for active rather than passive learning in anthropology, and proved immensely popular with the students. Like the slides of the Eskimos, they were remembered long after the course ended, and convinced us that fieldwork was indeed a vital and valuable way of establishing the relevance of the discipline for medical students.

As luck would have it, work in another teaching situation than the anthropology course helped to clarify still further the value of field teaching, and bring it even closer to medicine itself. As will be recalled from the previous chapter, one of the innovations in the University of Monterrey's curriculum was a course entitled "Fieldwork", a three-hour once a week class whose objective was to give the students an increasing exposure to the practice of community medicine and public health. This was achieved through a graded series of projects in community interviewing, special studies of environmental factors (nutrition, sanitation, housing) which affected health risks in given communities, disease detection and vaccination programmes, community teaching, etc. The projects in the first semester, when the students carried Social Anthropology, had the objective of introducing the students into the communities in which they would carry out later projects. Another objective was to integrate classroom learning in the various subjects being studied with real community situations. In lieu of this, we were invited by the director of the medical faculty to teach some of these first semester Fieldwork groups. It was an opportunity which we gratefully and enthusiastically accepted.

In this manner we ultimately came to direct five different fieldwork projects with groups ranging from first through third semesters in four

different sectors of the metropolitan area:

(1) Colonia Luis M. Farias: a squatter settlement of about 4,000 persons located to the northeast of the urban area along the banks of a storm drainage canal;

(2) San Pedro, Garza Garcia: a medium-sized town in the process of being incorporated into the urban core containing a socio-economic cross-section which ranged from squatters living on the (periodically inundated) banks of the Santa Catarina river to the urban upper-middle class;

(3) Cerro La Campana: an older largely squatter settlement occupying one of the low hills just to the south of the city centre; and

(4) Sierra Ventana: a newer squatter settlement with a densely packed population of about 12,000 spread over three hills further to the south from the central city than Cerro La Campana.

Of these four locations, Sierra Ventana was perhaps the most important, since here the students ultimately became involved in the more ambitious project of establishing a community clinic, which went into operation in the latter phases of our fieldwork.

As can be seen from these thumb-nail descriptions, the common denominator of most of these communities was poverty. Nearly all contained populations predominantly made up of recent rural migrants, and economically marginal urban dwellers, and represented portions of the classic "misery belts" (cinturas de miseria) which have come to surround the rapidly growing urban centres of Mexico and other parts of Latin America. An immense and still growing literature in the social sciences has sought to document and analyze this phenomena, and at least two major studies already cited (Balan et al. and Hopgood) treat this topic in the Monterrey area. In addition, Lomnitz (1975) presents a detailed analysis of the social structure of a similar colonia in Mexico City. All of these studies provide useful supplementary data on the conditions which our Fieldwork class groups confronted in their community projects.

These urban misery belts also represent one of the major challenges to Mexican medicine, and a fact which has been amply commented upon in the medical literature. Lacking such basic urban facilities as sanitary facilities, pure drinking water, and income levels capable of providing an adequate diet, these colonias are where endemic and infectious diseases continue to take their greatest toll. In San Pedro, Garza Garcia, for example, we worked in an area with the highest infant mortality rate in the state of Nuevo Leon. Yet the solution of most of the health problems these communities confront obviously lies beyond the confines of traditional curative medicine. Nowhere is the value of community medicine easier to demonstrate, and in this sense they seemed ideal settings for putting this approach in the foreground for the medical students.

We have already noted in Chapter 1 that community medicine stimulated communication between anthropologists and physicians in the United States and Canada, and contributed to the development of medical anthropology as a distinct sub-field. Nevertheless, both of the concrete examples we offered -- the University of Kentucky programme in Appalachia and the Yale-Navaho programme -- dealt with community medicine in rural areas. In Monterrey this approach had to be translated into an urban setting in which the principal barrier was not urban-trained doctors confronting a rural community, but medical students from one social class confronting patients from another social class. Clearly a barrier was present, but it was an open question whether this barrier was properly speaking a cultural one, and to what extent anthropology could help the students overcome it.

The Fieldwork course was also beset by ambivalences created within the University administration. While all three of the controlling groups agreed

to its inclusion, they did so for different reasons, and included some key reservations which tended to cancel each other out. This left both the students and their teachers with many fundamental ambiguities to resolve when they confronted the communities in which the projects were carried out.

Most enthusiastic about the course were the public sector doctors, who saw the Fieldwork programme as the "backbone" of the medical curriculum, the only continuous activity which integrated all phases of training. The support of the public sector doctors was manifested by the Medical School's participation in national vaccination programmes, and the use of public sector medical facilities in various projects. The fact that the Fieldwork course often failed to live up to their expectations simply pointed out the disjunctions between their goals and those of the other controlling groups.

Also enthusiastic about the Fieldwork course were the religious. They saw the programme as a form of social service which taught the student the value of helping his fellow man. The fact that this service was directed toward the poor made it an exercise of the Christan value of charity, and in many ways the activities carried out mirrored similar programmes operated directly under Church sponsorship. Although charitable motives may not appear very convincing to more skeptical readers, many of the students, particularly those who had already participated in the Church-sponsored programmes, undoubtedly entered the fieldwork situation with these expectations. The fact that charity is a highly positive virtue in Catholic ethics, closely linked to the social projection of the Church initiated by Pope John XXIII, assured the programme of support from the orders involved in the University.

The direct articulation between Fieldwork projects and the Church,

while less prominent than with the public sector medical facilities, was nonetheless quite explicit. A number of Catholic charitable institutions received support from Fieldwork groups; in one instance, for example, a group of students promoted the use of a nearby Red Cross clinic in the squatter settlements which adjoined it. The Church's direct voice in the planning and direction of fieldwork projects was minimal, however, and the religious tended to be passive supporters and benefactors of these activities, with direct planning and control remaining in the hands of the public sector doctors.

The conflict between community medicine and Christian charity generated one of the most fundamental ambiguities for the students. The public sector doctors had an ideological commitment to creating universal access to medical treatment and a kind of equality in medical care which obviously did not exist in the marginal communities where the projects were carried out. The students, who came from classes markedly better off, perceived this disjunction between ideology and reality immediately, and the projects in which they participated hardly seemed to right the balance. Rather the students felt they came to the communities with very little to offer, and expected a hostile reaction from the community because of the real economic disparities which the students' presence served to emphasize. Public sector medical ideology seemed to offer them scant protection from this more elemental hostility. The religious ideology of charity toward the poor was, on the other hand, unacceptable and incompatible with the medical ideology precisely because it admitted and accepted the real disparities, and the public sector doctors were most anxious that their efforts not be perceived as charity. This put the students, who were the actors in the drama, in a

classic double-bind. The double-bind was even more traumatic for them because it was acted out in front of an unknown community audience, and they did not have the power to resolve it, since they were manifestly dependent on authorities higher up.

The ownership group, which roughly corresponded to the students' parents, presented still another difficulty. They were mostly concerned with the potential political repercussions of highly-visible community medical activities, and conditioned their acceptance of the projects with the key cautionary stricture that they not put the University into political controversies. Since many of the communities in which the students worked were highly politicized, this precaution was not meaningless in concrete, and political storm signals caused more than one project to be abandoned. (We shall examine one such politicized medical controversy in greater detail in Chapter 7.) The ownership group's attitude thus hovered between indifference toward the projects when they had little impact on the community, and manifest and rapid disapproval when they threatened to awaken the sleeping dogs of political class conflict. Even the public sector doctors had to accept and work within this limiting double-bind.

Given these ambiguities, it is not surprising that the Fieldwork programme was highly unpopular with the students, and that the real effect of the activities over the communities was minimal. All of the students were forced into community roles in which they had little or no experience, and in which class differences were very important conditioning factors of the experience. Rather than making the students ardent supporters of community medicine, the projects tended to convince them of the futility of such efforts, and make them feel uncomfortable even in the situations of modest

contact which community interviewing and vaccination programmes implied. Under these circumstances the students' attitudes ranged from positively traumatized to apathetic and conformist. Fieldwork projects, invariably inspired and ambitious, were usually under-organized, and frequently led to situations in the communities which were not anticipated by the public sector doctors who designed them. For these negative results the students could not be held responsible administratively within the University, since they were simply complying with the requirements set out for them by others, but being the foot soldiers in the battle, they had to face the direct fire of community hostility. So as not to bother people whom the students knew to be hostile to further questioning, interview reports were forged. When complicated health problems were revealed, the students had no other alternative than to refer their prospective patient-informants to under-equipped community facilities, or the few over-crowded hospitals open to the poor. In this way the students learned to handle the all-too-obvious class differences.

These manifest difficulties did not rob the fieldwork programme of interest for the anthropologist, however. While we were unable to resolve the ambiguities surrounding the programme which stemmed from the macro-social context, we were able to provide the students occasionally with information and insights which helped them to resolve some of the immediate and concrete problems they confronted in the community. Discussion of selected anthropological studies of other marginal communities in Mexico (Chance, Orellana, Butterworth, Higgins) helped the students put their own problems in a broader perspective and alleviate some of their frustrations.

These studies also pointed out certain relationships between theoretical

concepts in anthropology and the community settings. Concepts such as status and role took on more concrete meanings when they could be applied to dealings with community leaders, and factional disputes within the communities provided object lessons in the analysis of social structure. Application of these terms to concrete situations took away much of their fuzziness, and did more to convince the students that anthropology might have some practical value than ten thousand sermons about the general importance of cultural differences in medical practice. For those few students who could imagine themselves working in community medicine later in their careers, this added considerably to the respectability of anthropology as a part of their medical training. For the majority, however, such tangential benefits were only a palliative which helped to get them out of a tight spot, and did not modify their basically negative view of community medicine in the slightest.

Work in the community setting also helped to project the non-evaluative role of the field anthropologist in some cases. The Fieldwork projects frequently put the students in essentially non-medical roles within the communities, and these new and unfamiliar role specifications often caused as much consternation for the students as the community's hostility. After all, they had entered the medical school in order to become doctors, and usually had firm (even if erroneous) ideas as to what being a doctor involved. In the face of this frustration, which was heightened still further in the first few semesters by their manifest ignorance of medicine, some of the students found the role of anthropologist a convenient alternative. If they could not practice medicine, at least they could practice anthropology. The non-evaluative approach of social scientific knowledge for its own sake allowed them to side-step their negative evaluation of the Fieldwork programme's

medical aspects by substituting other goals. A few even convinced us that they would have made pretty good anthropologists if they had wanted.

The students' anthropological role-learning was also facilitated by our continual presence in the community alongside the students. While many of the other teachers of the Fieldwork course saw it as just another class, we saw it as an opportunity to do field anthropology, and usually accompanied the students in their house-to-house interviews, school visits, attendance at community meetings, etc. with considerable enthusiasm. This seemed to us more like "real" anthropological fieldwork than teaching in the classroom, and it did in fact allow us to see many facets of the community which would have been otherwise invisible. Like the field research projects, it was another point at which medical teaching turned into anthropological learning, and was an invaluable experience in this sense.

It would be a gross mis-representation of the Fieldwork programme, however, if we were to take it as experience in real anthropological fieldwork for the students. No such goals were ever contemplated in its design despite some superficial kinship between the two. Cultural differences between the students and their community informants were actually minimal, for example, and could nearly always be related to class differences. Both spoke the same language, shared the same fundamental attitudes, lived within the same social structure on a macro-level. The community informants understood the students' discomfort, and generally tried as best they could to cooperate. Only the gringo anthropologist was a true outsider to the situation, and had to study it in order not to be taken by surprise. The students experienced only minimal "culture shock", since they returned at night to a familiar home, and their traumas were limited to the degree to which

they could accept or reject the conditions which an unfamiliar poverty imposed. These traumas, while very real, were not cross-cultural in the anthropological sense, and our services as anthropologist were more those of a sounding-board than a cultural guide. In nearly all cases the students were much better informed about the cultural conditions of life in these poor colonias than we were. Rather, they served as our cultural guides instead of the reverse, and made our anthropological learning that much more productive. For these kinds of services we could only be grateful.

V. Summary

Throughout our discussion of anthropology's place in the medical curriculum, and the design of a relevant curricular offering, we have seen a simple principle emerge, which can serve as a pedagogical guide for any such efforts. The more the anthropologist retires into abstractions and relies on general concepts to put his discipline across, the less relevant will it be for medical students. The more he is able to particularize his knowledge to the time and place in which his students live and apply it to the concrete problems of medical practice which the students face, or will face, the more relevant will his contribution become.

We saw this principle first in the problem of selecting a textbook. The peculiarities of the image of anthropology in Mexico made textbooks by foreign authors inappropriate and irrelevant, and led to distantiation from the discipline. The antidote was to make the course more Mexican by including supplementary readings and discussion in class in lieu of the absence of an appropriate text by a Mexican anthropologist. Even works by other Latin Americans, or foreign anthropologists working in Mexico were not really enough. Until we dealt with the problems and preoccupations which have been discovered and studied by Mexican anthropologists, our course did not really fit into what our students expected to learn.

At the same time we discovered that our course had to fit into the expectations of the social groups who controlled the University at which we taught, even when these expectations were in themselves internally contradictory. The problem had to be resolved in the Mexican way by finding the lowest common denominator of agreed expectations, and stay within this limit. Any other course would have awakened crucial antagonisms which would.

probably have brusquely shortened our tenure.

Next, we found that our course offering had to be made broadly consistent with the goals and methods of the other segments of the medical curriculum. Any other course would become subtly antagonistic to the overall professional objectives which the curriculum sought to put across. The more we accepted our function as part of a professional selection process, the more the students respected the discipline being presented, and made the requisite effort to learn it whether they understood why it was there and what it could contribute or not..

Finally, the more we were able to project an active role for the anthropologist, akin to that of the clinician working with real patients, the easier it was for the medical students to accept the validity and practical value of the principles we were trying to put across. This was discovered first in connection with audio-visual materials which vicariously put the medical student in the field alongside the anthropologist, and later in real field situations in which the anthropologist could accompany the student and learn along with him. Such experiences show better than any others what the medical students "needed to know" about anthropology, and begin to suggest what the anthropologist might ultimately be able to learn from being in the medical setting. At this point the anthropologist's teaching responsibilities in the medical faculty become a doorway opening out into the community at large, and his knowledge of the medical education setting a guide to assimilating new and different information about that community context. The medical faculty can thus be seen against the broader backdrop of the social and cultural world of which it is but one of many concrete institutional expressions.

Our analysis so far stops short, however, of establishing general and necessary connections which would make anthropology so relevant as to be essential. For this kind of relevance an analysis of pedagogical alternatives is not enough. We must turn from the general context to specific problems which the medical student and the profession as a whole must deal with in order to make that kind of connection. Our brief look at community medicine in the educational context provides some valuable clues as to what should be explored further, however, and in the succeeding chapters we must take up in greater detail what the anthropologist can learn in the community which might be of practical use to the medical professional, and which he or she would probably not perceive from his strictly professional vantage point. We shall take this question up first in the context of rural community medicine, and later in the urban context, returning full circle once again to the poor urban colonias to which our discussion of the Fieldwork programme has now introduced us.

CHAPTER 5

THE TARAHUMARA PROJECT:
AN EXPERIMENT IN MEDICAL ANTHROPOLOGICAL FIELD TEACHING

Tarahumara Herbs

The Tarahumara Indians have come down,
sign of a bad year
and a poor harvest in the mountains.

Naked and tanned,
hard in their daubed lustrous skins,
blackened with wind and sun, they enliven
the streets of Chihuahua,
slow and suspicious,
all the springs of fear coiled,
like meek panthers.

Naked and tanned,
wild denizens of the snow,
they - for they thee and thou -
always answer thus the inevitable question:
"And is thy face not cold?"

A bad year in the mountains
when the heavy thaw of the peaks
drains down to the villages the drove
of human beasts, their bundles on their backs.

The people, seeing them, experience
that so magnanimous antipathy
for beauty unlike that to which they are used.

Into Catholics
by the New Spain missionaries they were turned
- these lion-hearted lambs.
And, without bread or wine,
they celebrate the Christian ceremony
with their chicha beer and their pinole
which is a powder of universal flavour.

They drink spirits of maize and peyotl,
herb of portents,
symphony of positive esthetics
whereby into colours forms are changed;
and ample metaphysical ebriety
consoles them for their having to tread the earth,
which is, all said and done,
the common affliction of all humankind.

The finest Marathon runners in the world,
nourished on the bitter flesh of deer,
they will be the first with the triumphant news
the day we leap the wall of the
five senses.

Sometimes they bring gold from their hidden mines
and all the livelong day they break the lumps,
squatting in the street,
exposed to the urbane envy of the whites.
Today they bring only herbs in their bundles,
herbs of healing they trade for a few nickels:
mint and cuscus and birthroot
that relieve unruly innards,
not to mention mouse-ear
for the evil known as "bile";
sumac and chuchupaste and hellebore
that restore the blood;
pinesap for contusions
and the herb that counters marsh fevers,
and viper's grass that is a cure for colds;
canna seeds strung in necklaces,
so efficacious in the case of spells;
and dragons blood that tightens the gums
and binds fast the roots of loose teeth.

(Our Francisco Hernandez
- the Mexican Pliny of the Cinquecento -
acquired no fewer than one thousand two hundred
magic plants of the Indian pharmacopoeia.
Don Philip the Second,
though not a great botanist,
contrived to spend twenty thousand ducats
in order that this unique herbarium
might disappear beneath neglect and dust!
For we possess the Reverand Father Moxo's
assurance that this was not due to the fire
that in the seventeenth century occurred
in the Palace of the Escurial.)

With the silent patience of the ant
the Indians go gathering their herbs
in heaps upon the ground -
perfect in their natural natural science.

Alfonso Reyes
Tarahumara Herbs (1934)

(translated by Samuel Beckett)

I. Anthropology and Rural Medicine.

One of the great challenges facing the Mexican medical profession, and a continual preoccupation of the Mexican government since the Revolution, has been the problem of providing adequate health care for the country's rural population. Mexico's most serious deficiencies in the delivery of health care do not occur in the relatively well-served urban centres such as Monterrey, many of which have in fact become professionally saturated, but in the rural areas where approximately 45% of the country' population still lives. Here fully trained doctors are scarce, and in some areas - the most remote and inhospitable ones - totally absent. This professional mal-distribution has long been recognized by Mexican public health specialists and responsible government officials, and has received quasi-legal recognition in the government's requirement of one year of "social service" by all Mexican medical graduates before their professional title is officially recognized. A significant part of this pool of conscripted medical manpower is directed toward the under-served rural areas, but although the program has been in operation for over thirty years, it has had only a marginal effect over the larger problem of mal-distribution. The program as it operates today is most characterized by the numerous ways available for avoiding such hardship duty. The majority of Mexican doctors, despite the substantial financial incentives offered, continue to regard rural medical practice as a form of penance which they immediately abandon after performing their "social service".

Nor is Mexico's problem of providing rural health care particularly unique. Rather, the problem of re-distributing doctors from urban to rural

areas seems to be common to nearly all the countries of Latin America to a greater or lesser degree. We have also seen in Chapter 1 that the decline of rural family practice in the United States was one of the factors which prompted innovative new programs such as that of the University of Kentucky which consciously sought to arrest this development. Nevertheless, recent statistics tend to confirm that these programs have had only very limited success, and that rural areas continue to be underserved. The only Latin American country which seems to have successfully shifted its medical professionals from the city to the country so far has been Cuba. Danielson (1975) shows that the key factor which triggered this change was a dramatic re-organization of the University of Havana Medical School in 1963, which changed the type of student entering the profession. This alerts us immediately to the institutional area within the professional milieu which constitutes the bottleneck that works to the detriment of the rural practitioner. It is the enculturation in the medical school which establishes the first link in the vicious circle, and only the ideological zeal of the socialist revolution which offered non-material political rewards for those who took up rural work, and gave open preference to medical school candidates from rural backgrounds cut through the circle.

For better or worse, the ideological zeal of the Mexican Revolution as reflected in the social service program has been incapable of generating that kind of sacrificial enthusiasm. Mexican medical school graduates, not just at the University of Monterrey but throughout the country, continue to be drawn almost exclusively from the better-educated strata of the urban areas, and medical students from genuinely rural backgrounds are rare indeed. When these students graduate, they naturally tend to gravitate to

the urban centres, and the vicious circle continues. The only way the rural family can obtain full medical service is by moving to the city too, and numerous studies have identified this as one of the factors which has promoted rural-urban migration.

Discussions of this situation with the medical students clarified to a great extent what they perceived as the most negative features of rural practice which influenced their choice. These features took the form of stock objections which were given greater or lesser weight according to the taste of the individual.

First, the genuinely hard living conditions, especially in terms of climate, food, and sanitary conditions were cited. Medical students are not routinely selected for their career on the basis of personal physical fitness, and memories (or fantasies) of bone-jarring rides over dirt roads, poor food, and personal discomfort seem always to remain especially vivid.

Second, the impoverished condition of the rural population made it almost impossible to generate a cash income in any way comparable to that of the urban practitioner. The rural doctor will automatically be forced to partake in the relative poverty of the rural zone as a whole if he chooses to work there, even though he may be among the richest and best paid professionals within his own rural milieu.

Another objection frequently mentioned was the lack of professional stimulation which results from geographic isolation. Medicine is a profession in which the successful practitioner must continually expand his knowledge and remain abreast of new developments and techniques as they become available. Work in rural areas was seen as depriving the doctor of contacts necessary to carry on this learning, and the longer he remains out

of contact, the more acute the rural practitioner's sense of inferiority is likely to be (Cf. Brown 1963).

A related objection was the lack of facilities with which to practice. The doctor trained in an urban hospital is taught to use medical high technology, and if the instruments he has learned to use are not available, much of his acquired expertise becomes worthless. For this reason it is difficult for the scientific physician to compete successfully with local folk practitioners unless he is willing to start anew and learn almost from scratch a medicine less dependent on high technology. This leap is often frustrating if not impossible to make.

At the root of these problems is a verity of truly anthropological proportions. As we have already seen, the differences between the medical students and the inhabitants of poor urban colonias were not really cultural ones, but rather reflections of class differences within the same culture. Oscar Lewis' "culture of poverty" has been subjected to scathing criticism as a model of these urban differences, and has ended up convincing very few. Redfield's rural-urban continuum, on the other hand, also developed on the basis of fieldwork in Mexico seems to have weathered the test of time better. In Mexico - and perhaps in other parts of the world as well - the greatest cultural differences within the society appear to be between the rural and urban segments, whereas cultural differences at the urban pole seem to be nearly always traceable to differences in income levels or proximity to rural origins. These rural-urban cultural differences are accentuated still further in the case of Mexico by the preservation of indigenous cultural isolates in many of the most remote rural areas. In order for the scientific doctor to penetrate these rural isolates, he must

in effect become an anthropologist as well, and learn to practice what can rightly be called "anthropological medicine" - an amalgam of cultural knowledge and medical expertise which equips him to make the necessary transformations.

These reflections help us to understand why the field situations available in the Monterrey area were still not much of a test of the anthropological paradigm of fieldwork in its usual form, and suggested a special kind of relevance of anthropological knowledge in confronting the challenge of rural medicine, especially in areas with substantial indigenous populations. Obviously not very many medical students could be expected to accept this challenge, but for those few who did, would not anthropological knowledge have a special relevance far beyond that we observed in the urban context? Was it not even possible that the anthropologist could help to break the vicious circle which had frustrated the growth of rural medical practice, and thus help solve this perplexing problem? Was the rural indigenous community not in fact where anthropology could be most broadly and generally relevant to the medical practitioner? It was ruminations such as this which led us to launch into a still more ambitious attempt to search out mutual relevances between anthropology and medical practice in a setting far removed from Monterrey.

The end product of our thought, conversation, and planning along these lines was an experimental course in "Fieldwork" offered under University auspices during the summer of 1974. After several visits and consultations, arrangements were made for two groups of three students each to undertake a combination of research and service activities at the Clinica San Carlos, Norogachic, Chihuahua, a Catholic mission hospital in the Tarahumara region

of the southern Chihuahua sierra. For the participating students the University agreed to provide one semester's credit in the regular Fieldwork course. The Mission assisted by providing room and board for the students at nominal cost, and the benefit of their ample experience as orientation and guidance in the local community. Our own role was to select and train the participants, design and coordinate their field activities, and teach them in the process whatever we could about anthropology. This more "anthropological" field project seemed like the next logical step in exploring the potential relevance of anthropology to medical training.

II. Norogachic: Ethnography of the Field Community.

The community of Norogachic is located very near the crest of the Sierra Madre Occidental at an approximate elevation of 2100 m. (7200 feet) in the southwestern corner of the state of Chihuahua. This region, also known geographically as the Tarahumara, is characterized by a contrasting topography of upland meadows and pine forests bisected by broad valleys and deep canyons (Cf. Gajdusek 1954). Much of the land is too irregular to be used for agriculture. Only the wider, more level parts of the valleys permit cultivation and hence permanent settlements. Norogachic, which means "place of the round hills" in the Tarahumara language, occupies one such valley basin - about 3-4 miles wide and flanked by mesa-like hills (cerros) - on a trjbutary of the Rio Urique, which ultimately flows into the magnificent Barranca del Cobre and on to the Pacific Ocean. In this valley the Jesuits established a mission church in the late 17th century to convert the surrounding Tarahumaras to Christianity, and this mission establishment is the first permanent settlement recorded at this location.

The ecological conditions of the region impose severe limits on the practice of agriculture, however, and coupled with the broken terrain and the traditional Tarahumara pattern of semi-sedentary transhumance has inhibited significant nucleation. Norogachic has always been more a cluster of farms than a true town. Population densities have remained low, and geographical isolation and lack of transportation links has prevented the development of commercial links with the rest of Mexico. Most families continue to depend on their own small plots for subsistence, and if any one of the many adverse climatic conditions (drought, early freezes, and flash flooding - to mention only the most important) reduces or wipes out their harvest, starvation becomes an imminent threat. The necessity of protecting against such disasters has fostered hte pattern of dispersed settlement, so that farmers can hedge their risks and make use of secondary food resources in case of emergency. In this and many other respects the Norogachic area is typical of the "refuge zones" (regiones de refugio) which Aguirre Beltran (1967) has so aptly identified as the characteristic habitat of the indigenous groups of modern Mexico.

The original inhabitants of the entire Tarahumara region were an indigenous group also known in the anthropological literature as the Tarahumara. (The name of the group in their own language is Raramuri, which means the people who race - referring to their famous feats as long-distance runners, but we shall follow traditional anthropological usage here (for the sake of conformity). This group belonging to the Uto-Aztecan linguistic family and closely related to other nearby indigenous groups such as the Pima and Yaquis to the north and the Tepehuanes and Huicholes to the south, was first encountered by the Spaniards when the rich mines of Santa Barbara

and Parral were opened in the late 16th century. These locations are far to the east of the present territory occupied by the Tarahumara, and the bloody history of mining enslavement, culminating in two full-scale uprisings in 1646 and 1684 (Huerta and Palacios: 317-33), explains much of the displacement. Despite stubborn resistance the Tarahumara have been slowly but steadily forced from the more fertile lower valleys into their mountain redoubts throughout the four centuries of European contact. The collapse of the Jesuit mission system following their expulsion in 1763, and the unstable political conditions within the young Mexican Republic provided a very significant hiatus to this invasion. Since the beginning of this century, however, and particularly in the last four decades, rapid population growth throughout Mexico has renewed the pressure, and resulted in further loss of land. The present-day Tarahumara, numbering about 50,000, are centred around a core area where they maintain a distinctive life-style which contains elements of both indigenous and Hispanic origin. The modern-day Tarahumara exhibit an acculturative continuum which ranges from non-Christianized ("Gentile") Tarahumara in the most remote parts of the core area to completely mestizoized Tarahumara, such as those living mear the railroad centres such as Creel along the Chihuahua-Pacific Railroad, which skirts the Tarahumara region to the north. Within this acculturative spectrum Norogachic falls very near the mid-point, since it is a completely mestizo settlement, but is at the edge of the core area. The process of regional economic development is now accelerating rapidly, and there is little doubt that the entire group will soon experience more intensive acculturation than ever before. This can be best appreciated by examining ethnic relations in the Norogachic area in a longer historical

perspective.

Although the mission at Norogachic was one of the first founded, the isolated location deep in the high sierra did not promote further European colonization, and the explusion of the missionaries left a profound vacuum in which only the slightest traces of European influence survived. Lumholtz, who visited Norogachic in the 1890's just before the mission system was re-opened, met a half-blood lay priest tending a bat-infested shell of the mission church there, and states that at that time only about 300 Mexicans were living in the entire municipio. Since then, the revitalization of the mission has created an island of continuous mestizo settlement around the mission complex covering most of the more level sections of the nearby valley. Linguistic data to be discussed later in this chapter suggests that this change occurred about 50 years ago, when the mission first established a Tarahumara residential school at Norogachic. Yet, beyond the immediate confines of the valley basin, most of the surrounding valleys and mesas remain almost exclusively Tarahumara, and the ejido of Norogachic which takes in this area is approximately 85% Tarahumara. Perhaps in part due to the protective influence of the mission itself, these Tarahumara have so far been able to defend their lands successfully from invasion. Relations between the Tarahumara and the mestizos are sometimes tense, and the amount of cultural contact between the two ethnic groups is consciously minimized by both, but the situation is relatively stable and has not involved violence in recent years (in contrast to other indigenous areas of Oxaca and Chiapas).

As can be appreciated in even this brief sketch, the presence of the Mission in Norogachic has profoundly affected the ethnic relations within

the community. In many ways, the Mission might be considered a "third-culture" within the community with special characteristics and customs different from both mestizo and Tarahumara, one of whose social functions is to serve as intermediary between the other two. Church and trade are the only two social situations in which Tarahumara and mestizos habitually meet, and of the two only before the priest does the Tarahumara enter into communication with the larger non-Tarahumara world in his own language. The Mission has fostered this mediating role for itself by incorporating Tarahumara religious symbols into Catholic practices, and by providing religious support and sanction for the traditional indigenous political authorities derived from the original missionization period three centuries ago (Cf. Fried 1953). All of the Tarahumara in the Norogachic area are "Christianized", although some mestizo Catholics still consider the acceptance of their indigenous customs within the Church as "paganism". Catholic Christianity provides a permanent institutional and cultural link between the two ethnic groups, and has thus acquired a self-reinforcing cultural tradition of its own because of this relationship. In many senses Norogachic can be considered a tri-cultural community rather than a bi-cultural one, with the religious forming the third element.

The Mission's policy toward the Tarahumara has not always followed the present guidelines, and must be viewed over a longer time period in order to be fully understood. Three distinct phases can be detected since the mission's re-opening at the beginning of this century, whose differences can be most clearly signaled in the area of indigenous education. In the initial period the Mission sought to bring the Tarahumara into the non-indigenous orbit (Cf. Ocampo 1950). Residential schools were constructed in

various parts of the sierra (the Norogachic internado was built in 1923) to teach the young Tarahumara the Catholic faith, the Spanish language, and the crafts of town life. This phase ended in the 1950's with the realization that the residential schools were contributing to cultural anomie and the disintegration of basic Tarahumara social institutions, such as the family. The urbanization of the Tarahumara had been only minimal, mainly because it led to their incorporation into the most infamous levels of the growing mestizo population. This realization prompted a radical revision of the educational policy. A radio school was established which beamed classes from a single central station in Sisoguichic, Chih. to many small schools located in the isolated Tarahumara rancherias. Here instruction was charged to bi-lingual Tarahumara teachers who received special training but continued to live in the rancherias. Although the course materials were mainly derived from the standard curriculum of the Mexican public educational system, a serious attempt was made to make their content more congruent with the Tarahumara's real needs (Cf. Schmelkes 1972 for an evaluation of the radio school program). This change eliminated some of the most conspicuous assimilationist aspects of the earlier education program, but it did not arrest the basic acculturative trend which proceeded from forces within the larger Mexican national society. As a result at the time of our fieldwork the Mission was entering a new third phase which involved a still closer, more intimate identification with the Tarahumara. The exact form this relationship would take was still to be determined. The radio school had been closed, but the new system to replace it was still not fully in operation. The rapid changes foreseen with the construction of all-weather highways, development of commercial agriculture

and lumbering, and the expansion of goverment schools and services made it difficult to know exactly what role the Tarahumara might play in the future development of their own homeland, and equally difficult for their teachers to know what they should teach. On the horns of this dilemma the Church seems to be seeking a more humanistic projection aimed at preserving basic human values in the face of circumstances in which they will almost inevitably be tested. This seems to be the shape of the emerging third phase so far.

This increasingly humanistic projection of the Mission is nowhere better exemplified than in its medical activities. Beginning with the humanitarian concern of the missionary priests to bring medicine to the ailing when they visited the remote rancherias, the medical service aspect of the Mission took concrete form in the 1950's with the establishment of a hospital in Sisoguichic by lay Catholic doctors. From here an increasingly far-flung and complex network of clinics, dispensaries and hospitals has sprung into existence which now extends throughout most of the mission system, and provides medical attention in many areas of the sierra where no other medical services are available. In most cases these facilities are operated by orders of Catholic nuns, who provide nursing and first aid under the direction of doctors in Sisoguichic by means of the Mission's radio-telephone. More serious cases can sometimes by evacuated on Mission flights to Sisoguichic for treatment, and periodic visits by staff doctors from the hospital and lay volunteers provide at least occasional diagnostic services.

Among the various medical installations operated by the Tarahumara Mission, the Clinica San Carlos in Norogachic is certainly one of the larger and more important. It was founded in 1959 by an order of Austrian

nuns, who continue to operate the clinic administratively from their headquarters in Vienna. The present building occupied by the Clinic is an impressive three-story structure built in the mid-1960's largely from donations by the German community in Mexico City. It adjoins the residential school, and is equipped with its own electric generating plant and water supply. The hospital contains three wards with about 40 beds in all, a small but well-equipped surgical theatre, laboratory, X-ray room fully equipped, and a pharmacy-dispensary, as well as the chapel and living quarters of the nuns. The hospital's equipment is almost all of the latest German manufacture, and is kept in spotless order by the nuns even when they did not make use of it.

Nor had the lack of technically trained personnel prevented the nuns from developing an ample range of medical services. The Clinica San Carlos provided the only medical service available within a 20-30 km. radius of Norogachic, an area with a resident population of 6-8,000. On the basis of simple nursing skills and a great deal of practical experience, the nuns were attending an average of about 800 outpatient consultations/month at the time of our fieldwork, and the hospital's beds were almost constantly filled with chronic and acutely ill patients. The mestizos who lived around the mission made extensive use of the Clinica, but an informal review of consultation records showed that fully half of the patients attended were Tarahumara. For many Tarahumara the Clinica's kitchen offered an infusion of health which visitors were never refused. Since the Tarahumara patients often arrived on foot (1-2 days walk is the best Tarahumara measure of the Clinica's service range) and remained for some time in the hospital to convalesce, the nuns had also developed a very

flexible policy of allowing family members to remain with the ailing patient. Although not all the nuns could speak Tarahumara, interpreters were always available, and Tarahumara patients were never refused attention.

Yet, for all its manifest achievements, the Clinica operated with evident limitations in its service capabilities, and had been unable to alter fundamentally the health conditions of the population. Lacking a full-time doctor, the nuns' attention was largely limited to practical nursing treatments undertaken with a great deal of accumulated common sense. Most of the sophisticated diagnostic equipment went unused; even X-rays had to be sent elsewhere for interpretation. Although the Clinica possessed an ambulance, the nuns were able to use it only infrequently to offer mobile medical care, and many of the more remote Tarahumara rancherias had never been visited. The volunteer doctors who periodically came to offer their services, while well-intentioned, were not always well-informed about Tarahumara norms and customs, and were therefore not as effective as they might have been. (One American doctor we met told us that when Tarahumara patients failed to arrive at the Clinica in the numbers he expected, he went from house to house looking for patients and was surprised to find no one at home. As Fried (1961) explains, his patients would all have fled to the nearby woods at the sight of such a strange intruder.) The Christian religious context of the Clinica also inhibited contact with Tarahumara native healers, and tended to create competition rather than cooperation with them. Finally, the fact that the nuns were all women prevented them from attending certain "male" health problems, such as venereal disease, which were wide-spread and of considerable concern to the community.

Over-riding all these limitations were the grinding poverty, malnutrition, and hard living conditions in which the majority of the sierra population (Tarahumara and mextizo alike) lived. Against these afflictions the Clinica could offer only temporary refuge, and it is no wonder, then, that among the Tarahumara the Clinica was known principally as the place one came to die.

A preliminary visit in April, 1974 convinced us that Norogachic fulfilled nearly all the conditions necessary for a fair trial of the relevance of anthropology for attacking the problems of rural-medical care. Nearly all of the standard objections put forward by the students were applicable to its situation with the exception of the lack of facilities. Yet the ironic fact that the high technology available in the Clinica, which represented a substantial investment, went largely unused for the lack of a doctor who knew how to put it to work threw the other objections into still higher relief.

Most importantly, Norogachic fulfilled many more of the conditions of anthropological fieldwork than did work in Monterrey's "misery belt". The cultural differences between mextizos and Tarahumara were highly visible, and in many cases were frankly dichotomous. This guaranteed the students who would participate a more truly cross-cultural experience than we had been able to observe in Monterrey. Moreover, a fairly abundant literature on the Tarahumara culture was available which would allow us to put forward anthropological perspectives on the situation, and find out what parts of this anthropological knowledge held practical relevance for overcoming the cultural barriers the students would confront.

It must be acknowledged, however, that certain features of the

anthropological paradigm of fieldwork could not be met, lest we identify the Fieldwork experiment too closely with anthropological fieldwork. The brief two-week stays arranged for the students scarcely approached in duration the year or more usually expected of the anthropologist in the field, but due to the Medical School calendar a longer stay was impossible. Similarly, the possibility that the students could achieve any degree of fluency in the Tarahumara language in such a short period seemed remote, and we resigned ourselves to the fact that their experience would be limited to bi-lingual Tarahumara, and consultations working through interpreters. The close identification of the group with the Mission also represented something of a compromise of the institutional independence usually sought by the anthropologist in his field community, but it was a compromise we felt was essential in order to establish rapid contact and rapport with the Tarahumara in the short time available. Each of these factors limited the anthropological dimension of the field experience, but none, we felt, sacrificed the basic essential of a cross-cultural contact. Our previous fieldwork in the Arctic had convinced us that short field stays, if well planned, could be very productive; none of the anthropologists who have worked so far in the Tarahumara have spoken the language; and the Mission liason, while not always acknowledged, has been widely used by anthropologists before both in the Tarahumara and elsewhere for much the same reasons as applied in our case. Whatever differences these factors represented from traditional anthropological fieldwork could, we felt, be controlled in subsequent analysis. In this sense the experimental course could be structured "like" fieldwork, without necessarily meeting all the conditions of the classical paradigm.

We must also admit that we were not completely aware at the start of the Tarahumara project that it was designed to confront the student-participants with the option of rural medical work. For us it was simply an anthropological teaching experiment, and we went to great pains before, during, and after the field stay to assure the students that we were not trying to sell them on the idea of working in the Clinica, or in the Tarahumara either. We made it clear that they were under no obligation either to us or to the Mission beyond the programmed period. Our interest in the project was strictly anthropological. Yet, from the point of view of the students, the very choice of the locale implicitly put the question to them: why not work in a rural area like the Tarahumara? Is there no one interested in filling this gaping and tragic gap? Not even medical students who could benefit from the best anthropological orientation we could give them, and had accepted the conditions which the field course imposed? It was in this sense that Norogachic was a most ideal site, and for this reason the appropriate arrangements with the Mission were confirmed, and we turned to the more mundane task of selecting and orienting the potential student participants.

III. Orientation to the Field.

We had assumed all along in the early stages of planning that an orientation course prior to the field stay was extremely important to the success of the Tarahumara project. Such a course would allow us to impart the necessary anthropological training, and would act as a natural filter of the potential participants leaving only those with the greatest motivation at the end. Approximately two months before the end of the

spring semester, therefore, we formed a group of students within the regular Social Anthropology course made of of those students who had initially expressed interest in the project, and organized a special section in which Tarahumara ethnography could be studied more intensively. Our assumption was that such advance exposure to the ethnographic literature would help the students to adapt more quickly to the new surroundings, avoid costly social blunders which might jeopardize their acceptance, and thus help them to function more competently as medical professionals. About fifteen students opted to follow all or part of this course, and we expected that the final participant group would be drawn from their number.

The Orientation course was developed principally around the study of John Kennedy's excellent ethnography of a Gentile Tarahumara rancheria, Inapuchio, located about 30 km. west of Norogachic. Kennedy's work recommended itself for our purpose because it was recent (1970) and available in Spanish. It was also short (about 300 pages), clearly written, including several sections on key Tarahumara cultural traits such as the tesguino complex not discussed in other works, and developed a more modern cultural ecological focus, in contrast to a number of works which used other less contemporary theoretical frameworks. The students were expected to read the entire book, and key sections were to be discussed in the once-weekly two hour class meeting. Besides Kennedy, a number of other articles (Pennington 1963: 177-94 on medicinal plants; Champion 1955 on acculturation; and Fried (1961) on inter-personal relations), all available only in English, were summarized verbally in class. While this literature left some obvious gaps (indigenous religious concepts, for example), it seemed on the whole a useful package for orienting the students. Copies of Kennedy

were ordered and purchased by all the students; a folder with the articles was left in the medical school library, and the special course began.

For a number of reasons, however, the orientation course did not turn out even remotely as planned. First off, the students found the readings pretty dull stuff, and it was difficult to pressure them into reading even a few chapters of Inapuchic, let alone the whole book. Most of the time in the weekly class was spent in discussing practical and personal details; who could go when, whether parents would give permission, how much it would cost, etc. Amid this barrage of organizational details, the ethnographic literature simply "got lost". Information about Norogachic, and slides from our preliminary visit during Holy Week 1974, did little to focus attention on Tarahumara culture either, serving rather to put the students' personal questions in a more concrete setting. By the end of the course we were using the class more as an opportunity to get to know the prospective participants individually, and had substantially abandoned the ethnographic approach to orientation as unrealizable. It is doubtful whether more than a handful of the students ever even opened Kennedy's book, and the articles slumbered in their folder in the library until we collected them before leaving in June. The utter failure of the orientation class is perhaps best appreciated by noting that of the six students who ultimately participated, not one attended even a single session of the orientation, which is another way of saying that all those who did follow the course ultimately decided not to go. The orientation course was, in effect, a waste of time.

This result was surprising, and called into question some assumptions we had been making about anthropological relevance. After all, the idea of

an orientation course was not original; we have already seen in Chapter 1 that the Yale-Navaho program used a similar technique with apparent success. In analyzing the failure of our course, a number of factors operating at different levels must be noted, most of which were peculiar to the socio-cultural milieu of the Mexican students and were not given sufficient weight in planning the project.

First of all, on the pedagogical level we have already noted in the previous chapter how unpopular the textbook was, and put forward the view that this was part of a profound antipathy for reading in general which was characteristic of most of the students. In designing the orientation course around readings, then, we were taking a calculated risk, hoping that the students would manifest their greater motivation by overcoming this general dislike. This turned out not to be the case.

We must also admit that at the professional level the ethnographic literature which we sought to use suffered from several limitations, and our selection within it may have not been the most judicious. The ethnographic literature available on the Tarahumara spans a period of some 80 years, and includes works by a number of respected figures within the discipline. While not as extensive as that on some Mexican indigenous groups (the Highland Maya of Chiapas, for example), it includes at least three major ethnographies (Lumholtz 1902; Bennett & Zingg 1935; and Pennington 1963) besides the one we used which systematically cover nearly all aspects of Tarahumara culture. Two other full length ethnographies by Mexican authors (Basauri 1929 and Plancarte 1954) were in existence, but exceedingly rare and unavailable for consultation or class use. In addition, several more specialized investigations (Fried 1953, 1961; Champion 1955;

Garcia Manzanedo 1963; Kennedy 1963, 1969, 1970b; Passin 1942; Paredes et al. 1970) describe and analyze specific aspects of Tarahumara life, often relating them to broader theoretical issues. The problem with this literature was thus neither its breadth nor its depth, but rather our selection within it, and a tendency on our part to interpret "ethnography" on too limited terms. We should hasten to add that our own reading of this literature proved very helpful, and even illuminated certain practical decisions which had to be made in the course of fieldwork. Our informational needs as a field anthropologist were not the same as those of the students, however, and the orientation course did not fully take this fact into account.

Perhaps the most obvious failure in this respect was the overly-hasty elimination of sources by Mexican authors. We already noted this difficulty in the selection of readings for the regular anthropology courses, and the same lesson could be applied to the orientation course. Whatever their deficiencies, we suspect that a more "Mexican" set of readings would have given better results. By imposing a reading list made up of works by North American authors, we added an unnecessary complication.

Another collateral deficiency was the lack of material which addressed itself to health and illness, and presented these problems from the point of view of the doctor. With only one exception (the material on medicinal plants) none of these works touched medical anthropology more than tangentially, and this made their transformation into tools for "anthropological medicine" that much more difficult. The students had a hard time perceiving how these ethnographic details could help them in the field, and had to see the Tarahumara almost exclusively through the eyes of

anthropologists who were addressing other concerns. As a result their fundamental questions about rural medical practice, the ones which were uppermost in their minds, went unaddressed and answered. (Irigoyen's (1974) account of his year of social service in the Tarahumara, which would have responded to this need, was not yet published.).

We also failed to include the only two works which make direct mention of Norogachic on our reading list, primarily because they were not by anthropologists. We refer to the classic travelogue Unknown Mexico (1902) by the Norwegian zoologist Carl Lumholtz, and the various essays on the Tarahumara by the French surrealist poet and dramatist Antonin Artaud, written after an ill-fated visit in 1936. Both of these works were available in Spanish translations, and offered intimate, if non-theoretical, comments about the Tarahumara in general, and Norogachic in particular. By assuming that all of our readings should be scientific in character, we overlooked the value these authors might have in stimulating interest and in communicating the "feel" of the place. A closer look reveals, however, that they are rich in ethnographic details, even though their authors are not ethnographers.

Of the two Lumholtz is obviously the more scientific. His expeditions to the Tarahumara in the 1890's uncovered botanical and zoological information of considerable value, yet it is the ethnological information which he collected peripherally to his main research which constitutes his principal claim to fame today. Lumholtz spent over two years in the Sierra Madre Occidental, and provides first-hand observations on all the indigenous groups of the region. Although he worked exclusively through interpreters, it is safe to say that no ethnographer before or since him

has equaled his breadth of experience in the Tarahumara milieu. His writings, however, obviously fit into the genre of adventure books so popular in the late 19th century, and contains most of the stereotypes one would expect in a work of this type. These biases are worn so lightly in his narration, however, that the modern reader has very little difficulty in recognizing them and making the appropriate adjustments. Here, for example, is how he describes his attempts to photograph some Tarahumara "belles" in Norogachic in 1890:

> The padre (whom Lumholtz earlier describes as "a very social, nice, energetic-looking person with a tinge of the 'red man' in his veins") good-natured to the point of officiousness, helped me to get Indians to be photographed. He also would insist upon arranging them before the camera. His efforts, however, were directed more toward achieving artistic triumph than scientific truth, and he wanted, for instance, to decorate the Indians with peacock feathers. He yielded, however, to my suggestion that turkey feathers would be more appropriate and straightway ordered one of his turkeys to be caught and deprived of some of its tail feathers. The only way in which I could show my appreciation of the disinterested kindness of the family was by photographing them, too. It was a new sensation to them, and the ladies asked to have it done the next day, as they wanted to arrange their hair and prepare themselves properly. (Ibid.: 204)

The modernity of this account is more than mere literary artifice, as we learned in attempting to photograph the townspeople of Norogachic in 1974. The camera was almost as much a novelty now as then, and our anthropologically-motivated attempts at shooting real life were just as convincingly frustrated. Tastes in portraiture had changed in the intervening years. The new ideal was a picture atop one's best mount, a pose which we were obligated socically to take on several occasions. Another aspect of Lumholtz's modernity was his participation in the peyote rituals of the Tarahumara, an aspect which parallels that of Artaud.

The works of Artaud (principally short magazine articles and

retrospective essays) derive from a visit he made to the Tarahumara in the fall of 1936, some forty years later. He spent the better part of his time in and around Norogachic, using it as a base for excursions into other more remote parts of the sierra. His principal objective was to observe various indigenous rituals, and culminated in his partaking of peyote with the "native priests", as he calls them. This peyote experience is described in detail in his "Voyage to the Country of the Tarahumara", and was sufficiently traumatic for his sensitive, poetic nature to have contributed quite directly to his psychiatric hospitalization some twelve years later. Under these circumstances one might expect that his observations on the Tarahumara would be permanently jaundiced by his mental state and of little or no value to the anthropologist. This is the view of his ethnographic contributions put forward by the critic Luis Mario Schneider, his most recent translator into Spanish:

> I deduce that the better part of Artaud's associations and deductions about the Tarahumara are a synthesis of sensitive proofs of intellectual knowledge known before the fact. (1975: 70)

This judgment seems true, by and large; Artaud's account is indeed replete with surrealistic literary illusions. Platonic Atlanteans and figures from the paintings of Hieronymus Bosch roam the streets of Norogachic in Artaud's visionary prose. Still, Artaud's more lucid passages offer much of value, and a condemnation seems out of place, a little like throwing out the baby with the bath water.

Consider, for example, the following passage in which Artaud describes his problems in obtaining official permission in the peyote rituals.

> The friendliness shown me by the young Tarahumara (his informant contact)..was already a guarantee that certain doors would be opened. Moreover, what he had said about the help that was expected from me made me think that my admission to the Rites of Ciguri depended partly on what I could do to overcome the resistance the Tarahumara were encountering from the mestizo government of Mexico to the observance of their Rites. Although mestizo, this government is pro-Indian because those who hold office have more red blood than white. But the distribution is not proportionate, and goverment representatives in the mountains are almost wholly mixed blood. And they regard the beliefs of the Old Mexicans as dangerous. The present government of Mexico has founded native schools in the mountains where Indian children are given an instruction patterned after that of the French elementary schools, and the head of the Department of Public Education of Mexico, from whom the French ambassador had obtained a permit for me, gave me lodgings in the native school of the Tarahumara. Thus I had made the acquaintance of the director of this school, who was also in charge of discipline through the Tarahumara territory, and who had under him a division of cavalry. Although no steps had yet been taken in the matter, I knew the official intention was to prohibit the next Peyote celebration, which was to take place in a few days... On my arrival in the mountains I found the Tarahumara desperate because of the recent destruction of a field of Peyote by the soldier of Mexico City.
>
> I had a long conversation on this subject with the director of the native school where I stayed. This conversation was heated, difficult, and sometimes repugnant. The mestizo director of the Tarahumara native school was much more preoccupied with his sex, which enabled him each night to possess the school-mistress, a mestizo like himself, than with the culture or religion. But the government of Mexico had based its program on a return to Indian culture and in spite of everything the man was reluctant to shed Indian blood.
>
> "Ciguri", I told him, "is not a plant, it is a man whom you have castrated by blowing up the Peyote field... The only method is to succeed in winning their hearts. They will never forgive you for this destruction, but you can show them by an opposite action that you are not an enemy of God... You must authorize this Festival at once..
>
> "The trouble is (replied the director) that when they have taken Peyote, they no longer obey us." (1976: 25-28)

There is nothing particularly surrealistic in this account; rather it provides some interesting insights into government policy and inter-ethnic relations in Norogachic at the time. It also reveals Artaud as a better diplomat than many anthropologists, and explains why he ultimately received

permission to participate. Open identification and championship of the Tarahumara cause earned Artaud complete access to the rites from the grateful Tarahumara, and produced the only account of peyote use "from the inside" before Castaneda and the contemporary wave of research in ethnopharmacology and "pyschedelic anthropology". Although Artaud's narrative is more empathic than factual, and his subsequent personal experience quite tragic, this does not make his experience worthless to the anthropologist, or uninteresting to the medical student. Rather, an excessively narrow construction which omits its insights simply leaves us that much poorer and unappreciative, and an inability to discuss its more controversial aspects makes us that much less relevant.

Whether the inclusion of Lumholtz, or Artaud would have altered the reception of Orientation course is open to speculation, of course. What they do point out is that an excessively limited conception of what was appropriately anthropological deprived us of these historical insights into Norogachic, and the Tarahumara culture in general. Medical students are not, after all, planning to be field anthropologists, and there is no need to shield them from writings which are not strictly scientific.

Yet, perhaps the most crippling defect of the Orientation course lies at still a different level, the kind of inter-personal relationships characteristic of the Mexican educational setting in which we were working. By linking the Orientation course to the Social Anthropology class we unwittingly promoted a confusion of roles and objectives. We realized after the fact that many of the students (though certainly not all) who opted for the special section did so in the hope of attracting favourable attention from their teacher and thus improve their chances of passing the

Anthropology course to which it would be accredited. We were, in short, "conned" into thinking that they were especially interested in anthropology, and they hoped this would favorably influence their course grade. (As a matter of fact, none of the students in the special section failed the course, but a number failed other courses, and ultimately left the school.) Our social ignorance in interpreting the students' indications of interest proved almost complete in this instance. As a result the real composition of the participant group came as something of a surprise.

While we had assumed all along that normal communications channels within the University would provide a fair cross-section of potential candidates for the project (it did not), and that the Orientation class would act as a natural filter for selecting the most interested, in fact not a single participant entered the project by this route. Rather, the real basis for selection was the manipulation of networks of personal friendships, through which information was disseminated more rapidly, and firmer commitments could be established than those within the strictly institutional University context. Four of the six participants were personal friends for at least a year prior to going to the Tarahumara, and the other two participants were friends of theirs whom we did not happen to know at the time. The groups might by more honestly described, then, as those among our Mexican student friends who were most curious to know what anthropologists do during the summer. This form of social relationship through friendship ties, known as cuatismo, is a very common, pervasive, and apparently very ancient feature of Mexican society, the word itself deriving from the Nahuatl cuatli, meaning twins. Its importance has been abundantly documented in contexts far removed from that of the field project

(Cf. Lomnitz, Chap. 8, for a discussion of the urban barrio context), so it is not so surprising that it should turn out to be a key element in the selection process. Nevertheless, since it came as a surprise to us, it left us wondering whether we had done something crucially wrong in the Orientation class, and whether the resulting group could be considered in any sense "representative" of the medical students as a whole. Was the field course really a genuine teaching experiment as we had planned, or was it just a summer vacation in the sierra with friends?

Besides being friends and medical students, the participants shared a number of other characteristics which help us with the advantage of hindsight to answer this question, and determine their representativeness. Despite strenuous efforts to recruit women students to the group, the group turned out to be exclusively masculine. We found that our intentions of forming a mixed group clashed diametrically with deep-seated parental attitudes, or rather suspicions, about the propriety of such groups, even under university supervision. All of the potential female candidates - and there were several - ultimately dropped out. As we have noted already, however, medicine is usually classified as a "male" career anyway, and our group was not unrepresentative in that light. None of the students who took part had ever lived for any extended period in a rural area, and five of the six were from the Monterrey urban area. In these respects they mirrored the enrollment of the Faculty at the time quite faithfully, and in respect to their urban origins the Mexican medical profession as a whole. Like other students at the Medical School the participants were from middle, upper-middle, and upper class socio-economic backgrounds, and as far as we could determine their future career plans in medicine were not significantly

different from those of their peers. In these senses we may consider the group to be representative of a large majority of the medical students at the University, and in a more limited sense of Mexican medical students in general.

Although the participants entered the project mainly through friendship ties, the group came from two different contexts within that network, and this in turn divided the project into two distinct phases. The first group were all students who had just finished the anthropology course at the end of their first year of studies. They were not participants in the Orientation course primarily because their prior friendship made such a demonstration of solidarity with the project unnecessary. Their deficiencies in terms of the project were not anthropological, but medical. They had had no significant clinical experience whatsoever, and at that stage of their training a general medical knowledge only slightly more informed than that of the educated laymen. In contrast, the second group was composed of students whom we met first through a Fieldwork class project in a community dispensary. They were all finishing eighth semester, and had been engaged in supervised medical consultation for over a year. They had not come to the orientation course because it did not fit into their clinical work schedule.

These differences in level of medical training, and particularly clinical experience, turned out to be the most influential variable which affected the summer project. Because of this factor, each group necessarily engaged in a different set of activities, and had different experiences of Norogachic as a result. Our original intention had been quite the contrary, but on the positive side, this allowed us to clarify

the effect of different levels of medical preparation on the students' experience, and understand better just why it was so important.

IV. The Field Course: First Group.

It was not until after the group had arrived in Norogachic that it became apparent that a new plan of activities would have to be developed. Although we had always recognized their scant clinical experience as a limitation, we had still hoped that they could find gainful work in the Clinica in some auxiliary capactiy. This was not feasible, however, since most of what they could do the nuns could do too. Besides, the Clinica's in-patient population was at its low point for the year, and there really was no need for extra hands. Nearly everyone in the sierra who could move was involved in spring sowing and weeding. After consultation with the Mission, it was decided that the students' time would be better dedicated to other activities on behalf of the Mission rather than direct service in the Clinica. While relations with the Clinica remained cordial, and the students did get to observe and know the patients in the Clinica, the principal focus of their activities was shifted to a community interviewing program, which put them in closer contact with both Mestizos and Tarahumaras in the community. This alternative seemed particularly attractive as a substitute because the students had already done community interviewing in their Fieldwork classes, and were thus already familiar with the role. It also allowed for the possibility of developing medical anthropological research data, in the hope that this data would be a base from which the second group could learn.

The final plan of activities called for the students to carry out semi-structured interviews of several health-related topics in a comparative sample of Tarahumara and Mestizo households. The sample was developed primarily on the basis of proximity to the nuclear centre where the Mission was located, accessibility of the household on foot (especially for the Tarahumara sample), and the presence of one or more adult members of the household at the time of our visit. The Tarahumara interviews were carried out with the aid of an interpreter who was well known to nearly all the Tarahumara of the region, and this facilitated their acceptance by the Tarahumara materially. Interviewing through an interpreter was a new experience for all of the students, however, and undoubtedly sacrificed some controls over the accuracy of the information conveyed. With one exception (an invitation to attend a tesguinada beer party at our interpreter's home) the students returned each night to the Mission, so the maximum range of the Tarahumara interview coverage was about five hours walk. Within this range the Tarahumara rancherias of Tucheachic, Bacasorari, Santa Cruz, and Bacochic were broadly covered, and our sample included individual households pertaining to the rancherias of Ramichic, Kockerari, and Gomarachic as well. Within the nuclear centre over half the Mestizo population was sampled. Our interviewing with both groups was hampered by the fact that it fell in the middle of the bean-sowing season, and much of the male population was occupied working their scattered parcels. Nonetheless, the students became very adept at administering the interview in the most varied settings, and our sample was accumulated in spite of this handicap, although one never knows at what sacrifice of accuracy, or representativeness. Working in teams of two (we swung between the teams in order to observe interview

techniques) the students accumulated a sample of forty Tarahumara households and 39 Mestizo households, totalling 231 Tarahumara and 216 Mestizo in all, in about ten days of interviewing.

The interview schedule used is reproduced in slightly summarized form in Appendix 3. Given the paucity of information on the Sierra Tarahumara communities, it would have been ideal to develop a broadly based ethnographic picture, but time limitations did not permit such extensive data collection. Instead, the schedule focused primarily on topics especially related to health conditions and the operation of the Clinica: household composition and demography, housing conditions, language of use, illnesses of household members within the past six months, accidental injuries, and information on childbirth and infant mortality. From this data we hoped to develop a better idea of the Clinica's importance and impact on the community, and document some of the conditions under which it was working. In addition, as a more concrete contribution to our informants, free non-prescription medicines which had been collected by the students for donation to the Clinica were offered at the end of the interview to those indicating stipulated minor illnesses among family members. (More complicated cases were encouraged to report to the Clinica, if they had not already done so.) The learning of the pharmacological properties of these medicines, their applications and contra-indications was the only specifically medical learning incorporated in the project.

For a variety of reasons certain parts of the data produced by the interviews proved unreliable or unanalyzable, and will not be discussed. One of the major difficulties encountered was the aforementioned language factor, which proved particularly deceptive in the area of Tarahumara

illness concepts. Without much more precise language referents than we were able to establish, much of the data on Tarahumara illnesses remains unanalyzable, and comparisons with Mestizo illnesses are specious at best. The data on clinic use and reactions to the Clinica's service also proved softer than desired, since nearly all informants perceived our clear-cut ties with the Clinica, and this predisposed favourable responses to any type of evaluative query. In a different vein, the housing survey produced data which was largely inconsequential. No Mestizos slept on mats, for example, and no Tarahumara slept on beds; and since all Tarahumara homes were one room, the ratio of occupants to space became a fairly meaningless statistic. Finally, the chronological imprecision surrounding life events such as births and deaths, ages, and dates of illnesses, especially among the Tarahumara informants, leaves some doubts as to the absolute accuracy of the information obtained. These were the most important limitations of our data collection, and which prevented us from developing the complete picture of the community-Clinica relationship which we desired.

Nevertheless, in some topics the interviews apparently did yield fairly accurate and reliable information on the population of Norogachic. This was particularly true of the demographic data, which permitted calculation of statistics on infant mortality and age pyramids for both populations, the accident information, and the data on language use. While this information does not allow comprehensive analysis of either the Clinica or the community, it does illuminate certain aspects of their inter-action. It is this initial and partial synthesis of data which we will now discuss for the ethnographic light it sheds on health conditions in the community, and the problems the second group had to face in addressing them.

The demographic data collected seemed reliable enough to construct comparative age pyramids for the two ethnic groups, which are given in 10-year age cohorts in Figure 3. These pyramids show essentially identical configurations for Tarahumara and Mestizo, and an overall population which is - like that of the Mexican population in general - heavily skewed to the younger age groups. One other common feature worth noting is the sexual imbalance in both populations in the 11-20 cohort of school-age. This deficiency of males seems to be due to the interaction of a number of factors, including greater male access in both groups to educational opportunities beyond the primary school, greater migration to urban areas in search of employment, and the ability of young males to postpone marital and property obligations which would tie them to the community until a later age. The pyramids suggest that these factors ceased to operate by the age of 20 for the Tarahumara men, but continued through the next age cohort (21-30) among the Mestizos. Looked at in the overall, however, the most striking feature of the age pyramids is their basic similarity. Obviously both groups confront the same demographic constraints, and have responded to them in a very similar way.

This apparent similarity revealed by the age pyramids turns out to be deceptive, however, when we turn to more specific aspects of demography. Figure 4, for example, develops comparative statistics on child mortality among the two ethnic groups, and establishes at least three parameters on which they are markedly contrasting. Our data here covers a sub-sample of 42 Tarahumara and 30 Mestizo couples for whom complete and reliable information was available on these questions, and reveals substantial differences in median family size, number of child deaths (defined as death

Figure 3: Age Structure of Sample Population, Norogachic, Chih.

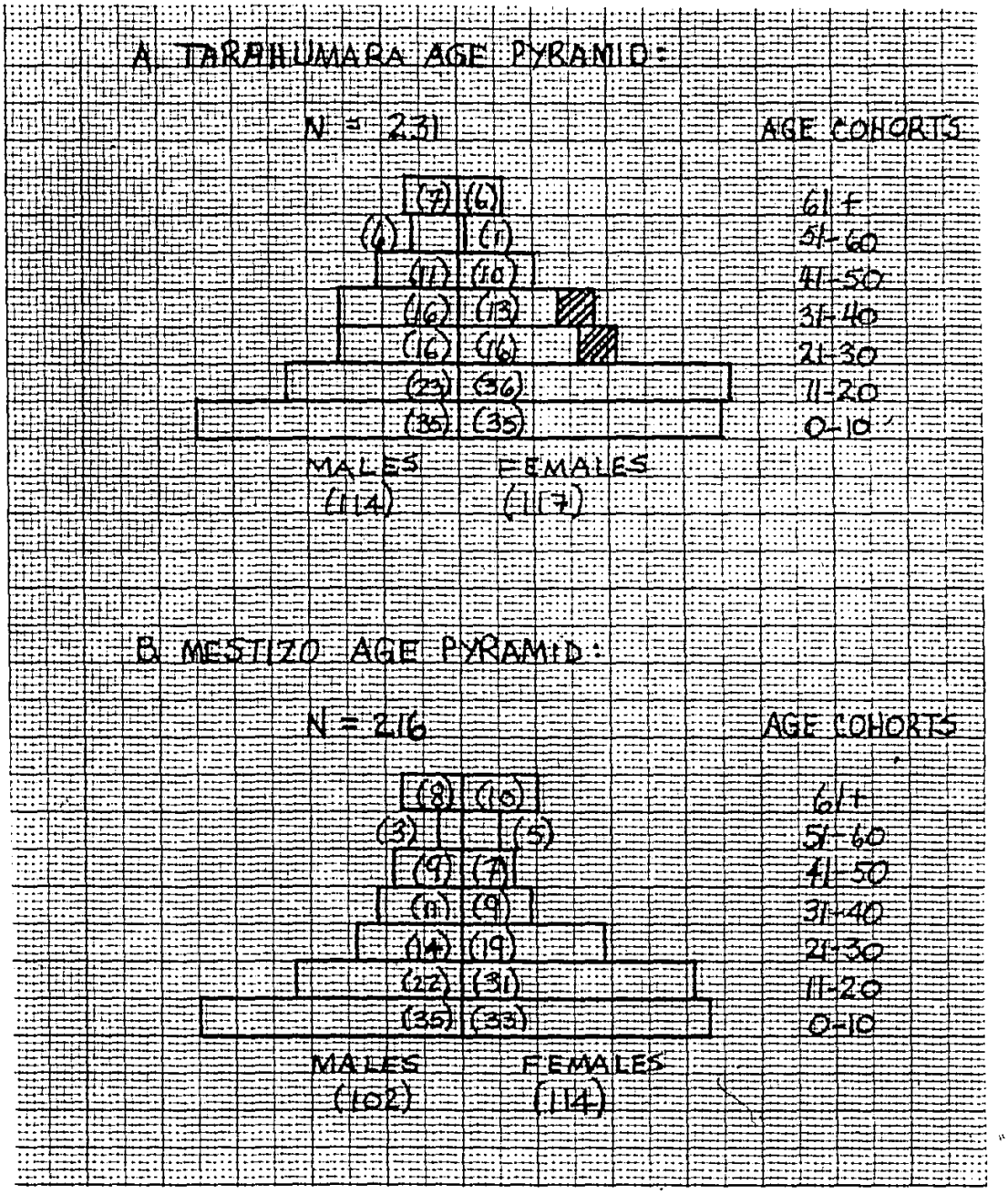

Figure 4: Child Mortality in Norogachic.

	Tarahumara	Mestizo
A. Data		
a) No. of Couples	43	30
b) No. of Surviving Dependents	154	130
c) No. of Still Births	18	22
d) No. of Children Dead	96	16
e) Children Born Attended	N/A	45 (35%)
f) Children Born Without Attention	N/A	85 (65%)
B. Median Family Size ($\frac{b}{a}$)	3.4	4.3
C. Child Deaths/Population ($\frac{d}{b\&d}$)	38%	11%
D. Stillbirths/Population ($\frac{c}{b\&c\&d}$)	7%	13%

before age 7), and the number of still-births in the two ethnic groups. Both populations are in periods of rapid growth, with large families being the rule, but the statistics show the Mestizo population is growing at an even more explosive rate than the Tarahumara. Part of this difference is the result of the higher child mortality among the Tarahumara, which at 38% of the population is more than three times the Mestizo rate of 11%, and is certainly one of the highest rates recorded in Mexico. This population loss is somewhat compensated for by the larger number of still-births among the Mestizos, which occur at about double the rate of the Tarahumaras.

It is tempting to attribute some of these differences, especially child mortality, to differential access to and use of medical facilities such as the Clinica. Indeed, the Clinica had made conscious efforts to promote attended child births for several years. Our interviews revealed that these efforts had made no significant impact on Tarahumara child birth practices whatsoever, but had met with some success among the Mestizos. Not a single Tarahumara child birth had been attended by anyone other than a family member or near kin, usually the husband or mother of the expectant woman, but among the Mestizos, 35% of the births had been attended in the Clinica, and a clearly rising trend in use was apparent. Still, it seems difficult to affirm that Clinica use alone would account for the wide disparity in child mortality among the two groups.

Our statistics on differential child mortality obviously do not permit a conclusive explanation, and further research on the question is indicated. One working hypothesis for such an investigation might be that the Mestizos, who largely occupy the better, more level lands in the valleys, have assured themselves of a more dependable - if not more abundant or nutritious - food

supply than the Tarahumara, and are thus better able to tide over periods of extreme shortages when the Tarahumara face literal starvation. Other hypotheses need to be considered as well, such as the use of short-term cash employment to cover food shortages, and the results from our initial interviews can only be seen as the preliminary look at a much larger and more complex problem. The issues involved, however, are of enormous importance for the work of the Clinica, and the practice of medicine in the Tarahumara.

The data on still-births seems amenable to a simpler, more directly genetic explanation, also of considerable interest to the practice of medicine. It appears that extreme in-breeding in the Mestizo population has resulted in the preservation of a number of defective genes which do not appear in the Tarahumara in the same frequency. This explanation is supported by the presence of non-fatal genetically based defects and illnesses, such as congenital hearing loss and epilepsy, in several members of the same family.

Another area of the interview schedule which yielded some suggestive contrasts between Tarahumaras and Mestizos was the survey of accidental injuries. Participant observation in the Clinica had suggested that it functioned in part as a first-aid station for the surrounding population. Attention to accidental injuries seemed to represent an important part of its total work load. This section of the interview sought to explore this factor, and was administered according to a slightly different methodology. Informants were asked to describe any accidents which had occurred to them or to members of their household within memory. This "free recall" method presupposed that the most important and the most usual accidents would be

recalled, and thus provide a representative ethnographic sample without trying to achieve epidemiological precision. The accident accounts were hand-recorded in the words of the informant as much as possible. When informants manifested uncertainty or confusion about what was being solicited, the interviewers were permitted to explain more fully, and to suggest some of the commoner types of accidents as a "starter". This technique provided a degree of internal corroboration that the questions being posed were understood, and lends confidence to the responses themselves.

The fifty-two accident accounts collected in this manner are summarized and analyzed in Tables A and B of Figure 5. Analysis was developed along three lines: the type of accident, the gravity of the injury suffered, and whether professional medical attention was sought. The severity of the injury was measured by a combination of the length of time required for recuperation, the type of attention given the injury, and whether permanent physical damage resulted. Three categories of severity were constructed on this basis:

Slight Injury - recuperation within one month or less; no formal treatment, or treatment limited to normal first-aid procedures; no permanent damage.

Moderate Injury - recuperation with 1-3 months; more extensive medical attention required (sometimes but not necessarily professional); light permanent damage (such as scarification) possible.

Serious Injury - recuperation longer than 3 months; extensive professional medical attention required (except in cases of fatality); permanent scar, physical handicap, or chronic complaint associated.

In most cases, the professional medical attention obtained was at the Clinica, but some of the accidents which are included did not occur in

Figure 5: Accidental Injuries in a Bi-cultural Sample.

A. Accidental Injuries - Tarahumaras (N=24)

Type of Accident	%	Total	Seriousness: Slight	Moderate	Serious	Medical Attention Yes	No
1. Ax cuts	42	10	5	5		4	6
2. Falls	17	4	2	1	1	2	2
3. Burns	12	3	1	1	1	3	0
4. Snake Bites		2	1		1	1	1
5. Falling objects		2	1		1	2	0
6. Automobile		1			1	1	0
7. Knife Cut		1	1			0	1
8. Horse Kick		1	1			0	1
		24	12	7	5	13	11
			(50%)	(29%)	(21%)	(54%)	(46%)

B. Accidental Injuries - Mestizos (N=28)

Type of Accident	%	Total	Seriousness: Slight	Moderate	Serious	Medical Attention Yes	No
1. Falls	21	6	2	1	3	4	2
2. Cuts	18	5	4		1	3	2
3. Gunshot Wounds	18	5			5	5	0
4. Burns	14	4	1		3	4	0
5. Falling Objects		2		1	2	2	0
6. Burro Kick		1			1		1
7. Automobile		1			1	1	0
8. Snake Bite		1		1		1	
9. Stoning		1		1		0	1
10. Drowning		1	1			1	0
11. Stick Puncture		1	1			1	0
		28	9	4	14	22	6
			(32%)	(14%)	(50%)	(79%)	(21%)

Norogachic, so a wider base of medical services (particularly for serious injuries) is actually implied in our statistics. Nor did professional attention necessarily imply the physical presence of the injured in the Clinica; in some cases the victim merely sent a friend or relative to request medicine.

The tables reveal differences between Tarahumara and Mestizo accidents on all three of the dimensions analyzed, and can be summarized as follows.

1. There are notable differences in the type of accident most frequently reported. Among the Tarahumara a single type of accident - ax cuts - predominates by a wide margin; the Mestizo accidents are much more varied. This conclusion may be a methodological artifact resulting from the better communication in Spanish between the Mestizo informants and our student interviewers. It may also be conditioned by different cognitive perceptions of accidents of which we are unaware. The most plausible explanation, however, seems to be that the difference is real, and is a reflection of the more varied cultural repertoire of the Mestizo group. Several categories of accidents - gunshot wounds, to mention one - occur in connection with the use of a good rarely possessed by the Tarahumara. This would suggest that differential exposure to cultural equipment whose use is potentially hazardous may be an important variable in the accident environment. A kind of cultural ecology of accidents is suggested.

2. There is a trend for the Mestizo accidents to be more serious than those of the Tarahumara. This trend is even more accentuated than the statistical summary indicates, because only three of the five serious accidents include two fatalities. Based on the accident accounts themselves, the greater use of guns among the Mestizos seems to be associated with this

statistic, since gun-shot wounds were invariably serious.

3. The Mestizos more frequently obtained medical attention for an injury than did the Tarahumara. This result most assuredly reflects a combination of the willingness and motivation to seek professional attention, and the distance from the facilities where it could be obtained. Most of the Mestizos lived in or near the nuclear centre within 1-3 km. of the Clinica, and could normally reach it within an hour. The Tarahumara, as we have mentioned, tended to live further away, and would have required up to 3 hours or more to reach the Clinica in case of emergency. The typical Tarahumara accident - the ax cut - would also have made it difficult to reach the Clinica without aid, and there was a cultural preference, frequently mentioned by Tarahumara informants, to use traditional herbal remedies for injuries such as ax cuts.

Although our data on this point are admittedly open to question, we found only a very low correlation between alcohol use (either in the form of tesguino or commercial beer) and accidents. This suggests that interpretations such as Zingg's (1942: 92) or Kennedy's (1970: 235), which treat tesguino use as a "spurious value", or a dysfunctional "social cost", must be treated with some caution. Given the restraints of the interview situation and our overt identification with the Mission, which has actively opposed tesguino use for decades, our results are impressionistic at best, but the scarcity of references to alcohol-related accidents (they occurred in only one or two accounts) suggests that certain spectacular cases may achieve wide popular circulation without necessarily being representative of the total accident picture. Our accidents tended to be associated more with the work environment than with the well-lubricated convivality of the

tesguinada.

Like the question of child mortality, the circumstances of accidental injury in Norogachic require further investigation, probably including an epidemiological survey, before any firm conclusions can be drawn. Nonetheless, the initial results seem promising. By focussing our study on the non-psychological dimensions, we begin to glimpse a contrasting cultural ecology of accidents between the two ethnic groups which has rarely been noted or explored in the literature so far. In this light, the construction of a sawmill in Norogachic shortly after our fieldwork terminated - the first industrial operation of this kind in the region - makes a re-study of the accident situation even more attractive. For the moment we must be satisfied with the more general conclusion that although they live in the same physical environment, different types of accidents seem to occur to the two ethnic groups, and that these accidents constitute a relatively important part of the health risks faced by both.

A final area of the interview schedule worth discussing is the data on language use, which tends to be more reliable because it could be corroborated independent of comprehension per se. This data is summarized in terms of monolingualism and bi-lingualism in Figure 6, where bi-linguals in both groups are represented according to 20-year age cohorts and by sex. Our original interest in bi-lingualism stemmed from a desire to establish to what extent fluency in Tarahumara would be a prerequisite for a doctor working in the Clinica. The data furnish a pretty clear answer to that question; effective work with the Tarahumara still requires a command of their language. Besides this, however, the sharp contrasts in bi-lingualism between the two groups add an interesting dimension to the broad features of

Figure 6: Bilingualism in the Norogachic Area

		Monolinguals	Bilinguals
A. Ethnic Tarahumara			
	Totals:	155 (66%)	79 (34%)
1. By Age:	0-6 years	38 (100%)	0
	7-20 years	53 (62%)	33 (38%)
	21-40 years	39 (56%)	30 (44%)
	41-60 years	17 (57%)	13 (43%)
	over 60 years	8 (73%)	3 (27%)
2. By Sex:	Male	70 (59%)	49 (41%)
	Female	85 (74%)	30 (26%)
B. Ethnic Spanish-Mexican			
	Totals:	187 (87%)	28 (13%)
1. By Age:	0-20 years	116 (96%)	5 (4%)
	21-40 years	43 (94%)	9 (6%)
	41-60 years	15 (72%)	6 (28%)
	over 60 years	13 (60%)	8 (40%)
2. By Sex:	Male	78 (80%)	22 (20%)
	Female	109 (95%)	6 (5%)

inter-ethnic relations in Norogachic which we mentioned earlier in this chapter.

First, we note that although bilingualism is much more common among the Tarahumara than among the Mestizos, in neither group do the bilinguals reach an absolute majority. The fact that Tarahumara bilingualism is rather evenly distributed among the adult generations suggests long-range stability in language use, probably derived from the effects of the Mission school which has been in operation for over 50 years. This derivation is further strengthened by noting the groups which are most and least bi-lingual. The least bi-lingual are the children, who learn Tarahumara exclusively in the home, and the women, whose domestic duties and social role specify minimum contact with non-Tarahumara. The men, who attend the school and trade with the Mestizos, are the most bi-lingual. Nearly all the bi-lingual females (few as they were) had learned Spanish in the Mission school as a consequence of a recent change in the Mission's educational policy toward increasing female enrollment at the internado. Yet the language of choice within the Tarahumara home continues to be Tarahumara. Among the ethnic Tarahumara there were no monolingual Spanish speakers at all, and in only two of the 40 households surveyed were all members bi-lingual. In most situations of interaction with mono-lingual Mestizos only one member of the household was needed to establish communication, and most Tarahumara households possessed at least one such person, usually the male head of the family.

A somewhat similar situation prevailed among the Mestizos. Although bi-lingualism was much less common overall, it continued to be a male-dominated skill. There was rarely more than one male per household who

could speak Tarahumara, but in slightly more than half of the households, the male head indicated that he could. The figure also shows an interesting generational trend, with maximum bi-lingualism (40%) in the oldest generation. This generation certainly included the Mestizo leadership group, among whom the need to maintain economic relations and political ties with the indigenous community was strongest. It may also indicate a gradually changing picture of bi-lingualism over time, in which the oldest generation (born before the Mission school) found it necessary to know Tarahumara, whereas the younger generations find it progressively less so.

Among both groups we conclude that bi-lingualism is a situational skill which does not affect basic cultural identity. When mono-lingual individuals need to communicate, bi-linguals are nearly always available. Personal observation showed, however, that those Tarahumara who spoke Spanish often did so with obvious difficulty, and that communication beyond the level of simple conversation was difficult. This communication took place most frequently in commercial transactions with a limited group of bi-lingual Mestizos, and did not threaten the cultural identity of either group.

Applying these general observations to the Clinica, we can appreciate that the likelihood that a mono-lingual Spanish-speaking doctor could effectively reach the Tarahumara population would depend on his/her skill at using (and even training) interpreters. It is obvious that the more Tarahumara the doctor knew, the more effective he would be. The ideal doctor would be fluently bi-lingual, but in reality the possibility of finding such an individual seemed very remote. The utility of our bi-lingualism data for the operation of the Clinica, therefore, seemed more

hypothetical than real.

As we can appreciate from the data we have been discussing, the interview program of the first group was able to collect some medical anthropological information of interest, despite their limitations. In addition, they also had a field experience in Norogachic more like that of the anthropologist. Far more than the second group, the first lived within the community on personal terms. They made friends easily, especially with the young people near their own age, and their interview visits took them into the homes of people seen only sporadically in the Clinica. Relations with the Mission - a bit rocky at first - improved steadily throughout their stay, and their final acceptance into the community was formalized symbolically by an invitation to one of the members of the group, a fairly competent singer and guitarist, to play during Sunday mass. From this detail we can see that they "made it" as anthropologists, in spite of the standard hazards of the rite de passage, plus a few additional ones peculiar to their own brief intense experience.

For the students the hardships were many: change in food, dysenteric illnesses due to the water, an isolation from their friends and families more complete than they had expected, and the physical exertion of the long hikes required for the interview program. These added up to a "cultural shock" when they began to perceive different norms of behaviour than the ones they took for granted, not only among the Tarahumara but among the Mestizos as well. The aversion of eye contact during conversations among the Tarahumara, and the use of the formal usted in conversations between Mestizo married couples (and even juvenile playmates) took them by surprise, and gave their experience an explicitly anthropological dimension. A brief

example from their many adventures will serve to illustrate.

The day after our arrival in Norogachic we were invited to a picnic lunch. The occasion was the birthday of another secular volunteer at the Mission, a young lady dentist who, accompanied by her cousin, had been working in the community for five months at the time we arrived. They had invited several friends from town as well, more or less of the same age as the students, and a favourite location alongside a nearby river had already been selected. Beer was brought along to accompany the charbroiled meat, its use being sanctioned on this occasion by the presence in our group of the resident priest at the Mission. His departure by mid-afternoon, however, left a mixed group of normal young people sitting beside a very inviting mountain stream. The pleasure of a swim was obvious, and we had come prepared with trunks. Unfortunately, we took the plunge in swimwear somewhat more risqué than usual for Norogachic, and most importantly, we did so in front of members of the opposite sex, an unpardonable breach of Norogachic's strict code of sexual separation in public. In so doing, therefore, we attracted the attention of a number of people who happened by, or perhaps came to see the show being put on by the city slickers. One woman in particular rushed back to town to spread the word of our indecent party, along with some appropriately embroidered sexual fantasies of her own, to her circle of intimates. By the time we returned in the evening, the word was literally all over town, and threatened to provoke a hostile reaction to the students almost before they had gotten started. Fortunately, our invitation in itself had established an important link with the community. The girls and their friends had an even greater stake than we did in counteracting the damaging gossip, and much more effective means to

do it than we could have mobilized. Since the principal authoress of the rumours was already a well-known gossip in town, it was easier to confront her publicly and force her to admit that some of her more fanciful inferences were untrue, and with this the incident died down. Because of the tactic of direct confrontation, little damage was done, but it was clear to all of the Monterrey slickers how easily it could have become a much more serious problem. As it turned out, the only long-term effect of the incident was to enforce a somewhat more puritanical standard of conduct than might otherwise have prevailed among young men accustomed to the bright lights of Monterrey.

Inter-personal conflicts within the group occurred on a few occasions, particularly under situations of stress later in the stay. (It is remarkable how little mention is made of such conflicts within research teams in our fieldwork literature, although they must certainly occur.) These conflicts required our intervention in a few cases in order to prevent them from degenerating into obstacles. Such interventions placed us at times in the role of teacher "in loco parentis" in relation to the students. Our own conception of the project insisted unrelentingly on its being a serious educational enterprise, but to an 18-year old two weeks in the Sierra Tarahumara sounds very much like a vacation, or perhaps more realistically an extended Boy Scout trip. While the experience in the Tarahumara was a maturing one for all the participants, it certainly did not imply that they were mature at the time, and the conflict between education and recreation provoked some conflicts.

The learning experience provided by the Tarahumara project can be measured somewhat loosely by the impact it had on the subsequent careers of

the three students who participated. Only one of the three continued in the Medical School more than one additional semester, but he showed a dramatic change in his academic performance after the summer in the Tarahumara. After having flunked several subjects in the first two semesters, he passed all his subjects the year following, continued satisfactorily in the career from there on, and is now a doctor. Apparently the Tarahumara experience provided him with a fresh motivation for the medical career. The other two participants soon left the Medical Faculty for a variety of reasons, but in each case their subsequent career shifts were consistent with some aspect of their experience in the Tarahumara. One student changed to a career in biology, and is now a licenciado in that field pursuing ecological research. The other, after working for some time handling complaints related to medical benefits for the Mexican social security system, entered the career of sociology with the intention of pursuing community research.

The great drawback of the first group, however, was that they were scarcely perceived at all by the community in a medical context. While it was true that they were students of medicine, they were unable to practice medicine due to their inexperience. What they were able to see of medicine was limited largely to those aspects usually visible to the field anthropologist. Here their role limitations paralleled our own, and unfortunately alternative medical roles which would have enriched the clinical content of their experience were not immediately available. The first group, despite its many positive achievements, left us frustrated in our plans to observe students actually working at medical tasks, for which we had to wait until the arrival of the second group in August.

V. The Field Course: Second Group.

Up to the time the second group of students arrived in Norogachic, the experimental field course might well have been described as an anthropological success, but a medical failure. The students in the first group demonstrated convincingly that they could survive the cultural shock of "anthropological" field conditions, and learn to make objective - even if incomplete - observations on the community in which they were living. But their inability to practice medicine in any significant way frustrated any more ambitious objectives. Yet, any conclusions about the relevance of anthropology to medical education in these circumstances seemed to require at least some idea of its utility in clinical practice.

The three weeks between the departure of the first and the arrival of the second group was spent primarily in long solitary walks in order to learn the neighbouring trail network. This gave us ample opportunity to ponder our simultaneous victory and defeat. The walks were required for practical reasons because deteriorating weather conditions were daily increasing the isolation of Norogachic from the "outside world", and transportation became a determining factor. The summer thunderstorms which began in early July (after htree pilgrimages from the Church along the dry river beds with the image of the Virgin leading the column of solemn parishioners) became more intense and frequent, and were often accompanied by dense mists which filled the valleys until mid-morning. This left only three or four hours of clear skies around mid-day when the planes might enter and land safely. The rutted and rocky roads had long since become impassable as the waters in the streams rose and became violent torrents with each rain. Transportation in the sierra was reduced to its most

elemental rhythms, the pace of man and animal along the trail. When the trucks could no longer pass, the better off turned to their horses and burros, while the poor, and especially the Tarahumara, turned to their centuries-old trail network. It became absolutely essential to know these routes in order to get to the Tarahumara rancherias.

For the most part Norogachic entered into almost complete isolation from the outside world in this season. Animal and foot traction was rarely used to move merchandise over long distances, and the community was thrown back almost completely on local and stored foods. Traffic was almost exclusively local, and was undertaken only in absolute necessity. True enough, the radio brought in stations from Chihuahua and even El Paso, and kept the community in touch. (The news of President Nixon's renunciation was promptly forwarded to us by a young man who tended one of the stores, for example.) And in true emergencies, the planes of the Mission would almost always attempt a landing. Flying risks were extreme, however, and a near accident at the short hilly airstrip convinced us of the reality of these dangers. (A Mission plane with four persons on board came within 15 m. of falling into a deep arroyo which abuts the strip due to a brake failure.) There were also days in which the flying conditions were literally impossible, and Norogachic's isolation became truly absolute. It fitted the paradigm of an island society, small and isolated from outside influences, envisioned by the architects of the fieldwork paradigm almost a century ago to a tee.

Our principal hope for the second group was that they would have the opportunity to work within the Clinica, but we could not guarantee them this when they arrived. Although all of the members of the group had

worked with patients for at least a year, they were still medical students, and the stated policy of the Clinica was that only fully-titled doctors would be allowed to consult paitents, or undertake other specifically medical functions within the Clinica. Despite our efforts to reassure and convince, those in charge remained adamant about this requirement, and our uncertainty about the composition of the group made it impossible to extract and firm guarantees. (We were completely out of touch with the students in Monterrey throughout the summer, and did not know the exact number or composition of the second group until they actually arrived.) We were able to extract the assurance, however, that the students would be given the opportunity to show what they could do before any final decision was made, and this small wedge proved crucial in their final acceptance.

Through their demonstrated ability the students won a place for themselves in the Clinica very quickly after their arrival, and removed all the earlier objections and impediments. They came prepared to take up the role of doctors, and, while recognizing the limitations of their training, accepted the concommitant responsibilities. On the whole the students were extremely impressed with the facilities available in the Clinica, and commented to us that they were better than in many smaller urban clinics in which they had worked previously. For them, the experimental field course was an opportunity to put into practice many new clinical skills, and their activities expanded the medical functions of the Clinica in several directions. During the two weeks of their stay, the students provided continuous out-patient consultation in the dispensary, and performed rounds daily on the in-patient population. They also re-conditioned and put into working order the small laboratory in the Clinica, and did the laboratory

tests indicated for each case. Later, they took X-rays, and used the surgical theatre on at least a couple of occasions. In their spare time they sorted and classified large quantities of donated medicines so that they could be made available in the Clinica's pharmacy. All of these tasks were undertaken on their own initiative and with exemplary efficiency. The second group's acceptance by the Mission was signaled by an official announcement of their presence in the Clinica during Sunday mass, and in a slightly different form by a tap on the window at 5:30 a.m. to wake the doctor to come see a patient. Their roles as doctors were confirmed, and trust was placed in their abilities.

The greatest benefit we derived from their success was the chance to follow individual cases in treatment. These case histories allowed us to compare our own view of the illness episodes with that of the students, and thereby clarify some differences in the medical and anthropological perspectives on clinical practice. The cases also illustrated very well what the doctor could and could not achieve, given the circumstances of the Clinica and the needs of its surrounding population.

In some cases the students were able to make unequivocal diagnoses and undertake specific treatments. Such was the case of Porfirio, one of the workmen in the Mission, who had complained of shoulder pains throughout the summer. In fact, he stated that the pain had begun six months previously, and when the students took an X-ray of the shoulder, it revealed a broken collar bone which required prompt and careful treatment in order to heal properly, and immobilization of the affected shoulder for several months. The economic necessities of life in the sierra rarely allow for such a long period of convalescence, but in this case the students were able to convince

the Mission to continue his regular salary provided he kept the collar bone in a sling and allowed it to heal correctly. The man gratefully accepted these conditions, and when we saw him again eight months later during a follow-up visit, the bone had healed, the shoulder pain was gone, and the patient had now returned to work.

Not all of the cases the students saw could be treated with such definitive results, however. In cases with long-term chronicity, or which required more complicated interventions in the patient's social milieu, the brevity of the students' stay ruled out the possibility of a significant medical treatment. The cases of Beto, a three-year old Tarahumara boy, and Federico, a Mestizo adolescent, fit into this category.

Beto had entered the Clinica the previous April, three months before the first group arrived, with severe burns over most of his chest. He was a charming little boy who quickly won the affection of the nuns, and became something of a favourite around the Clinica. By the time we arrived, his wounds were largely healed (only a small unscarified open sore remained), and during the first group's stay his treatment was terminated, and he returned to live with his Tarahumara grandmother. In her home, however, the lavish attention which he had received in the Clinica was not continued, and within a month (during the second group's stay) he returned in a state of severe depression, scarcely even responding to his own name, and showing evident signs of mental disorientation. A medical examination by the students revealed no physical symptoms of importance. His ultimate disposition required arrangement for adoption into another Tarahumara family, and was not achieved until some time after our departure.

Federico's case was also a complicated one which required social

interventions beyond the students' capacities. He was a boy of perhaps 14 years at the time, but because of adaptational problems, he had never attended school and remained with the mental and social skills of a boy much younger than his chronological age. At about the age of eight he witnessed the death of his father in a fatal fall, and ten days later his mother committed suicide by drowning, leaving the young boy without home or immediate family. About this time he began to suffer nervous "attacks" (possibly epileptic), and was thrown into a life of vagrancy, moving from house to house among distant kin and friends begging food and lodging. Since he came to the Mission frequently in need, all of the students in both groups got to know him to some degree. His behaviour toward them was often somewhat inappropriate and difficult to handle, however. He would clutch their arm tightly, aggressively seeking from them the security and affection he lacked in the community, but his needs were so great that they led inevitably to demands for attention which could not be fulfilled. When one of the students in the first group rejected him, his vulnerability was revealed; we heard him sobbing outside our window a few minutes later. When the second group arrived, we felt obliged to explain the situation to them at some length, and they opted to minimize their relationship with him so as not to awaken either false expectations or further social frustrations. Under the circumstances we could only concur that this was probably the wisest course to follow.

Not all of the cases ended so happily either. During the second group's brief stay, and despite their best efforts, three Tarahumara children died in the Clinica due to complications of malnutrition. One of these cases in particular stands out. Late one night a Tarahumara child of

perhaps 3 years of age was left at the Clinica very near death from starvation; the student who examined him on admission estimated from the child's condition that he had not eaten in at least two weeks. The Tarahumara, as we have already noted, often bring their children to the Clinica when they can no longer provide them with food, in the desperate hope perhaps that the nuns would be able to care for them. In many cases, as in this one, the malnourished children arrive already so weakened that little or nothing can be done. Nevertheless, the students resolved to make every effort to save the child's life. His condition was so deteriorated that vital functions were failing, and it was necessary to perform a cut-down on the vein in order to introduce a needle for intra-venous feeding. Bladder functions had also disappeared, and the students had to perform a bladder tap in order to relieve pressure and prevent additional complications. (They had learned this technique in their pediatrics block at the Monterrey Children's Hospital, and won considerable admiration from the nuns, who had never seen the procedure before, for their efforts.) Although the immediate crisis upon arrival passed, and the child's condition improved slightly with intravenous feeding, he continued to languish and failed to regain consciousness within the next forty-eight hours. Three days after admission he died from renal complications which went undetected due to the lack of chemical reagents needed to perform the appropriate laboratory tests.

The work of the second group was not limited simply to attention in the Clinica. After the students had become familiarized with the Clinica and recognized in the surrounding community, it seemed that a more comprehensive effort to bring medical care to isolated patients was called

for. Due to the includement weather, relatively few patients could get to Norogachic, and the in-patient population was at a seasonal low. Under the circumstances it seemed better to bring medicine to the rancherias rather than wait for patients to arrive. With the assistance of the Mission arrangements were made for two of the three students to make a two-day swing to the near-by Tarahumara rancheria of Koechic and the mestizo settlement of La Cienaga, some 6 km. from Norogachic (four hours walk under the prevailing conditions), while the third student covered the consultations in the Clinica. This turned out to be one of the second group's most interesting (and even heroic) adventures.

The Clinica's ambulance was mobilized to carry us with medical supplies to Koechic, where we installed ourselves for consultations in the log house usually occupied by the teacher of the local Tarahumara school. Word had been sent earlier through the local Tarahumara gobernador when we would be available, and the students did not have to wait long before patients began to arrive. Some came as much as a day's walk in order to take advantage of their presence. Working through an interpreter familiar to all the Tarahumara patients - the gobernador of Koechic - the students now learned through practice how to deal with different cultural styles of communicating information about illness and symptoms, and how to adjust one's conduct to different social expectations. They learned, for example, that in the Tarahumara language a single word is used to describe the entire region from the base of the neck upwards, so a Tarahumara patient could accurately describe a sore throat as a "head ache", and that Tarahumara women were less reticent about breast explorations than the women the students had seen in Monterrey. Cultural knowledge about the Tarahumara

seemed not only valuable but essential in these consultations, and the need for more detailed, systematic anthropological investigation of these cultural differences was obvious.

We made no systematic attempt to monitor or tabulate the consultation interviews, as it seemed this would impede the students' more important medical functions. Through informal observations and conversations with the students afterwards, we learned, however, that the chief complaints were diarrheas caused by the heavily contaminated surface drinking water. During the heavy summer rains the animal excrement used to fertilize the fields washes into the creeks and standing pools, and the students hit the literal peak of that season. They quickly ran out of the appropriate medicines they had brought, and toward the end of the consultations found themselves empty-handed. It was only then that one of the students realized that they had not been recommending to all the patients that they boil their drinking water. We learned something about the compartmentalization of medical knowledge from this incident, one of the gravest deficiencies derived from medical over-specialization. Our suspicions about this point received further confirmation the following day in La Cienaga.

La Cienaga is an isolated community of about 300 Mestizos, a cluster of farm houses grouped around a small sawmill even more isolated in the high sierra than Norogachic. Whereas the Mission and the wealth of the region were centred in Norogachic, La Cienage was an outpose of egalitarian agriculturalists, and the difference between the two communities could not have been more striking. Cooperation between families was the dominant norm in La Cienaga. As a result the students were greeted with open arms, and their day of consultations became a festive occasion. The consultations

were held in the federal primary school, and the whole community came out to exchange gossip, flirt, and play basketball while waiting their turn to see "the doctors". Almost sixty patients were seen during the course of the day, and the students received endless expressions of gratitude, and offers of food and overnight accommodations from a number of families. They were a very special event in the life of this community, and they learned how special from one of the local residents. They were the first group of medical professionals to visit the community in over a year. "I never realized until now what the concentration of doctors in the cities really meant", one of the students said afterwards. The topic had been covered in a fourth semester Public Health course back in Monterrey, but was compartmentalized under a different heading in the abundantly served urban area. Here in the rural community it took on a new significance.

We decided not to accept the invitations to spend the night in La Cienaga, and returned instead to the school in Koechic in order to see some additional Tarahumara patients the following morning, and still have time to hike back to Norogachic before the afternoon rains. We soon rued the choice, however, when an intense electrical storm struck during the night. Whereas our previous night in the school had been starry, the rains now revealed abundant leaks in the roof. While tremendous bolts of lightning (whose potency could be heard as a literal hum) struck within a few hundred yards of our resting place, we spent most of the night dodging the various streams of water which descended from the roof. To make matters worse, almost everyone came down with the same diarrhea as our patients, and dawn found us waiting for an early morning slosh through the soaked meadows to visit "the country". Despite our discomforts an additional 20 Tarahumara

patients were seen before we left at mid-day for the hike back. In all, about 120 patients (Mestizo and Tarahumara) were seen during our two days of medical field work, and the students returned to the Clinica very tired but richly rewarded in experiences both medical and anthropological. Their payment from the Tarahumara of Koechic was the gift of a live chicken. By that time the students had learned its value for those who gave it (they ate meat only twice during their stay), and accepted the gift gratefully.

All in all, the work of the second group provided a convincing demonstration that there was such a thing as "anthropological medicine". Their medical skills acquired in the city were put to the test and transformed to meet the demands they faced in the sierra - "recompartmentalizated" we might say. Trained in the conditions of urban practice, they experienced as doctors the other half of the dichotomy: rural medicine. At the same time they became avid learners of anthropology, not from books or professional articles for sure, but from rapid questions and comments within the routine of their daily work. In this bi-cultural community of the sierra, it seemed that anthropology acquired that general and necessary connection with medicine which we have called relevance. Perhaps the conditions to be faced were relatively rare, but in this situation at least anthropological knowledge seemed indispensable. Our only regret was that we did not have more information about the things they "needed to know". This seemed to be the real challenge for the medical anthropologist: to collect, analyze, and reflect upon the kinds of socio-cultural knowledge these "anthropological doctors" needed to know. The task seemed complex.

Although they worked as "anthropological doctors", the second group of

students took up the role of anthropologist infrequently if at all. Their perception of the environment and their experiences were nearly always from the medical role. Everyone in the community - Mestizos, Tarahumaras, and the religious - classified them socially as doctors, and to their credit they entered the role with conviction and skill. Unlike the first group, whose interviews and conversations were wide-ranging, the interviews of the second group with community members were nearly always clinical, the kinds of information exchanged between doctor and patient. There was no way to confuse the two roles: being a doctor and being an anthropologist were different things.

It was only natural, then, that the second group sharpened our perception of the challenge which the experimental field course was implicitly making to them as doctors: to take up work in rural areas. Even those in the first group, however, who were still years away from their degree, had interpreted their experience in the Tarahumara in terms of the vacant post at the Clinica, and the larger issue of rural medicine. Within the intimacy of late-night bull sessions and long hikes in the country, each of the six students indicated at one time or another how they viewed the idea of working in Norogachic for a longer period. In most cases the students were sympathetic, and one participant in the second group did in fact return to do his social service in a rural mestizo community in the lower Tarahumara. Yet in the end none of them returned to Norogachic. The power of anthropology to affect so personal an aspect as the students' career decisions was limited, and the project had no direct effect on the provision of health services in Norogachic.

Hindsight affords some very reasonable explanations as to why things

turned out this way. We had not, after all, selected a very promising group of potential rural doctors. None of the participants had ever lived for any length of time before in rural areas, nor had they indicated any special predilection for it. We had not even selected the participants on the basis of medical expertise or potential. Moreover, even those in the second group, who came to be considered doctors by the community, were still at least two full years away from being able to practice as fully-licensed professionals. The experience in Norogachic was far out of phase with their level of preparation even if they had wanted desperately to return. The students in the summer course were simply not very likely candidates to become the first full-time staff doctor to work at the Clinica. The course was, at best, sowing seeds which might come to fruiting much, much later.

One other impediment intervened which was peculiar to the Mission medical setting. Not all the students were disposed to adapt to the special norms which prevailed within the religious community. Social norms such as celibacy rules imposed constraints on their relationships with people with whom they were in daily contact. The fact that breaches of these rules would become instant topics of gossip and condemnation within the larger community made the rules that much stronger. Other norms of behaviour, such as public drinking, were also affected by association with the religious community. The difficulty of finding a lay doctor who could accommodate his/herself to these special features of the religious culture was a quite conscious concern for the Mother Superior of the Clinica, and may, in fact, explain a good deal of her reluctance at first to have the students work in the Clinica.

Besides this, none of the students were strongly committed to the

Mission's religious objectives. Although they occupied the role of "lay volunteers" within the religious community, they had not been selected for their religiousity, and several never even attended Sunday mass. They all maintained a certain distance from the overtly religious activities going on, and while respecting the rules and socializing amicably, they made no attempt to identify with the Mission's broader ideological commitments. Thus, even if they had been strongly motivated to work in rural areas, it is doubtful that the Clinica San Carlos would have been the place where they would take it up.

Much of this mis-fit between the students and the demands of the position became clearer after a follow-up visit to Norogachic in April, 1975, about eight months after the summer field course ended. In the intervening period, the first full-time staff doctor in the history of the Clinica had arrived, and the changes he produced both there and in the community at large were many. A comparison of his background and experiences with that of the students tells a great deal about what was needed to tip the balance, and overcome the objections which impeded their return. They also help us to appreciate better what a complete "anthropological doctor" needs to know, and just how relevant anthropology really was.

VI. How Norogachic Got a Doctor.

Only a few days after the second group departed for Monterrey, the first full-time doctor in the Clinica San Carlos's fifteen year history took up his post. He was Dr. Fructuoso Irigoyen, a 27-year old graduate of the University of Chihuahua whose family had lived in the state for several generations.

Dr. Irigoyen had done his year of social service in the sierra community of Cerocahui, some fifty miles west of Norogachic, and had developed a special interest in the Tarahumara as a result. The account of his experiences in Cerocahui was later published (Irigoyen 1974), and need not be repeated here. Suffice to say that it left him with a heightened interest in the Tarahumara culture, a desire to return to the sierra and learn more, and most importantly a basic command of the Tarahumara language. All of these were factors which made the position in Norogachic attractive to him, and the Mother Superior had been in contact with him for several months prior to our visit. His final acceptance of the position was received during a one-day visit in July (between the stays of the two student groups), at which time we met briefly. Although the relationship between Dr. Irigoyen's arrival and the summer course was entirely fortuitous, it ended up providing a unique lesson in the relationship between medicine, anthropology, and social change, and added a valuable new dimension through which to view the students' experience.

Irigoyen's previous experience in Cerocahui had already given him an ample preparation in the type of one-man general practice medicine required in the Clinica. Medically speaking, he came prepared. He performed a wide variety of tasks ranging from tooth extractions ("there is no time or money for fancy dentistry here; you have to control a possible source of infection") to follow-up care of a bone cancer leg amputation. He especially valued and tried to develop his skills in minor surgery, which he had found extremely important in the sierra. His recent medical training in Chihuahua provided him with contacts among the urban specialists who taught at the University, to whom he could freely and confidently refer

patients whose treatments were too complicated to be handled in the Clinica, and a bank of up-to-date information upon which to base his diagnostic and therapeutic decisions. He had also learned to adapt his medical role model to the environment in which he was working, and dressed and spoke like his patients as much as possible. He normally worked around the Clinica, for example, in the same kind of huaraches used by its clientele. All of these aspects of his training opened up new service possibilities for the Clinica, which under his guidance became a functioning small hospital for the first time.

On the social level part of Irigoyen's success was due to his excellent relations with the religious community. A bachelor at the time, he took up residence within the Mission house across the road from the Clinica's doors, rather than in a private residence in the community. By his own admission, he experienced a kind of re-conversion to his Catholic faith while working in Norogachic which further heightened his dedication to the Mission and his medical work. As a boy he had attended religious preparatory schools like those affiliated to the University of Monterrey, he said, but had lost interest in religion during his years in medical school, only to re-discover it again in the Tarahumara. While he remained officially a lay volunteer just like the students, he participated freely and frequently in religious activities, and was perceived socially on many occasions by the religious as a member of their group. They at no time felt his presence as threatening, therefore little tension was felt by the nuns when they made the transition to medically subordinate roles after having worked independent of professional supervision for so many years. Irigoyen worked instead to up-grade their nursing skills, and thereby won

their acceptance and confidence. Thus a major social structural innovation in the Clinica's organization was achieved smoothly in part due to the presence of a common ideological commitment between the innovator and the recipient organization.

By living within the religious community, Irigoyen was also able to establish a socially independent role which allowed him to work with both Tarahumara and mestizo patients alike, a role which in many ways paralleled the intermediary position of the Mission itself. Although he was racially Mexican and not Tarahumara, he periodically used items of Tarahumara dress, like the missionaries, and his command of their language placed him in an anomalous position among the Mestizos, most of whom (as we have seen) spoke little or no Tarahumara. Moreover, Irigoyen made no attempt to imitate the manners of urban doctors with whom many of the Mestizos had had previous contacts if these manners might distantiate the Tarahumara patients seeking his services. His cultural identification with the Tarahumara was completed when he danced with them as a Matachin in October, some two months after his arrival. This veritable declaration of independence from the Mestizo culture was commented upon several times (not always favourably) during our visit six months later.

Irigoyen's nearest medical competition was located in the county seat of Guachochic, about 30 miles (four hours by trunk) from Norogachic, and a town which in recent years has emerged as the transportation and commercial hub of the upper Tarahumara. At the time of our fieldwork, it had a population of at least 6,000, and possessed two government clinics and six resident doctors. The explosive growth of Guachochic had displaced nearly all the Tarahumara resident in the region, however, and these medical

facilities jad very little impact on the indigenous population. Besides, as the outer-most appendages of large cnetralized medical bureaucracies, the clinics often suffered from shortages of material and a rapid turnover of personnel. Neither of the clinics had surgical or hospital capabilities. Taking these factors into account, we can see that even the county seat with its six doctors was in reality medically under-served.

Dr. Irigoyen's presence in the Clinica San Carlos became more widely known in the region when he successfully performed minor surgery on a patient referred to him by one of the doctors in Guachochic shortly after his arrival. Word soon apread, and within a short time a steady stream of patients began to arrive in Norogachic to consult, not only from Guachochic but also from the wider region of the sierra for which it was the hub. Six months after Irigoyen's arrival at the Clinica, this movement had become so intense that regular bus service was installed on a bi-weekly basis from the county seat to Norogachic. For the first time in its history Norogachic was linked to the rest of Mexico by regular public transporation. The motivating force behind this transformation was the arrival of the staff doctor at the Clinica.

The benefits of the regular bus link, like the increased capabilities of the Clinica itself, rebounded on the whole community, so few Mestizos objected very strenuously to Irigoyen's identification with the Tarahumara, however aberrant they might think it to be. Direct access to the community from which they drew their supplies made it possible for Norogachic residents to buy at lower prices and select from a wider variety of goods. Naturally, the increased flow of patients also brought larger amounts of money into the community in the form of supply purchases at the local

stores, and money spent on food and lodging while visiting patients or consulting. These tangible economic gains were realized in greater or lesser degree by nearly every resident of the nuclear community, so everyone appreciated the "asset" which Irigoyen and the Clinica represented. The change in the community of Norogachic was swift and dramatic.

Naturally, in medical terms Irigoyen's success was due to his own skills as a professional. He was gifted and dedicated physician who won his clientele by therapeutic success. But it would be reductionist to limit the analysis to this level only. Irigoyen was also successful at an institutional and cultural level as an "anthropological doctor", and the results he obtained at this level agreed in large part with the hypotheses which had governed our selection of the locale for the experimental summer course in the first place, namely that the missing catalyst in the Clinica was the doctor himself, and that the successful doctor in the Clinica would require bi-cultural capabilities to go along with his medical skills. That the Monterrey students had not been the ones who effected the change was incidental, then; the situation which developed later abundantly vindicated our underlying interpretation of the institutional and community setting.

In comparing Irigoyen with the students who participated in the summer field project[6] (especially those in the second group), the fundamental difference which emerges (beyond the circumstantial ones of age and level of training) is the question of ideological motivation. There is no doubt that Irigoyen's strong religious convictions coupled with his desire to know more, participate in, and identify with the Tarahumara culture were powerful counter-balances to the objections which influenced the students' perceptions of the situation. The non-material ideological rewards which

Irigoyen valued so highly were not of comparable importance to the students, who evaluated the attrictiveness of the Clinica under different criteria (largely those of private practice medicine, as we shall see in the next chapter), and logically came to different conclusions. Ideological rewards, then, were the factor which swung the balance and broke the vicious circle, and anthropology contributed at least some of these rewards.

CHAPTER 6

IDEOLOGY AND VALUES IN MEDICAL EDUCATION

The Nahuatl educator ... was called te-ix-tlamach-tiani, "teacher of people's faces";

> He makes wise the countenances of others;
> he contributes to their assuming a face;
> he leads them to develop it ...
> Before their faces, he places a mirror;
> prudent and wise he makes them;
> he causes a face to appear on them ...
> Thanks to him, people humanize their will
> and receive a strict education
>
> Miguel Leon-Portilla, Aztec Thought & Culture (1963: 115), quoting from Codice Matritense de la Real Academia.

The Tarahumara experimental field course provided a number of new insights into the relevance of anthropology in medical education, and it also suggested some aspects of this relevance which needed to be explored more fully. In this chapter we will look principally into these additional aspects, but it is valuable to begin by showing how they emerged and became more evident through the experience in the Tarahumara.

The field course illustrated in a new and very different context from the Medical School classroom the value of ethnographic information both in designing the project and in guiding the medical students' learning experience in the field. Upon entering the medical school environment in Monterrey, we found very few ethnographic studies with which to compare it in the literature, and had to develop our ethnography from scratch. But the Tarahumara fell more clearly within the traditional concept of ethnography in anthropology, and had been the scene of many anthropological investigations. Our orientation class consciously sought to transmit this background information to the participants. The failure of the orientation class, and the apparent disinterest of the students in reading these

ethnographies should not blind us to the importance of this information, for the students were not, after all, anthropologists, and we were. We read this literature even if the students did not, and passed the information on verbally whenever the circumstances permitted or demanded it. We encounter here a question more of method than content.

Our ethnographic understanding of the Medical School context also guided the design and realization of the project in a number of ways. Knowing the role of the religious orders as one of the controlling groups within the University, for example, reassured us that the connection with the Mission was an appropriate one, and would ultimately reinforce an awareness of anthropology's relevance within the medical curriculum, and the University as a whole. Knowing something about parental attitudes toward their daughters in the Mexican family prepared us for the eventual and inevitable loss of the female participant-candidates, while knowledge of the professional milieu of medical practice and the "male" image of the career reassured us that the resulting all male group was not that unrepresentative of the medical profession as a whole. Knowing the urban backgrounds of the students and the type of urban medicine to which they were exposed in the Medical School alerted us to the cultural differences they would encounter in working in the bi-cultural rural milieu of Norogachic. In these and many other instances like them prior knowledge of the socio-cultural context of the Medical School was invaluable in informing the practical decisions which had to be made in guiding the project. One might even say that our final perception of the special relevance of anthropology in what we have called "anthropological medicine" was simply the end product of knowledge acquired about the problems which concerned the Mexican medical profession,

and our developing awareness of the image and activities of anthropology as a discipline in Mexican culture.

What was lacking from all of this, and which created the surprise when we contrasted the students with Dr. Irigoyen, was an appreciation of the importance which their personal attitudes and values could play. Our conception of ethnography did not lead us to weigh and measure the ideological make-up of the student group, and our idea of anthropological relevance in education was limited to the transmission of "objective" knowledge. It did not foresee that the project itself projected an implicit conflict between rural and urban medicine, and that the students would struggle more with this conflict than with the details of Tarahumara culture. As a result, the summer project left us with more questions than answers about the ways in which anthropology could clarify and resolve these conflicts, or whether indeed it had anything to say about these questions at all.

In this sense it appears that we fell into a trap which the medical milieu itself propitiated, for anthropologists have studied the values, attitudes and ideologies (both implicit and explicit) of other cultures quite extensively. Our own ethnographic description of the University of Monterrey included many elements, such as the existence and characteristic attitudes of the three controlling groups, which can only be called "ideological". Doctors, on the other hand, tend to reject the very existence of ideology and values in medical practice, or if recognized, prefer to ignore them and see (or keep) their medical ministration as "value-free". This seems to be the primordial characteristic of the "medical model", as it has come to be known in the social scientific

literature. In contrast, our anthropological view of Norogachic and the Clinica re-confirmed and heightened our awareness of how "value-laden" the medical environment really was, and how only the introduction of new values permitted the circle which had left Norogachic without a doctor to be broken, and open up fundamental changes in the health conditions of its population.

This realization pointed to a new kind of relevance for anthropology in medical education. If anthropologists were more sensitive to the role values and ideology might play in medical practice, was it not possible for them to sensitize medical students in these aspects as well? And would this effort not lead the anthropologist to a broader and more comprehensive understanding of the medical environment itself? Would this not constitute another area of general and necessary connection between the two fields? The Tarahumara project seemed to suggest that this was so, and that a more complete picture of the students' values, their attitudes and opinions, and their broad ideological position needed to be added to the ethnographic picture. It did not imply that these attitudes and values would be changed measurably by anthropological instruction, or that this should be one of its goals. It did seem obvious, however, that such instruction could not ignore values and ideology completely, and that anthropology inevitably made the medical students more "value-sensitive". The experience of projecting slides of the Tarahumara project and discussing it in class during the following semester tended to strengthen this impression.

The problem of pinning down this ideological framework was made more difficult because of its ambiguity in anthropological thought in general. As Geerts has pointed out "nowhere is resistance to claims to objectivity

greater than in the study of ideology." (1973: 195) The concept of "ideology" has acquired many different meanings in the hands of different social scientists, and its recognition depends, therefore, as much on one's definition. Leslie White, for example (1959), includes within ideology all of the intangible aspects of human culture, making it one of the three basic sub-systems of his anthropological theory. For other writers, ideology is a falsified version of socio-cultural reality conjured up for partisan purposes whose only relation to the social scientist is to delude him. Geertz seems inclined to take ideology as a multi-facetic symbol system which operates to organize social activities and relationships around common goals and meanings. It may be manifested simultaneously in a wide variety of cultural forms. An excessively formalistic emphasis on the "idea" alone, the pure symbol, leads the analyst away too quickly from flesh-and-blood life into a realm of pure abstraction, therefore some kind of action component must also be included in the concept of ideology to counterbalance this tendency. In Geertz's case this counterpoise is what he calls "thick description": "tracing the curve of a social discourse; fixing it into an inspectable form" (Ibid.: 19), a special kind of intensive ethnography which provides the kernel from which the more abstract analysis grows and develops. If we consider our account of the Tarahumara project as an example of "thick description" (although we did not present it as such), Geertz's method can be roughly applied to our data, and provides hints as to how its more abstract "ideological" dimensions can be clarified. In the preceding discussion, for example, we used the terms "ideology" and "ideological" to describe several aspects of the narrated events without making any attempt to define their intended

meaning more rigourously. We can now go back and disentangle these threads to see how they can be investigated more systematically.

First of all, we can detect an ideological polarity in personal attitudes arranged around the opposition of "liberal" and "conservative" norms. In referring to the gossip about our risque swimwear, for example, we made mention of Norogachic's strict code of conduct between young people of opposite sexes, and suggested that these norms were conservative when compared with the students' more "liberal" attitudes. Conservative here signifies "traditional", or unchanged, rather than being a political label, and refers concretely to a norm of distance, modesty, and formality within even the most intimate spheres of personal interaction. Knowing that the Monterrey students were generally more "liberal" in relation to Norogachic's "conservative" norms had practical significance within the project; it helped us to prevent further breaches like the afternoon plunge in mixed company which might have prejudiced relations with the community. More importantly, the students' sensitivity to this difference alerted them to watch for it in other social relationships. In this way they discovered for themselves that not only husbands and wives but even eight-year old playmates used the formal usted in their casual conversations. At parties and social gatherings, dancing together was rare because it implied a high degree of intimacy in public; even walking hand-in-hand down the street with a girl or boy-friend was tantamount to a marriage proposal in Norogachic. Conservative norms of modesty and distance in public social relationships applied to all forms of relationships considered intimate.

Liberal and conservative norms also entered into the work of the second group in more strictly medical contexts, whenever these contacts implied any

degree of physical intimacy. In at least one of these situations of medical consultation, the Monterrey students turned out to be the conservatives: they were surprised when the Tarahumara women showed no reluctance in having their breasts examined, since their previous experience with urban Mexican women had been the opposite. The problem of venereal disease, which was of considerable concern to many men in the community, could not be treated because such treatment would have violated perceived norms of intimacy in relation to the nuns in the Clinica. To deal with this problem would have required a much higher degree of confidence than the group was able to achieve in two weeks' stay in the community. In these and many other situations in consultation intimacy and trust was difficult to obtain because of Norogachic's traditional norms.

One can see from even these few examples that culturally conditioned norms of personal intimacy, which may vary greatly from one context to another, play a very important role in the doctor-patient relationship. Not only the patient but the doctor as well enter into the relationship with pre-established expectations, and guide their conduct (even unconsciously) in accord with their culturally prescribed norms. It is worthwhile to know, therefore, where the students stood on the liberal-conservative spectrum in relation to intimacy in social relationships.

A study of sexual attitudes administered as a class research project to his fellow students by one student who later participated in the Tarahumara project provides a partial glimpse into the area of intimate relationships. The research instrument consisted of ten questions (formulated with our aid) to be answered by a simple "yes" or "no". The questions were grouped around three main foci of interest, all of which

treat issues of intimacy: attitudes toward pre-marital sex (5 questions), attitudes toward contraception and abortion (3 questions), and attitudes toward homosexuality and the role of the male as exclusive bread-winner of the household (one question each). Around the first two foci the questions probed both ideal norms and real behaviour. The only other data collected was the sex of the respondent, which formed the basis for analysis of the answers. The questions and results for the sample as a whole, and for male and female respondents separately, are presented in Figure 7, and provide an interesting picture of the Monterrey students' liberalism-conservatism.

Since the questions themselves deal with intimate topics, the student who designed and administered the questionnaire was concerned from the start with the difficulty of getting honest answers. Anonymity of the responses was guaranteed, but it is still difficult to know whether an uninhibited response was achieved. The questionnaire was administered during anthropology class time so that it would be taken with the greatest possible seriousness, and no frivolity was in evidence during the administration. Moreover, on our suggestion, the student incorporated a statement at the beginning of the questionnaire to the effect that students who did not feel they could answer honestly could leave any question blank. No more than five students out of eighty-seven who responded abstained on any one question, thus providing a more concrete measure of the level of cooperation achieved. Another element of the test construction demonstrates a high level of rapport: all the questions were phrased by the student in the familiar tu form, rather than the formal usted. Most formal tests would use the usted form, whereas tu would be the normal form of address among the students. These elements all lend confidence to the responses obtained.

Figure 7: Personal Attitudes in a Mexican Medical Student Population

Total N of Sample = 87 N of Males = 51
N of Females = 36

Question: (Spanish Equivalent)	Positive Response					
	Males		Females		Total	
	N	%	N	%	N	%
1. Do you think that a woman should remain a virgin until she marries? (Consideras que debe una mujer ser virgin hasta que contraiga matrimonio?)	37	73	18	50	55	65
2. Do you believe that abortion should be legalized? (Crees que la aborcion deba legalizarse?)	22	43	12	33	34	40
3. Do you think that it would be a positive thing to have sexual relations with your girl friend (boy friend)?[1] (Crees que sea positivo mantener relaciones sexuales con tu novia?)	22	43	6	17	28	33
4. Have you had sexual relations? (Ha tenido relaciones sexuales?)	37	73	3	8	40	47
5. If you knew that a friend of yours was homosexual, would you try to break relations with him (her)? (Si tu supieras que quna amigo tuyo (amiga tuya) es homosexual (lesbiana), tratarias de romper relaciones con el (ella)?	17	33	10	28	27	31
6. Do you think that a man should be chaste until he marries? (Consideras que un hombre debe ser casto hasta que contraiga matrimonio?)	13	25	8	22	21	24
7. a. (Females only) Have you used contraceptives? (Ha usado anticonceptivos?)			5	14		
b. (Males only) Would you accept a woman as a wife even though you knew that she had had sexual relations with another person? (Aceptarias a una muger para esposa aunque tu sabias que ella ya habia tenido relaciones sexuales con otra persona?)	30	59				
8. Do you agree that the man should be the only one who works? (Estas de acuerdo en que el hombre sea el unico que trabaje?)	10	20	3	8	13	15
9. Do you think that contraceptives should not be used? (Eres de la idea de que no deben usarse los anticonceptivos?)	20	39	5	14	25	29
10. Would you accept that a daughter of yours have sexual relations with her boyfriend?[1] (Aceptarias que una hija tuya tuviera relaciones sexuales con su novio?)	12	24	8	22	20	23

[1] I am translating the term novio or novia as boyfriend or girlfriend. In actual fact the relationship is more formal, and there is no exact equivalent in American English. Traditionally in Mexico it would be equivalent to fiancee for either sex, but in the present generation the relationship is often undertaken without this degree of formal commitment being implied, and would be more nearly like "going steady". A correct English rendering would be somewhere between these two, with the exact point on the continuum depending very much on the individuals. I have here chosen to translate it - exclusively for simplicity's sake - under the generic term of boyfriend and girlfriend.

Turning to the results themselves, the questions about pre-marital sex introduce us to the sharply dichotomous sex role specifications characteristic of Mexican society, and to important differences between ideal and real behaviour. Sex before marriage is permitted and even expected of men, but strongly disapproved for women. The operation of this norm is seen most clearly at the level of actual behaviour: 75% of the men (median age 18) report having had sexual relations, while only 8% of the women admit to it. (This incongruency is explained, of course, by recourse to prostitutes.) That is, so to speak, the real situation. On the ideal level, we find that male pre-marital sexual experience is approved almost as strongly by the women as by the men; the women expect and prefer that their mate have sexual experiences. (Lack of such experience is ipso facto suspicious.) The major deviation between ideal and real norms occurs around the question of female virginity. On an ideal level slightly less than half of the female students think the woman need be a virgin at marriage, whereas three-quarters of the men think she should be. Thus, in their real behaviour, the women respond not to their own convictions but to male expectations. This conflict over female virginity is even more apparent when the question is brought one step closer to the altar by referring to ideal behaviour with one's novio, a relationship which many of the students maintained. Here almost half of the men felt that pre-marital sex with a novia would be positive, whereas only 17% of the women agreed. The men may approve pre-marital sex, but if they really intend to marry their novio, the women know better than to accept: the male must insist, but the woman must always refuse. Looked at from within the fraternal relationship, both sexes concur that pre-marital sex is not proper during noviazgo for one's

brother or sister. The typical role is for brothers to defend their sisters from the sexual advances of her suitors, lest the honour of her and the family be compromised. The overall results of this section of the questionnaire point out a strong dichotomy in sex roles which permits and encourages men to engage in pre-marital sex while strongly prohibiting it for women, and is overtly enforced by the value men place on virginity at marriage.

The constellation of norms which are revealed here have been the subject of extensive study by Mexican psychologists, sociologists, and other social scientists (Cf. Diaz Guerrero 1970). They are frequently referred to as the machismo (maleness) complex, which places the male always in the active, dominant role, and the woman in a submissive, dependent one. In terms of sexual behaviour, it places women into two mutually exclusive categories, "mothers" (or in the case of unmarried girls "future mothers") and "prostitutes". The operating principle of courtship as revealed in our responses is that the girl who concedes sexual favours before marriage is likely to do so afterwards, and disqualifies herself as a future wife and mother because of her untrustworthiness. The maternal female places her concern for her children and her allegiance to her husband first. These idealized relationships are repeated endlessly in all forms of popular Mexican culture from songs and jokes to television soap operas. They are also of great antiquity within the Hispanic cultural tradition (Cf. Fernando de Rojas' famous work "La Celestina", written in 1492, for one of its classic expressions). What the students offer in the questionnaire, then, is an idealized picture of male-female relationships which can only be called "traditional", and one which places them in exactly

the same stance as the rest of Mexican society.

If we place the students' sexual attitudes on a liberal-conservative axis, they can only be classified as "conservative", however different their norms may be from ones considered conservative in Anglo-Canadian society. Although a minority reject these traditional strictures, the vast majority still support and govern their behaviour according to them. While the students might not interpret or apply them as strictly as in Norogachic, the majority would not be in basic conflict with the conservative norms of that community. It is worth noting that after the swimming incident all of the students accepted our injunction against further compromising behaviour as ideally correct, once the variance in the way the norm was applied was pointed out to them. They understood how important correct conduct toward the girls in the community was, and fully comprehended the norms being applied by the community, because these norms were not really at variance with their own. In sexual conduct there was no cultural difference between them and the Norogachic Mestizos, at least. (Some possibility of differences exists in relation to the Tarahumara, but we have no data which refer to this.) The students' conservatism is not monolithic, however, since at least some have begun to question the traditional norms, and it is possible that some of the participants in the Tarahumara project (at least the student who designed the questionnaire) belonged to this minority.

More liberal attitudes are revealed in reference to situations not completely covered by the traditional norms. Since many of these situations relate directly to medical studies and practice, they are especially important, and suggest that social selection for them may promote or favour liberalization of certain of these traditional norms. Within Mexican

society as a whole, for example, contraceptive use has been very slow to gain acceptance, since it contradicts the traditional norms which value maternity above sexual pleasure ("mothers" above "prostitutes" in the terms just outlined). In contrast, amont the medical students contraceptive use is approved by 61% of the men, and an even more substantial 86% of the women. These statistics are even more surprising when we recall the University's (however loosely) Catholic affiliation. Obviously the medical students have been exposed as future professionals to information about contraceptives and the risks of abortion, miscarriage, and other pregnancy complications which has changed the traditional attitudes completely. They may be responding to government propaganda efforts to promote family planning in Mexico, to which they as medical students are more systematically exposed than the general population. The "official" position of the government has tended to call the traditional norms into question and is congruent with the students' views. (We shall have more to say about the government's family planning program in relation to the traditional norms of the general population in the next chapter.)

Another area in which the students show more liberal views is in their support for the working woman. The traditional norm of the woman in the home with the children is rejected by the overwhelming majority of both men and women students. Even in the first semester of studies, and taking into account the attrition of female students later in the career, the selection of a medical career carries with it an implicit recognition that a woman may work while raising a family, and need not sacrifice her professional interests for that reason. Future colelgial relationships between men and women doctors are clearly anticipated by both sexes.

Of the two other attitudinal questions, regarding abortion and homosexuality, the students' liberalism is more muted, but is present nonetheless when they are compared with the general population. In Mexican society as a whole both abortion and homosexuality are severely condemned. (Cf. Carrier 1976 for attitudes toward homosexuality; attitudes toward abortion were mainly probed in private conversations, as its practice is illegal throughout Mexico, and therefore goes without public comment.) This blanket public condemnation may be accompanied by some relaxation of attitudes in private, but in general most Mexicans regard abortion as a form of murder, and homosexuality (particularly male homosexuality) as an incapacity of tragic and sinister proportions. Thus, even though it is not the majority view, the fact that 43% of the men and one-third of the women openly declare that they favour legalization of abortion is in reality an indication of astounding liberalism among the medical students. A representative sample of the Mexican population taken at the same time would certainly have rejected legalization of abortion by a margin of at least 10 to 1. Similarly, the generally more open acceptance of homosexual friends appears to be much more liberal than that of the general population, and at least indicates greater frankness and candor about real behaviour. In both these areas it appears that the attitudes of the medical profession as a whole are more liberal, and that medical education and the adoption of professional role models has tended to liberalize the students' views when the prevailing norms in the society at large remain conservative.

Our analysis of the students' relative liberalism/conservatism has shown that where professional norms do not modify them, the students' views remain basically traditional and conservative, as in the area of courtship

and marriage. Selection for the medical career and enculturation into the profession tends to modify these views in a number of areas touching on medical practice, however, even at the very early stage of the career to which our survey data refers. Despite all professional denials, there does seem to be a distinct "medical culture" which at times may be at variance with that of the general population, represented in the medical context by the doctor's patient clientele. (On one occasion a Mexican doctor who taught embryology at the University commented to us about a male client who came to him to ask that he "certify" the virginity of a young lady he intended to marry. The doctor refused.) We recognize here a new and different use of the term "ideological", namely a set of beliefs and values developed in accordance with membership in the medical profession, which is intimately related to the process of medical education.

Examples of the operation of this professional ideology in connection with the Tarahumara summer course were evident. We mentioned, for example, the common view within the profession which held work in rural areas in low regard, and contrasted this with the obligation imposed by the Mexican government to perform a year of "social service", which attempted to re-distribute doctors toward rural areas. Earlier, in Chapter 3, we also spoke about an ideology of "private practice", akin to the ideology of private capitalism, and contrasted this in a number of ways with the attitudes of the public sector doctors. This sphere of ideological concerns is perhaps the easiest for the anthropologist to recognize and accept, since it corresponds closely to the sphere of political ideologies which have been the subject of social scientific investigation for some time. We need only add that we are concerned here principally with the medical configuration

of these ideologies which often involve special nuances of the issues.

Ideological symbols in this sphere respond basically to circumstances well beyond the intimate levels of inter-action, and serve to position the doctor within the larger society. This is not to suggest that they are in any way abstract, however, They affect the satisfactions the doctor will derive from his work, and the type of patients he is likely to see, even if he takes a position independent of ideologies, or disclaims responsibility for what the professional ideology prescribes. Our discussion of the issues surrounding rural medical work suggested that many factors were involved: personal motivations for medical specialization, economic expectations, and the social and cultural background of the individual, to mention only a few. Medical "ideology" of this type might include many mutually contradictory possibilities, and needed to be measured on many dimensions simultaneously.

Another student-devised questionnaire, administered in the fall of 1974 after our return from the Tarahumara, attempts to define some of these issues of medico-political ideology, as related to professional practice and medical education which were raised in the summer course. Because of the importance of the medical educational process in defining and changing these attitudes, the study was designed as a comparison between students in the first and ninth semesters of the curriculum. The instrument developed consisted of sixteen questions, several with sub-questions, which covered the topics thought to be relevant in scrambled form. In Figure 8 the questions are presented in de-scrambled order along with the results for the two samples.

Due to certain methodolgoical difficulties the comparison between the first and ninth semester groups must be interpreted with some caution, and

Figure 8: Motivations and Ideology in a Mexican Medical Student Population

N of 1st Semester Student Sample = 59

N of 9th Semester Student Sample = 50

Question:	1st Semester Students N	1st Semester Students %	9th Semester Students N	9th Semester Students %
A. Background and Predisposing Factors:				
1. At what age did you think about being a doctor for the first time?				
a) primary (6-12 years)	24	41	15	30
b) secondary (13-16 years)	30	51	19	38
c) prepatory (17 or older)	5	8	15	30
3. Do you have a relative or friend who is a doctor and who influenced you to study medicine? (Positive)	9	15	7	14
13. With whose political and religious ideas are you in agreement?				
a) parent's generation	2	3	0	0
b) own generation	12	20	7	14
c) both	24	41	25	50
d) independent	19	32	18	36
16. Which of the following motivations do you believe attracts students of medicine to become doctors?				
a) research		36	6	12
b) to be titled		17	8	16
c) economic prestige		27	27	54
d) social prestige		27	26	52
e) to help others		71	28	56
B. Basic Ideological Positions:				
11. Do you plan to practice medicine upon finishing? (Positive)	58	98	46	92
5. Are you in agreement with the way medicine is currently practiced?				
positive	28	47	9	18
negative	27	46	33	66
No response	4	7	10	20
2. In which of the following aspects do you believe that medicine could be reformed in Mexico? (Positive)				
a) medical education	47	80	31	62
b) reforms in government medical institutions	48	81	27	54
c) role awareness	49	83	34	68
d) socialized medicine				
positive	27	46	18	36
negative	21	36	11	22
No response	11	18	21	42
4. Do you believe that your religious ideas would influence your handling of: drugs, contraceptives, or abortion?				
positive	15	26	7	14
negative	35	59	33	66
Don't know	9	15	10	20

Figure 8: (Cont'd)

		1st Semester Students N	1st Semester Students %	9th Semester Students N	9th Semester Students %
C.	Medical Issues I: Social Service:				
6.	Are you agreeable to doing the obligatory year of social service? (positive)	48	81	34	68
7.	Do you believe that the social serbeing being undertaken on a national and local level has helped the population?				
	positive	41	69	24	48
	negative	5	8	10	20
	Very little	4	7	-	-
	No opinion	9	15	16	32
8.	In what place would you like to do your obligatory social service?				
	rural area	25	42	14	28
	urban area	29	49	23	46
	Don't know	5	8	13	26
D.	Medical Issues II: Specialization.				
9.	a. Do you plan to specialize? (positive) b) if so, in what country?	58	98	47	94
	Mexico	6	10	19	38
	U.S.A.	26	45	15	30
	Other foreign	15	26	7	14
	No response	12	21	8	16
E.	Medical Issues III: Physician Distribution and Rural Practice				
10.	Having received your degree, in what type of city would you like to practice?				
	over 500,000	9	15	7	14
	under 500,000	10	17	5	10
	75-100,000	10	17	5	10
	over 1,000,000	14	24	13	26
	Don't know	16	26	20	40
12.	If you marry, would your spouse influence your choice of permanent residence? (Positive)	28	47	10	20
14.	Would you like to practice in places where medical services are almost non-existent?				
	positive	32	54	9	18
	negative	20	34	32	64
	Don't know	7	12	9	18
F.	Medical Issues IV: Physician Remuneration				
15.	a. Do you think that the doctor today should earn: more	5	8	13	26
	less	-	-	-	-
	sufficient	53	90	36	72
	b. How do you believe that the doctors who earn less should resolve their economic positions?				
	charging more	3	5		10
	working more	39	66		46
	changing work	1	2		4
	don't know	16	27		36

did not yield the clear-cut measure we had hoped for. Changes in the University's admissions policy, content and emphasis within the curriculum, and teaching staff could not be eliminated, even though they are not germane to the issues themselves, and intervene to complicate the comparison. Additionally, the first semester students who developed and administered the questionnaire did not enjoy the same personal recognition among the ninth semester students as they did among their fellow classmates. Although anonymity was once again assured, the ninth semester students were suspicious that the answers to some questions, such as those dealing with social service, might be passed on in some way to the university administration, and many refused to declare an opinion. Nevertheless, these methodological difficulties tended to affect specific responses to certain questions only without necessarily warping the overall picture which emerged, and we can turn to the results with some confidence in their validity once these interpretive adjustments have been recognized.

The questionnaire included four items probing factors in the students' background which motivated them to enter medical school. The responses to these questions are characterized by great contrasts between the two sub-samples of students. Some of these contrasts establish real changes in ideological orientation as medical enculturation took hold, while others are artifacts of circumstances extraneous to ideology. On only one item do the two groups respond alike: neither was strongly influenced to enter the medical profession by relatives or friends who were doctors. This similarity is, as we pointed out earlier, largely a statistical artifact derived from Mexico's age pyramid. On all the other questions at least some contrast exists between the two generations. Whereas nearly half of the

first semester students had already decided to enter medicine before they entered secondary school, the ninth semester students showed an elevated number who decided in favour of medicine very late in their pre-university preparation. This difference is mainly a reflection of changes in admissions criteria and the pool of applicants from which the students were drawn, however, and has little significance for our ideological analysis. In contrast, the question on motivations for becoming a doctor revealed a particularly well-documented ideological shift between students at the beginning and later on in their academic careers. For the first semester students the "helping" motive is the predominant one by a wide margin, followed rather distantly by research interests. Social and economic prestige, still very far off for the first semester students, is admitted by only a few. The desire to help others, then, seems to be what lures students into the medical career. For the ninth semester students, now assured of becoming doctors, the question of social and economic prestige takes on added importance, somewhat at the expense of the helping motive but not to its complete exclusion. Perhaps the most startling result for the ninth semester group, however, is the very low interest expressed in research. One might naturally expect them to have developed some scientific interests in medicine in the course of their studies, but such is not the case. Actually, the result is very consistent with the available employment opportunities for medical research in Mexico, and is startling mainly in comparison with other countries, such as the U.S. and Canada, where different priorities and conditions of practice prevail. The final question in this section reveals a particularly interesting response configuration which measures the students' liberalism/conservatism and

relates it to the wider sphere of medical ideology. The question asks the student to express general agreement in political and religious questions along generational lines. The results show a slight trend toward greater perceived agreement with the parental generation among the older students, but in both student groups about half see no conflict. A consistent minority of about one-third see themselves as independent of generational influences from their own or their parents' generation. It is tempting to think of this group as the ones most susceptible to change toward professionally defined norms which might differ from both generations.

Another group of questions dealt with elements of the students' political ideology as they relate to medical practice. The results are somewhat surprising, and introduce us to a different area of contrasts and conflicts. Nearly all the students indicated that they intended to practice medicine, but neither of the student generations showed much satisfaction with the way medicine was being practiced. Despite their conservative personal views, both groups were on the face of it generations of professional reformers. The level of criticism is especially notable in the older and more experienced ninth semester students, indicating that additional exposure to the medical curriculum and clinical practice had heightened criticism rather than reducing it. It is even more impressive when we note the elevated refusal to respond to this question, most of which must be attributed to the negative column. Some contrasts can be noted between the two student generations. The first semester students, seeing a less sombre professional picture, are also more willing to consider the possibility of reforming it; the ninth semester students are more skeptical, although the majority continue to favour reforms.

How are we to explain this heightened criticism and reformist zeal in the professional sphere in a group of students who are otherwise basically conservative? The answer seems to lie in the conflict between the private practice ideology and the ideology of the public medical sector, for the bulk of the students' criticism is directed toward public sector medicine. The influence of a private practice orientation can be seen, for example, in the students' global opinion on socialized medicine, of which neither generation voiced approval. (The interpretative significance of this datum is somewhat clouded by the high suspicion factor among the ninth semester students - but this in itself is hardly a positive evaluation of public medicine from students who had been working in government clinics for some time.) Another question reaffirms the subordinance of religious ideology to professional criteria: almost two-thirds of the students indicate that religious ideas would not influence their handling of drugs, contraceptives, or abortions in professional situations. This confirms conclusively the liberalization of personal views around these professional issues.

In the area of motivations, attitudes and perceptions of the post-university training period, four issues were queried, all related basically to the option of rural medicine raised by the Tarahumara summer field course. Besides providing more concrete data on these issues, the responses also offer a possible measure of our own teaching impact - the only part of our data which lends itself to this kind of interpretation. Given our anthropological bias (conscious or unconscious), and the fact that we taught the first semester group but not the ninth, the distinctly more positive image of rural medicine among the first semester students is a shift in the predicted direction. More importantly, however, most of the

responses verify the basically negative student opinion on some collateral issues which affect hese attitudes.

Since the year of social service is a legal obligation, the fact that almost a third of the ninth semester students reject the obligation is a sign of considerable discontent, especially when less than half of the same group evaluate the overall effects of social service positively. The first semester students express a more positive evaluation of social service, but then again the obligation is still far away for them. The proximity of social service assignments also seems to have contributed to the suspicious "No Opinion" registered by almost a third of the ninth semester sample. It would be incorrect to explain this response solely in terms of rural medical practice per se; obviously a broader attitude toward public sector medicine enters in. The presence of an increasingly negative image of rural medicine is amply confirmed, however, by noting the differences between the first and ninth semester students' responses.

When the possibility of working in a rural area is put still more straightforwardly, the negative image of this alternative receives further confirmation. The responses on the size of city in which the students would ultimately like to practice shows no rush to the smaller cities should be expected. (The results here are somewhat confused in the comparative sample by the large uncertainty factor among the ninth semester students, who were actually facing social service assignments.) An additional question on work under conditions of physical isolation typical of rural medicine revealed a particularly sharp change between the first semester students, who were more enthusiastic to accept the challenge, and the ninth semester students, who saw the obstacles mentioned earlier as more important. Only 18% of the

upper level students indicated interest in working in isolated conditions, suggesting that the Tarahumara participants were drawn from a decidedly small group among their classmates, and were hardly representative of them as a group. They would also represent the potential appeal of "anthropological medicine" as a course theme.

The two remaining issues covered in the questionnaire deal with professional choices still a way in the future even for the ninth semester students: specialization, and preferred strategies for maximizing personal income. The response configurations to both of these questions can be related fairly closely to the implantation and perpetuation of the private practice model of medicine, and the conflicts generated between it and the state health apparatus.

There is universal assent, first of all, for the need to specialize. For the students of both generations this specialization should ideally take place in the U.S.; if not there, in some other foreign country, and only as a last resort in Mexico. This is exactly the profile given by the first semester students. For the ninth semester students, now facing the more realistic questions of costs, admissions requirements, and test scores, Mexico is the most likely place they think they will specialize. Even at this level of planning, among those ninth semester students who indicated a choice of country, more students aspire to specialize outside the country than within, and the U.S. is the desired destination of almost one-third of the total. (This questionnaire was administered before recent changes in U.S. Immigration policy relating to medical interns, residents, and doctors with overseas titles, or entrance of foreign doctors into the U.S.) The private practice model is reinforced principally, then, by an

exodus of Mexican doctors to the U.S. and Western Europe for specialist training, whose completion gives the doctor both the prestige and the clinical training to develop a private practice around his specialty. Even though only a few will actually be able to follow this course, it remains the ideal pathway to professional success for nearly everyone.

The question of remuneration presents the students with another area of ambiguity between the private practice model and the state medical system. Although a large number of students are simply perplexed by the question of raising income, a small but consistent shift can be observed between the beginning and the end of the professional training period. The ninth semester students are less convinced than the first semester students that the doctors' earning are adequate, and they are less convinced that working harder will make a difference - a judgment undoubtedly conditioned in part by their experience of how the public medical sector works. Thus, we see that the students begin their career with a typically capitalist orientation to private practice, in which working more resolves economic difficulties, but by the time their medical training is finished, they are less sure that such a strategy is sufficient.

In summary, we note that there is a progressively growing awareness among the students of a basic conflict on the level of career patterns in the two forms of medicine practiced in Mexico: public medicine and private practice. Students entering the University of Monterrey are normally predisposed by their own socio-economic backgrounds (and probably the private character of the institution itself) toward the private practice model, and medical training, part of which is carried out in public clinics and hospitals, introduces them to the alternative system from within for the

first time. There are no simple solutions to the conflict generated, and even the older students were still struggling to align themselves within these two medico-ideological frameworks. In their personal attitudes the students seem to be essentially conservative, but there is a consistent liberalization of views of questions which are closely related to medical practice (abortion, contraceptive use, etc.), where a more persistent liberal minority is identifiable in certain responses. Still, it remains ambiguous to what extent liberal or conservative views in the personal sphere are related to later identification with either of the two models of practice, or how the ideological conflict between the two systems is resolved. While we are not completely prepared to answer these questions, some additional information on the values of the students provides clues, and introduces us to a third application of "ideology" in our accounts of the Tarahumara summer course and the medical education setting.

Beyond the ideological factors in the professional and overtly political spheres, we made reference to ideologies in their purely intellectual form as systems of thought in and of themselves independent of any particular context, or the behaviour of any particular individuals. Ideologies in this sphere are most easily distinguished by the fact that they are universalistic in their language and principles, and global in scale and scope. Within the Tarahumara field situation the ideology of Catholic Christianity offers one relevant example, and the Marxist socialist ideology mentioned in connection with Cuba's re-motivation of medical students to work in rural areas would be another. Although these super-ideologies exist at a very high level of abstraction when viewed as pure symbol systems, they are not necessarily fuzzy and far-removed from daily

events. The reconversion to Catholicism of Dr. Irigoyen illustrates very well how these ideologies can reorganize attitudes and change the individual doctor's perspectives by providing a new motivational context.

Anthropologists who have attempted to deal with the articulation of these ideologies have often used concepts such as "values" and "social norms". The task of defining and measuring these values has not been an easy one (Cf. Edmonson 1973), since it is very easy for the analyst to fall into the ethno-centric trap and mistake his own values for those of his informants, but some progress has been made. If we accept the study of values as a viably objective endeavour, we may ask what kind of values are present in Mexican society which might affect the work of the physician? What kind of values does the physician himself manifest, and in what specific situations would these values come into play? More importantly, how are these values inculcated or modified during the course of medical education? The narrative of the Tarahumara experience revealed the students' values only obliquely, and make it a less than perfect source of information, but an ex post facto analysis of data collected for other purposes in Monterrey sheds considerable light on at least one key value: the value of respect.

Our research on student values derives from a re-study among the medical students using an instrument designed some fifteen years ago by the Mexican social psychologist Rogelio Diaz Guerrero to study the value of respect comparatively in Mexican and American cultures. We began to apply this instrument to the medical students as a practice exercise in association with the unit on methodology in the regular Social Anthropology course. Our attention was called to it because in the original study a sub-sample of

students from Monterrey was included. The instrument was administered unannounced in anthropology class time, and the results and methodology were discussed in subsequent classes. If this could be called a research effort, its only intention was to check the applicability of the earlier results to the medical student population. The up-shot of repeated administrations, however, were results sufficiently at variance with the original study as to raise some interesting new questions. These results are summarized in Figure 9 around a new analytic model whose derivation we must now explain, leaving the application of the results to medical practice situations as the theme of the chapter following.

Diaz Guerrero and Peck's instrument consists of an open-ended list of 20 possible meanings, or applications, for the word "respect" (respeto) to which the informant simply indicates acceptance or rejection. The intention of the original study was to establish contrasting significances for the word in two national "core cultures" and explore an acculturative mixture of these meanings in the border zone between the two cultures. The respondent population was therefore drawn from over 1800 high school and university students in four locations arranged along a geographical/acculturative axis: Austin, Texas; Edinburg, Texas in the Rio Grande Valley; Monterrey, N.L.; and the capital of Mexico. The analyzed results revealed statistically significant differences between the American and Mexican sub-samples on 17 of 20 response items, providing an impressive vindication of the idea that "core cultural" differences did not exist. The interpretations of respect statistically associated to each national "core culture" are summarized in column six of our figure. Diaz Guerrero's characterization of these core cultural differences is as follows:

Figure 9:

Figure-9: The Value of Respect in a Mexican Medical Student Population.
Sample N: 200 (M=128; F=72)

Range	Rank Order	Statement	Positive Response	Percentage	Acculturative Category	Thematic Category
Primary	1	To keep from trespassing on somebody else'srights. (13)	182	91%	Mex	Privacy
	2	Not to invade sombody else's privacy. (19)	168	84%	-	Privacy
	3	To love somebody. (4)	147	74%	Mex	Positive Emotion
	4	To be considerate of somebody else's ideas. (18)	137	69%	Am	Privacy/ Pos. Emotion
	5	To be considerate of somebody else's feelings. (17)	134	67%	Am	Privacy/Pos. Emotion
	6	To avoid interfering in somebody else's life. (20)	127	64%	Mex	Privacy
	7	To be willing to treat someone on equal footing. (5)	125	63%	Am	Equality
Secondary	8	To look up to someone with admiration. (1)	98	49%	Am	Admiration
	9	To feel admiration for some one. (8)	95	48%	Am	Admiration
	10	To give someone else a chance. (6)	92	46%	Am	Equality
	11	To feel affection. (7)	82	41%	Mex	Positive Emotion

Table (cont.)

Range	Rank Order	Statement	Positive Response	Percentage	Acculturative Category	Thematic Category
Tertiary	12	To feel a certain degree of protectiveness toward the respected person. (11)	54	27%	Mex	Protection
	13	To feel you like to obey someone. (14)	49	25%	-	Obedience
	14	To anticipate a certain degree of protection from the respected person. (9)	42	21%	Mex	Protection
	15	To feel it is your duty to obey someone. (16)	41	21%	Mex	Obedience
	16	To feel you have to obey someone, whether you like it or not. (15)	40	20%	Mex	Obedience
Rejected	17	To look up to somebody with awe. (2)	17	9%	Mty	Negative Emotion
	18	To fear somebody. (3)	16	8%	Mty	Negative Emotion
	19	To anticipate the possibility of punishment from the respected person. (10)	8	4%	-	Negative Emotion
	20	To dislike somebody. (12)	7	4%	Mex	Negative Emotion

> The American core culture describes the relation of respect as a relation among equals. Thus it appears that one can admire and consider another person as superior, perhaps in a specific attribute without feeling generally inferior or sub-ordinate. In truth one receives the sense of security and confidence in the emphasis on giving the other person "opportunity" and in being considerate of his sentiments and ideas. The relation of respect is much less impregnated with intense personal emotion for the Texas students ...
>
> The Mexican core culture appears equally consistent and rather different. It paints respect as an extremely intimate relationship, which involves to a high degree strong personal sentiments. For some, part of this sentiment is negative, in opposition to the very positive emotions of love and affection which are expressed by the majority..The core culture tends to be within an authoritarian model. In contrast with the American model, the Mexicans paint the relation of respect as a network of obligations and reciprocal interdependencies set in a mold of hierarchies, with strong emotional involvement to support it..
>
> (Diaz Guerrero 1972: 115-16)

We would generally agree with these contrasting characterizations, although questioning whether Texans are really representative of the whole U.S. population, but their derivation from the data is not always clear, and they may be the result of "prior knowledge" as much as of the study results themselves.

Furthermore, Diaz Guerrero found peculiar features in the responses of the Texas Mexicans and of the frontier cities (Edinburg, Texas and Monterrey, N.L.) which he attributes to the effects of acculturation. Of special interest to our study are two responses (indicated in column six of the Figure as "Mty") which are at variance with both national core cultures. Diaz Guerrero interprets them as suggestive evidence of the negative repercussions of American acculturation in Monterrey.

> It is only in Monterrey in which an appreciable number of students associate the idea of respect with submissive veneration and with fear. In Edinburg and Monterrey there also exists a significantly higher number of votes for the "anticipation of punishment" and the "desire to obey". In this constellation there is an almost sado-masochistic aura.. Can this be one grain more of evidence for the acculturative stress which the frontier zones suffer? (Ibid.: 118)

Diaz Guerrero stops short of emitting a final answer to this rather ominous question of acculturative stress, but, by invoking familiar stereotypes of Monterrey as an "Americanized" city within Mexico (Ibid.: 110; Cf. our comments in Chapter 2), he strongly suggests that this interpretation is correct.

A look at the results of our survey, which are rank ordered, shows the responses which Diaz Guerrero took as indicative of stress in his Monterrey sample are among the least chosen. It was this discrepancy which first prompted us to look further. What could have happened to this acculturative stress in the interim? Surely the international frontier had not moved.

Combining the rank order with Diaz Guerrero's core culture characterizations also revealed a pattern far more erratic than that suggested by the earlier study. Two of the three most highly accepted interpretations ("To keep from trespassing on somebody's rights" and "To love somebody") are important Mexican interpretations of the value according to Diaz Guerrero, but the second most common interpretation is not associated by him with either core culture. Furthermore, three of the six interpretations accepted by a simple majority are associated with the American core culture, and no item associated with the American core culture received less than 46% response. On the other hand, a number of "Mexican" interpretations were tertiary in our survey, especially those dealing with protection and obedience, which Diaz Guerrero mentions in support of his argument for an authoritarian tinge to respect in Mexico. These discrepancies between the two administrations pointed to a methodological and theoretical problem in the original study, we believe.

Diaz Guerrero and Peck's theoretical model of core cultural comparison pre-groups the responses before analysis into dichotomous national samples. This means that methodologically any answer which is given more frequently in one sub-sample than the other at a given level of statistical significance is assigned to the value configuration of that group, whatever its rank order importance. Thus, an answer given rarely by Mexicans, but even more rarely by Americans, might be labelled "significantly" Mexican when in fact it had little importance for either national group. It seemed that in drawing the national core cultural comparisons, any rank ordering process within each sample had been left out. At least we find no reference to it in Diaz Guerrero's published work. When rank ordering is included, a number of "accultural trends" are thrown into question, and the Mexican characterization of the value is developed with some changes in emphasis, for the responses did seem to develop a consistent interpretation of the value nonetheless.

To get at this other interpretation of respect, a thematic content analysis was made of the response phrases. Although Diaz Guerrero's methodology treated each possible response as an essentially unique item, on closer inspection it can readily be seen that certain key words, which serve as thematic indicators, are repeated in more than one phrase. (Cf. Opler 1945 for discussion of "themes".) By identifying these key words the alternative statements could be grouped (with only minor difficulties) into seven still broader thematic categories. This thematic approach seemed to recommend itself because it focussed the analysis on the question of the word's meaning, which is what the instrument is designed to measure, rather than on acculturation and the geographical distribution of the samples. It

thus avoids tenuous and possibly erroneous correlations with a phenomena - acculturation - which may well be of a different order entirely. After all, just how representative are eighteen hundred teenagers of the values of a combined national population of over 275 million anyway?

In columns 2-5 of our Figure the vlue profile (with key words underlined in column 1) is summarized according to rank order. The responses seemed to fall naturally into four general ranges of acceptance with relatively sharp breaks (11-14% spread) between each range. The following characterization of the ranges can be given:

Primary - interpretations accepted by a wide majority (63-91% of the sample;

Secondary - interpretations accepted by a significant number of students but less than a majority (40-49%)

Tertiary - interpretations accepted only by a minority of the students (20-27%)

Rejected - interpretations accepted so infrequently as to suggest conscious avoidance (4-9%)

This rank order profile was remarkably stable from one student generation to another, differences on any single item in the scale rarely exceeding 5%. Rate of response was also very stable, with an average of 8.3 responses accepted for the entire sample.

Employing the thematic approach and combining it with the rank ordering, two dominant interpretations of the value of respect emerge in our medical student sample. Each of these meanings corresponds to a different sphere of social intimacy, so we may understand their relationship as the application of a common value to these spheres. Within the sphere of more intimate social relations, the most widely accepted meaning stresses love and consideration for the other person as its most essential ingredient.

In the public sphere of interaction this value is transformed into the respect for the rights and privacy of the individual. The latter theme, which represents the public obligations of respect, is the only one which approaches near universal acceptance among the medical students.

Although equality between individuals is another theme of importance, it is clear that it is additional to the basic concept of individual privacy and is expressed only by certain individuals. (In line with the acculturative hypothesis one would like to know whether these are the same students who are attracted to Houston for medical residency, but we can not be sure.) Status differences are very evident in many areas of Mexican life, and the assumption of equality is not the cement which holds the society together. Rather it seems that the respect for individual privacy might be so highly valued precisely because it provides a formula for reducing conflicts between individuals of manifestly unequal status. Inequality is consciously recognized in Mexico, and by reference to the value of respect is brought under social control. The negative application of the word in social interaction - "you are not respecting me" ("no me respetas") - immediately signals invasion of privacy, and is a serious social warning.

The other themes - protection, admiration, and obedience - which play such a large part in Diaz Guerrero's Mexican core cultural characterization - are all of secondary importance in our survey, obviously referring to interpretations of the value held by some individuals but not by the collectivity of the students.

It should also be noted that neither of the two major themes expressed in our survey are missing in Diaz Guerrero's analysis; they are simply

obscured by the attempt to interpret the results exclusively in terms of acculturation. Nor does the addition of a thematic analysis imply that acculturation must be rejected altogether; a number of plausible acculturative explanations of the variance between the two studies can be postulated.

Perhaps the most appealing of the acculturative explanations is that real changes in value orientations have taken place in the decade intervening. This explanation of the results was often favoured by the students themselves when the survey results were discussed in class, and it seems to be borne out at least superficially in certain social situations. Even in such a short span of time Mexico has undergone sweeping transformations. The rapid spread of mass media and universal primary education have exposed the present Mexican student generations to new ideas and attitudes on an unprecedented scale. Urbanization and industrialization have been particularly explosive in Monterrey, as we have seen, and it is possible that new circumstances arising from these processes have eroded somewhat the authoritarian patriarchal family called "Mexican" by Diaz Guerrero, in which obedience and punishment served to buttress respect for the established family order. Nevertheless, this idea runs counter to ones common sense notion that values, such as "respect", would be a relatively stable part of a "culture core" and experience only minimal change over short periods of time. (Some pilot studies using the instrument with contrasting generations gave different responses for each generation, and applications in other professional careers, such as education, have shown some interesting variations. We are unable to demonstrate a link of either of these to acculturative effects as yet.) It

also begs the interpretation of the two major themes in the "respect" value concept - love, and respect for individual privacy - which are the same in both studies.

The results of our re-study indicate that the phenomena of acculturation alone does not explain the configuration with the value of respect takes, nor the changes it may have undergone. While acculturation of values may be occurring (we can not rule it out), it seems much more obvious that a parallel process of enculturation is taking place which establishes and maintains continuity in basic values. This enculturative process is most readily visible in Mexican culture in two institutional areas: the centrally-controlled public educational system, and the public civic symbols manipulated by the political parties in slogans and government propaganda. Our earlier analysis showed that in the medical student sample it was here that near universal levels of meaning acceptance occured.

When we direct our attention to this sphere of symbols, we find a particularly familiar expression about "respect" in Mexican culture which very closely approximates the sentiments which receive the widest acceptance in our sample. The phrase "El respeto al derecho ajeno es la paz" ("Respect for the rights of others is peace"), attributed to Benito Juarez, comes as close as normal textual criteria would demand to expressing the idea of not trespassing on others rights which received over 90% approbation. It is a phrase known by literally all Mexicans. One finds it graven on monuments and public buildings all over the country (one example is above the entrance to the Normal School of Coahuila in Saltillo), and which was also extensively publicized by the Mexican government during the patriotic celebrations of the "Ano de Juarez" in 1972, one year before our

fieldwork began. Thus, we can appreciate that powerful enculturative forces directed in the public sector had recently been mobilized to put forward this meaning of respect. The results of our survey show how eminently successful this effort had been - at least on the level of ideal values. It is not necessary to introduce acculturative influences to explain the students' responses. An even more economic enculturative explanation is much closer at hand.

A chance observation of a poster on a bulletin board in one of the religious preparatory schools affiliated with the University that the schools might also play an important role in translating this value from the public to the private sphere. The poster directly paraphrased Juarez to announce the most widely accepted meaning of respect within intimate social relationships: "Respects for the rights of others is love." In this integration of Church and state ideology we begin to appreciate some of the symbolic power of this celebrated adage within Mexican culture. This value represents a point of common agreement between ideologies which as recently as four decades ago divided and shattered Mexican society, and its reiteration re-affirms that fundamental agreement.

We can also appreciate that the value is compatible with the ideology of private sector capitalism as well. The liberty which Don Eugenio Garza Sada's ancestors sought in order to build their private fortunes was in fact granted by Juarez's liberal constitution, and the respect for private property, while violated or abused on occasions, has never been retracted by the central government. It is part of the new social compact which healed the wounds of a weak and divided Mexico after the French intervention, and established the institutional foundations of the modern

Mexican state. Private enterprise never tires of repeating the value of respect for individual rights, since these same rights will be extended by inference and law to the corporations these individuals create. They can be applied to corporate actions as well as individual ones.

The concept of respect for the rights of others can thus be appreciated as one of the central ideological concepts which binds together modern Mexican society. Distinct factions within the state (represented by the "sectors" within the official political party) which may be in violent conflict with each other over specific policy issues find common ground in this fundamental assumption about inter-personal and inter-group relations. Within the complicated and dynamic society which is Mexico today tests of this central value go on almost continually, and the value itself acquires a living quality through repeated use as a criteria of individual fairness and social justice when conflicts occur. "To respect" and "to be respected" are essential qualities for being considered a fellow human being, just as the loss of respect is the ultimate social calamity.

Having reached this level of abstraction, we may now pause and consider what all this could possibly mean for the teaching of anthropology in a private medical school in Monterrey. So deposited once again on the solid ground of ethnography, we find that some surprising new insights come into view about one aspect of the medical fieldwork course. These insights help us to apply the lessons of a classroom exercise into the more dynamic context of clinical practice and professional enculturation.

CHAPTER 7

VALUES IN ACTION IN A PUBLIC HEALTH VACCINATION CAMPAIGN

> ... When the singer was half-way through his song, the whole army was already humming the tune; when he finished, there was a moment of silence in its dying echo.
> "We are fighting", said Isidro Amaya, "for liberty."
> "What do you mean by that: for liberty?"
> "Liberty is when you can do what you want!"
> "But suppose that this harms someone."
> He answered me with Benito Juarez's great phrase:
> "Respect for the rights of others is peace!"
> I wasn't expecting such a thing. This idea of liberty surprised me from a barefoot mestizo. I consider it the only correct definition of liberty: do what you want. Americans pointed it out to me with an air of triumph as an example of Mexican irresponsibility. But I believe it is a better definition than ours: liberty is the right to do what the law ordains. Every Mexican child knows the definition of peace and they seem to understand what it means, too.
>
> John Reed, Insurgent Mexico (1914)
> (Translation from Spanish Ours)

In the previous chapter we identified two widely-accepted meanings of the word "respect" among the Monterrey medical students. These two facets of the value concept stressed first respect for the personal autonomy of the individual in public interactions, and then respect in more intimate personal relationships as a loving relationship. We further established that these values did not necessarily imply a relationship between equals. Rather, it marked a threshold point between unequals beyond which friendship changed to hostility. These value interpretations were not peculiar to the medical students either; their sentiments appear in widely-known public symbols, and appear to be systematically enculturated in the schools. They are, as Diaz Guerrero would have it, at the "core" of Mexican culture. It will be the objective of this chapter to define and explore its presence in medical settings as an operating factor in medical social relations, and to

show how it was enculturated during professional training.

Naturally, respect, like any cultural value, is multi-faceted, and enters the work of the doctor in many ways. To begin with, the doctor-patient relationship is expected to be a "respectful" one at least ideally. The patient, sick and in need, enters the relationship by "submitting to treatment"; he is the dependent partner in the unequal relation, the grade of dependence being conditioned by the perceived gravity of the illness. The physician learns to accept and manage the patient's dependence, and exercise decisive authority on the patient's behalf. This inherently involves negotiation of the patient's autonomy for which the value of respect is an applicable measure. If the doctor does not respect his patient's autonomy sufficiently, the relationship ceases to be respectful on both sides; the patient may retaliate by cutting off the therapeutic relationship and looking for another doctor, not complying with the doctor's instructions, or bringing in family members or friends to defend him. The definition of respect is thus a key element in all aspects of the doctor-patient relationship, and all "agreements to treatment" serve to define it in concrete terms.

Among both doctors and patients there are variations in individual willingness to surrender (or take up) authority, and as a result the ideal relationship of respect described above is subject to various pathologies. If the doctor is unsure of his authority, he will be unable to convince, or may suffer a fatal hesitation in a moment of crisis. He may also meet his pathological opposite among patients, the "authoritarian" patient who already knows what is wrong and what should be done, and simply wants the doctor's acquiescence. The authoritarian patient aggressively invades the doctor's autonomy, and forces agreement. Doctors cease to respect the

patients' complaints when this occurs; such patients become the "crocks" who waste the doctor's time and for whom he can do nothing. Other doctors take advantage of the patient's dependency to bolster their own sense of authority. They are natural autocrats who find medicine a convenient setting in which to demonstrate their prowess. The only patients they can tolerate are the abjectly weak and submissive, patients too powerless or poor ever to question the doctor's orders, even if they are dying from the medicine he administers. These pathologies, all present in the clinical practice situation, help us appreciate how important the negotiation of a respectful doctor-patient relationship really is.

Where this respect has been less well-recognized is in the doctor's relations outside clinical consultation in the community. Prevention and detection of illnesses in the community, the task of public health, also require a negotiation of respect between the doctor and his community clientele, in order for the medical task to be accomplished. Our data will take up the negotiation of respect in one of these community settings, in which the patient's dependency is less than in the clinical setting, the house-to-house vaccination campaign. This context recommends itself because public vaccination programmes are a well-established medical public health measure of great importance to the control of certain afflictions, and are in use throughout the world wherever scientific medicine is practiced. They are also relatively accessible to observation by non-medical social scientists, such as anthropologists, in contrast to many other medical procedures, such as surgery, which are normally closed to observation by outsiders.

This context also recommends itself because our data on the value comes from the same student sample in both cases. The same students who answered

the questionnaire on the meaning of respect also participated in the vaccination campaign. The information from one context can be related with greater confidence to the other. Knowing how they understood this value, we can see how the students learned to use it in their negotiations with the community. Our data refers to a context of medical enculturation, and our normal supervisory duties provided all the justification necessary to establish our observer role. From this role we were able to see how the students applied the value of respect in the primordial scene which their incursion into the home provoked.

To this we shall add data of a very different type -- the account of a political incident in which the question of public vaccination became linked with the controversial question of birth control, and provoked a grass-roots protest movement. This information is drawn from the newspaper accounts of the incident, which drew both local and national attention, which we can occasionally supplement with comments from students and faculty of the University who were actually working in the communities involved in the protest. These two sources corroborate each other in all major details.

At first glance it might appear that the two types of data are only circumstantially related. From our analysis of the primordial vaccination scene, however, we hope to show the value of respect provided a hinge which transformed acceptance into rejection when a threat to personal autonomy was perceived, and the doctor became an invader. When viewed in this perspective, the vaccination scene and the political incident are mirror examples of the same phenomena, first on the micro-social level of the family and then on the macro-social level of the community, and the two types of data become mutually illuminating instances of negotiation of respect between the

medical professional and his patient-client.

Three role components need to be identified in the social structure of the vaccination situation before we proceed to the ethnographic description. Each role component produced a somewhat different perception of the situation itself. The first component is the role of the medical students qua doctors, derived from their professional training; the second the pre-existing attitudes and expectations of the patient vaccinees and their community, derived principally from past experiences and popular stereotypes; and third, the educational objectives of the medical school as an institution in programming such activities as vaccination campaigns as part of their teaching effort. The different perception of vaccination which each of these roles embraced go a long way toward explaining how conflicts and crucial misunderstandings could develop in even this apparently simple social situation.

We shall begin with the doctor's view of vaccinations. For the scientifically-trained physician (and the medical students learning this role) vaccination is one of the simplest and most indispensable procedures of modern medicine, and he has a hard time understanding any other reason than ignorance for rejecting it. Medically-speaking, its importance is undeniable in preventing and controlling many epidemic diseases; it should be recalled that there is still no "cure" for tetanus or poliomyelitis except preventive vaccination. The relatively low cost and technical simplicity of vaccinations make them an especially important part of health services in developing countries. Vaccination is often one of the first scientific medical procedures to become widely known in these countries. The ability of vaccination programmes to reduce -- sometimes dramatically -- the incidence of

certain common illnesses makes it ideal as a 'pioneer' of scientific medicine. Under these circumstances the role of vaccination as a molder of public opinion toward scientific medicine cannot be underestimated. Vaccinations are inseparably linked by all scientific physicians to basic epidemiology and public health, and from the medical point of view to question their value lies somewhere between lunacy and heresy.

Nevertheless, the physician's view of vaccination is nearly always fixed on the narrowly biological pinprick, and makes little if any attempt to take in other cultural meanings which the pinprick might have for the patient. Thus, R. Carruthers (Med. J. Aust., June 7, 1969:1174-77) discusses the best site on the body cosmetically to apply the vaccination so as to hide the disfiguring mark without ever mentioning culturally different concepts of beauty. Foege and Eddins (1973) consider the choice between alternative vaccines in terms of their storage characteristics and ease of application. Different types of vaccination equipment are usually extolled in terms of their rapidity.

Even when the scientific doctor focuses his attention on social and cultural factors, he is frequently unable to perceive them from any other role than that of the doctor. The correctness of scientific medicine is unquestioned, and details of the situation obvious to the anthropologist go unperceived. For example, Imperrato (1969) discusses the socially important problem of selecting an appropriate site in the community in which to vaccinate. Based on his field studies in the Mali Republic, he determined that market places were the best places for the highly dispersed population because of their common accessibility. It is important to realize that the vaccination site is flexible, but the social perspective added is only that

which is compatible with the medical point of view. His discussion makes only casual mention of the police constables who stood beside the vaccinators, and never explains their role within the vaccination situation. Legal power at the doctor's side remains invisible because it does not fit into acceptable medical ideology. Similarly, Challenor (1971) describes how religious beliefs associated with the Shapono cult in Nigeria conditioned response to a smallpox vaccination campaign, but he does so without ever taking these beliefs as culturally logical alternatives to scientific medicine. Religious beliefs are only an impediment in applying an absolutely rational scientific solution to the problem (cf. Cohen 1977 for a contrasting approach in connection with smallpox eradication in Ethiopia -- cited in M.A.N. August 1977:9).

This bias becomes even more apparent when attention is shifted from descriptions of successful campaigns to examples of vaccination evasion or rejection. These are rarely reported in the medical literature, and official statistics are hard to obtain. Nonetheless, active participation with the student vaccination teams in Monterrey provided many dramatic illustrations of their difficulties in convincing people to cooperate, the negative reactions these efforts sometimes aroused, the relative frequency with which non-biological factors influenced prospective recipients and led to ultimate rejection. At least one study of a cholera campaign in the Philippines (Azorin and Alvero 1971) confirms almost 20% of the population simply refusing to receive the vaccine -- approximately the same percentage as we observed. If opposition or rejection of vaccination is one of the great unspoken problems in public health medicine, this is not because of its rarity but rather the open clash it produces with accepted medical opinion.

Medical professionals are committed by definition to promoting and demonstrating the value of vaccinations. When resistance is encountered, the professional views it simply as a "throw-back" to pre-scientific fears like those met at the beginning of the 19th century when scientific vaccination was first being introduced. Those who resist, the argument runs, have not caught up with advancing knowledge and don't understand that they are being helped rather than hurt. (During the protest incident to be discussed shortly, one University faculty member, who was also a public sector doctor, described the community's attitude as "medieval".) Since resistance to vaccination is irrational, the light of reason should dispel such doubts and fears; once the target population has been properly informed, it will naturally cooperate. Here, the doctor's role shifts from healer to educator, and proselytization replaces demonstration until the clouds of ignorance are dispelled. Such optimism often stems more from the doctor's convictions than from the social facts of the situation, a fact more easily appreciated from the anthropologist's third party viewpoint, which takes in the client's role as well as the physician's own.

From the client's point of view vaccination is most often simply a question of compliance. The client's knowledge about the diseases against which he is being protected is usually very scanty; most of these diseases are (or have become through vaccination successes) rather rare and thus outside his immediate experience. His knowledge of the body's immunological system, and the scientific rationale for vaccination, is effectively nil. From his point of view the acceptance of vaccination always represents a certain leap of faith; the fundamental disparity in knowledge is nearly always present. What usually brings about the client's compliance is the

superior power and authority of the medical team. A special uniform and a more cultured language symbolically externalized the doctor's superior knowledge in the situations we observed, just as effectively as the presence of police constables in Mali, but in either case, the message was the same. Either the client accepts the doctor's authority and complies, or he declares rebellion and can be forced to comply, because the law is on the doctor's side. Routine vaccination programmes, such as the ones we observed, rarely carry that strong a legalistic imperative, but in cases of true epidemic disease emergencies, the legal power of the doctor can become almost unlimited. Discretion in its use is obviously advisable, but it is always there if needed.

The gap between the client's and the doctor's knowledge can also lead to crucial misunderstandings. An example from the Monterrey vaccination campaigns will serve to illustrate. We discovered in the colonias in which the student teams worked that the population frequently regarded "bad reactions" to the vaccines as diseases in and of themselves, rather than a necessary if unpleasant aspect of a larger therapeutic process, as the medical model of vaccinations assumes. The doctor sees "bad reactions" as a small percentage of total applications, and usually feels justified in discounting them on behalf of the larger good. For a client whose child becomes sick after vaccination, however, it is not a question of percentages; he is the one who is suffering, and his willingness to become ill for the sake of a larger therapeutic model is very limited indeed. Depending on the severity of the vaccine reaction, the client's preoccupation may grow to almost hysterical proportions. One ill person after a vaccination campaign can sow doubts and fears throughout the community. Rumours spread rapidly,

and become embroidered with more extravagant details and suppositions; on one occasion we were told that our vaccination team was "responsible" for the death of a child in that community. That the child had been vaccinated, we found, was true, but that the vaccine reaction had really led to its death we were unable to determine. Too many clinical details had been lost in the process of rumour formation.

This illustration emphasizes perfectly an important point about the disparity between the doctor's and the client's knowledge. The confusion does not arise from the client not perceiving what the doctor perceives; both of them recognize the "bad reaction" episode and link it correctly to the vaccine. Rather the problem arises because the doctor does not know what the client knows -- that for the client the bad reaction is an illness just like any other -- and undermines his own authority before the client as a result. The culpability of the vaccinator for the bad reaction is obvious, and the client is suspicious that the "healing contract" has been violated. Irrespect has crept into the doctor-client relationship, and has veered it from a positive to a negative charge. The next time the doctor comes around with his vaccines he had better beware.

Nor should we confuse the client's limited knowledge with a lack of experience. In Mexico vaccination campaigns have been going on for a long time, and very few Mexicans have never been vaccinated at all. The national Ministry of Health organized a massive annual campaign which aimed to provide six basic vaccinations to all children under the age of six. The extensive use of mobile para-professional teams extended the campaign's reach into even very remote parts of the country. The campaigns were supported by mass media publicity, and received the administrative collaboration

of health officials at all levels. While these programmes may have had their deficiencies, they were largely successful. Availability of vaccination was not quite universal, but the use of the schools, community clinics, and other local facilities as well as house-to-house campaigns in the populous urban barrios had made it very nearly so. The people who rejected vaccination did so, then, not out of ignorance of an unknown experience but from crucial objections to a scene they knew only too well.

We must now turn to the third role within the situation, that of the students qua students, the learners within an educational process. We have already mentioned the use of para-medical personnel in the vaccination campaigns, and can now recognize the students as one of the categories of paramedics so used. So they were undoubtedly considered by the public health officials in charge of the campaign, and there is no reason to reject the classification. In Mexico the para-medical professions are rather poorly developed in comparison to the number of doctors (approximately one nurse is graduated for every three doctors, for example), and many functions normally assigned to fully-professionalized paramedics in Canada or the U.S. are assigned to medical students at different levels of medical manpower.

The vaccination teams we observed were composed mainly of first and second semester medical students whose participation was accredited to the Fieldwork course we have already described. While many of the fieldwork activities were highly unpopular with the students, the vaccination campaigns enjoyed great popularity. Rather than having to force students to attend, many students volunteered for additional hours and extra duty, even on Saturdays and during Christmas vacations. The reason seems clear when we apply the "apprenticeship" model of medical training to the situation.

Whereas the unpopular activities, such as door-to-door interviewing, involved tasks which the students could not see as a normal part of the doctor's work, vaccinating was an explicitly medical activity in which they could be apprentice doctors. They were, after all, doctors-to-be at a stage in the medical curriculum where few opportunities of this kind were available. Manipulating the symbols of the profession (white coat, instruments, official policies, etc.) within the vaccination situation, everyone got a chance to "play doctor" for awhile and see how the role felt when they were still a long way from being doctors. Nearly everyone appreciated the opportunity. For many, it was their first experience in an explicitly medical relationship, and they felt unsure and self-conscious, as might be expected. They were acutely aware of the disparity between medical student and doctor, even if this difference was totally unperceived by their youthful clientele, and only slightly by their parents. Much of their behaviour in the vaccination situation was a play between the confident authority of the doctor they wished to be, and the fumbling insecurity of the first semester neophyte.

From the medical school's point of view, vaccination campaigns were a particularly appropriate activity for the first few semesters of "Field-work" because they were medically very simple, and put the students into direct contact with the community. Usually the students undertook vaccination programs only after they had become known in the same community through interviewing. This established some prior recognition, and hopefully created a climate of "good will" between students and community which could be drawn on in the event of difficulties. The students were given a short course in vaccination techniques at the nearest government

health centre, which also furnished the vaccines, clerical support, and the services of a public health nurse who accompanied the students on their community visits. During the campaigns the students worked in teams of two-four going from door to door in a given block or sector of the colonia. Each team worked one morning per week, so the same community might be visited several days in succession by different groups. This created some additional problems of coordination. It also ruled out the possibility of a really personal contact with the family visited, since it was rare that the same student administered the second and third doses as had made the initial contact.

The students were not given quotas to be vaccinated per day, since it was impossible to predict the reception and difficulties they might encounter. Rather, they were encouraged to take as much time as seemed necessary with each family in order to establish good rapport, and if necessary they were to try to convince the parents and children to cooperate if they showed reluctance. In no case were they to vaccinate children without parental approval, however far-fetched the objections raised might be. In this was the authority of the medical mandate in the students' hands was limited, and they were encouraged to establish a relationship of respect with their clients. By such tactics cooperation with the vaccination campaign was usually obtained, but rarely without a struggle, and a persistent 15-30% refused vaccination outright in spite of the students' best efforts to convince. Sometimes the objections offered were clearly justified, but more often they were rationalizations which skirted the main issue with which the client-recipients were struggling. To appreciate this issue and its relationship with the question of respect between doctor and client, we must re-construct ethnographically the

archetypal "vaccination scene" provoked by the students' arrival in the community.

The archetypal scene stands out so clearly because it was repeated with only minor modifications every time the students visited to vaccinate. It didn't seem to matter much who were the individuals involved, or in what kind of community; the archetypal scene was, in Gearing's terms (1958), a "structural pose" which the community assumed for that brief moment.

The mere sight of white-coated students sent children scurrying in all directions to warn their parents, siblings, and playmates of the impending ordeal. Within half an hour word would have spread throughout the community, thus totally depriving the vaccinators of any element of surprise and giving those who wanted to escape time to plan their strategy. For the children this strategy usually consisted of finding a supposedly secure hiding place, and creating a great commotion if they were cut off in flight (the students became very adept at this maneuver) or otherwise given away. Boys fled just as frequently as girls, and many times older children well above vaccination age also joined in the flight, testifying to the irrationality of the fears awakened. Often, the adults were also tense, and released their anxieties through joking remarks which usually dwelled on their own good fortune for not being eligible for vaccination any more. When the vaccination team arrived at a given house, the students first obtained a vaccination history for all the children under 6, usually provided by their mother, and secured at least her passive consent and cooperation for the succeeding effort. The children eligible were now rounded up from under beds, behind back sheds, and from the security of neighbour's homes. This frequently involved some element of betrayal,

either with the complicity of other family members or due to the child's own panic. From this point on the scene was accompanied by the bitterest wailing from all the children to be vaccinated, which reached a dramatic crescendo as the needle entered their bottoms, at which time a maximum shriek was loosed (akin perhaps to the "primal scream" identified by Janov and his followers) which could usually be heard from a great distance. This shriek seems to have served at least two purposes: besides releasing enormous emotional tension, it signaled the location of the dreaded vaccinators for the other children nearby. Sometimes a struggle ensued in which the child required physical constraint either by its mother or by one of the other students, but more frequently the defense was strictly vocal. After the vaccination was completed, the children almost invariably turned immediately to their mothers for comfort. Not infrequently, the child's anguish approached true hysteria, and if the child refused to remain still, vaccination had to be abandoned. Other times they required up to several hours to calm down after the team's visit. The emotional intensity of the archetypal scene obviously varied from one family to another, but the "structural pose" in which the students placed the family seldom changed.

In the face of this near universal psychological reaction of hysteria and anxiety, some mothers admitted frankly that they could not cope with the disturbance and rejected vaccination on this grounds alone. Others took a more oblique tack, stating that their husbands (always conveniently absent at the time) had forbidden them to let the children be vaccinated, or that the children had been sick recently. These appeals the students always respected. It was obvious in all cases that the root of the problem was the mother's concern with her child's emotional reaction. The needle itself and

the benefits of protection secured through vaccination compliance were secondary. For them it was reducing or avoiding this family trauma which occupied their attention.

The medical students naturally reacted to this archetypal family scene with considerable guilt, and tried hard to minimize the tumult which their unanticipated visits provoked. They were cast in the role of villains when their professional roles led them to expect the opposite reaction: an expression of parental gratitude and comprehension of their benefic intentions. In these circumstances a little extra attention to tactical details sometimes helped to limit the disturbance: one clever team discovered that by administering double vaccinations simultaneously in each cheek of their young subject, they could reduce the hysterical scene to a single episode. The mothers were somewhat grateful. Others canalized their tension into joking among themselves before and after the team visits, parodying the patients' reactions and mockingly playing up the sadism of their medical roles.

These measures undoubtedly helped the students to deal with their immediate psychological stress, but they could not modify the shape of the conflict. At least two violations of the respectful relationship were implicit in the structure of the vaccination scene which were beyond their power to change, and the students were aware of the violations. At the base of the situation were trespasses on the client's personal autonomy, the interpretation which the students related so clearly to the value of respect in their questionnaires. The students expected and sought to establish a respectful relationship with their clients, but the social situation of home vaccination forced them to trespass mutually in understood ways on the

personal autonomy of the recipients of their service. This put the students in the awkward position of choosing between personal and professional values, and was the source of their anxiety.

The first violation occurred because of the setting in which the vaccinations took place: the home. One of the universal norms in Mexican society is that a man's home, however poor it be, is his castle. Entering the home of another person without the resident's explicit permission constitutes an invasion of his privacy. The value of respect for the personal autonomy of others clearly articulates with this norm. Almost inevitably, the students were forced to violate this norm somewhat because their home visits were unannounced, the administration of the vaccines required at least minimal entrance into the privacy of the home, whether an invitation was fully extended or not, and their medical mandate left them little room to negotiate - the vaccination was all, or nothing. In most cases the vaccinators were received without much fuss, but in other cases they were limited to the yard or even the doorstep because permission to enter the interior was not extended. In the 15-30% of homes who rejected vaccination, the inability to negotiate entry into the home was the most frequently associated difficulty. The students developed great skill at reading the social clues which indicated whether entry would be perceived as an invasion. What must be emphasized is that according to the value profile given in our earlier study the students always entered the situation at a disadvantage, asking forgiveness for what they themselves perceived as an invasion.

The students' disadvantage was further heightened by another violation of the respectful relationship, an invasion of the personal autonomy within

the mother-child relationship. It is here that we can appreciate better the genesis of the particular anxiety trauma which vaccination provoked in the young children. Upon examining the situation, we can recognize that the mothers found themselves in a double bind situation with regard to the proferred vaccination, and communicated their anxiety over this dilemma to their children. The double bind occurs over the mother's efforts to preserve the personal autonomy of her child in the face of an outside threat to her protective mantle: the vaccination team.

In the lower-class Mexican homes like the ones in which the vaccination activities took place, it is often the mother who maintains the continuity of presence which constitutes family life. Numerous studies have documented the existence and circumstances surrounding these matricentric households, including Oscar Lewis' classic studies, and more recent research by Lomnitz and others. Hopgood (1976) comments on this for the immediate Monterrey urban area, while Olson (1972) discusses the genesis of these matricentric households in the nearby rural area, occasioned in this instance by patterns of migratory labour. Thus, in spite of the official social ideal of the patriarchal family dominated by the absolute authority of the male, the position of the women at the centre of the Mexican family is a well-established fact. The image of the mother as the ultimate protector of the home and family is manifested in such diverse cultural forms as the cult-like worship of the Virgin of Guadalupe (Cf. Wolf 1958), a familiar image in the homes the students visited, and the use of women as political mediators when the male politicians could not reach agreement (Olson 1977). One of its most curious manifestations is the use of a human barricade of women and children by proletarian demonstrators to repel police incursions;

the sanctity of mother and child is the ultimate social weapon used before real armed violence breaks out. It is not accidental, then, that the students encountered principally the mother at home when they came to vaccinate.

These matricentric housefolds fulfill the important function of providing a measure of security and stability to the home environment of the young child, in spite of the frequent absence of males, many of whom lead lives quite independent of their families. There is a basic dichotomy between life inside and outside the family. For the small child the world outside the family is basically threatening and hostile. Small children customarily flee to their homes at the sight of strangers (in this respect their reaction to the vaccination teams was not peculiar at all), literally cling to their mother's skirt in the presence of strangers, play principally within the family group, and are rarely allowed to stray very far from the home without company of an older brother or sister. While the world outside is ruled by danger and met with suspicion, especially in poor communities, within the household warmth and protection are always available in unlimited quantities. Permissiveness toward the young child is the dominant norm, and tantrums or misbehaviour are usually met with tolerance and understanding. In this form deep emotional dependence on the mother is created in the child, and (s)he looks automatically to mother when facing any serious emotional crisis throughout life. (Cf. Ramirez 1973, Chapter 8; Solorzano N.D.; and especially Diaz Guerrero 1972, Chapter 9, Tables 1 and 2 for more details and documentation.) From this we can see that the Mexican woman and mother exercises a high degree of personal autonomy, and commands respect, in two principal spheres: the home itself, and over her own

children. Within the Mexican sexual division of labour, these are her areas of prime responsibility.

For the small child the mother's protectiveness is absolute. Yet, at the same time that she provides protection from the hostile world outside the family, the mother realizes that this protection is only partial and temporary. It is widely believed that the child who lacks this emotional security and indulgence in early childhood will not develop normally in psychological terms, but the child's growing autonomy inevitably leads it beyond the family circle into the unprotected world. The continuation of maternal over-protection into adolescence or early adulthood is considered equally pathological, especially in relation to sons. There is a special Mexican idiom, "mamón" (very difficult to translate, but meaning more or less literally "too much mother"), which is vulgarly used among adult men to identify this kind of protection-seeking infantile behaviour when it is menifested beyond the appropriate age. There is thus a "normal" time when maternal protection should be left behind, however traumatic this may be. There are also times in early infancy which anticipate this inevitable shock when maternal protection collapses. We are now in a position to see how the archetypal vaccination scene fits into this latter category, and threatens the mother's autonomy in both spheres at a time when she is not prepared to accept it.

We have already noted that the precipitous rush to the family was a characteristic reaction to the appearance of the vaccination teams. The children usually hid in or near their homes, and often tried to make their accomplices in their secret. We can therefore identify the vaccination teams with some confidence as one of the outside threats from which children

seek maternal protection. To the child the vaccinators are unknown outsiders who invade the home, and are therefore inherently menacing. Furthermore, they menace the child's physical person with a needle, demonstrating more clearly still their threatening intentions. The child under six reacts automatically with a rapid withdrawal to maternal protection with every expectation of receiving it.

The mother, on the other hand, finds her desire to provide the requested protection in conflict with her adult perception that the vaccination protection is beneficial in the long run, and that the child's fears are unfounded. If she concedes and accepts vaccination, she wins the approval of the vaccination team but at the cost of demonstrating the collapse of her protective umbrella over the child and the home. The mothers consequently felt great anxiety upon confronting the vaccination team; she was damned by her child if she accepted, and damned by the vaccinators if she didn't. In many cases we suspect that the vaccination scene may well have been the child's first experience of the collapse of maternal protection, in which case it was even more traumatic. The clearer the child perceives this collapse (and the mother may show it quite overtly in submissive behaviour toward the vaccination team), the greater is the child's hysteria at seeing it disappear. This helps to explain why the most intensive crying occurred not when the child was discovered and brought forward, but when he realized that his mother would not save him/her at the last minute. In the vaccination scene, then, the medical students precipitated one of the primordial psychological conflicts within the Mexican family - the loss of maternal protection - in such a way that both mother and child saw an important part of their personal autonomy

threatened by the health effort.

The essence of this analysis became clear only after observing one of the rare exceptions to the archetypal vaccination scene. On this occasion we accompanied a group of three students who had decided on their own initiative to undertake the vaccination of some 50-60 children in a poor rural community, Icamole, N.L., some 60 km. northwest of Monterrey. They had made prior contact with a young woman in the community who had studied some nursing, and who accompanied them on their house-to-house visits among her neighbours. This tactic facilitated the team's acceptance into the homes, eliminating that threat to autonomy, but it did not avoid the traumatic emotional scenes within the homes which we have already described. Only one little girl of about five showed no fear of the needle, and in front of her mother and whining sisters and brothers submitted to the ordeal without the slightest sign of tension. The explanation was simple: the little girl received regular injections from her mother as part of a medical treatment. For her the vaccination represented an extension of her mother's protection rather than a challenge to it, and her bravery was simply an expression of her confidence in that relationship. From this single contrary example one appreciates more clearly the substance of the normal reaction, and the social rules being brought into play.

We have no doubt that the students learned a great deal from their participation in the vaccination campaigns. It is unlikely, however, whether any of them, or the client-recipients either, would have articulated their feelings about vaccination in the way we have presented them. Our explanation is essentially an -etic one which depends on the anthropologist's position as an observer of the scene; we did not even attempt to "teach" its

ingredients to the students. Despite their own anxieties and traumas, the students were enthusiastic about vaccinating, not so much for the technical skill they acquired (this was usually achieved after the first few efforts) as for the real social issues they had to confront in their medical roles. In Geertz's terms, they got to "deep play" the role of doctor and feel its emotions.

What we wish to pursue further, however, are not these educational lessons but the effect of the vaccination campaigns on the population served. The actors in the home vaccination drama clearly followed the rules of conduct we have suggested, and the scene was repeated so often as to make one think of a ritual in which fear of the needle and fear of the loss of maternal protection were inexorably linked. Since the vaccinations were carried out through medical authority, medical care in general was tarred with the same brush, and an expectation was created in the population from infancy that all other contacts with doctors were going to involve a similar loss of autonomy. The vaccination scene became a paradigm which crystalized very hostile attitudes toward the profession, and the students contributed, wittingly or unwittingly, to reinforcing this attitude each time they returned another wailing child to its mother. This dimension is important to bear in mind as we move to the macro-social level to consider how the home vaccination campaigns became symbolically linked to a rather different issue, and involved the students in a political controversy of a much larger scale.

In order to understand this incident, it is necessary to make some brief reference to another medical issue which has surged into importance in recent years in Mexico. We refer to the Mexican government's programs to

make birth control information and techniques available to the mass of the population. Mexico's birth rate continues to be among the highest in the world (it fluctuated between 3.5 and 3.9/100 during the period of our fieldwork), and is highest of all among the urban poor, who remain economically marginal but have access to at least minimal medical care. The economic and social disturbances related to this rapid population growth have been of growing concern to government planners for over a decade, and have provoked a number of specific programs. Mexico's participation in the 1974 World Population Conference generated considerable propaganda in the mass media, and announced clearly the government's intention to address the problem. The social problem was not so much "whether" as "how".

Efforts at introducing family planning in Mexico clashed with deep-seated values in the culture, and faced strenuous institutional opposition from many activist groups, including some affiliated with the Catholic Church, who sought to defent these values. The machismo of the man with many children, the subordination of the wife to her husband, the separation of male and female roles, and the economic dependency of the woman upon her spouse are but a few of the important norms within family life which come under pressure, for what family planning really proposes is a radical transformation of the family itself. To many of the urban poor family planning seemed an even more insidious attack, aimed at depriving them of one of the resources they themselves could create - their children, who later in life would provide aid and economic support for their parents. Children are, among other things, an insurance policy against an uncertain economic future, and the suggestion that the government might provide abortions or in other ways limit through medico-legal pressures the number

of children a man might have created an atmosphere of special resentment and suspicion in this group. A number of politicians who were "pre-candidates" of the official party for the Presidency in the 1976 elections made statements for and against different programs and proposals, and at least one promised that family planning would be one of the major efforts of his administration if he were elected. Thus, the birth control "controversy" hung tensely in the air as the time rolled around for the annual national vaccination campaign in the fall, and set the stage for a spectular incident.

About one month before the scheduled inception of the vaccination campaign, a rumour appeared spontaneously and simultaneously in most of the poor colonias of the city (including all the ones in which the students were working) that government vaccination teams, which sometimes worked in schools, were secretly planning to administer vaccines to sterilize the male school children. Some claimed to have actually seen the vaccinators, but for most the rumour alone was sufficient to spread an instantaneous "panic" among the mothers, who rushed immediately to withdraw their children from school, and refused to return them until school authorities gave public assurances that no vaccinations of any kind would be adminstered in the schools. Several schools had to be closed almost immediately, and two days after the rumour started, the State Director of Public Education reported primary and secondary school attendance at about 50% of normal. For at least a week following the panic, classes were disrupted, and conditions did not return fully to normal for several months (El Porvenir, October 11 & 12, 1974).

It is useful here to pinpoint just exactly how the two activities of

vaccination and family planning became symbolically linked, because the declarations and decisions of the politicians responsible clearly indicate that they were aware of the linkage, and made a politically sound choice, however much it flew in the face of established medical opinion. Since the same rumour appeared in other parts of Mexico at the same time, it was obvious to the state officials that they were dealing with an organized campaign with political intentions to discredit either the vaccination or family planning campaigns or both. If so, the choice of the vaccination campaign was a particularly astute one; the rumours fell on ground already well prepared to accept the symbolic transformation.

The original justification for home vaccination was, in accordance with the ideology of community medicine, to bring these medical services closer to the population served. The campaign was limited to the poor marginal sectors of the city, however, and was never extended to middle or upper class areas. It thus contained an implicit discrimination of the population which the community medicine ideology tended to camouflage behind other reasons, but which was perfectly clear to the population, and made them feel pressured. Their concentration on the medical justifications for home vaccination tended to blind the doctors responsible to the community's perception of the campaign as an invasion of the privacy of their homes, and left them unaware of the growing ill-will which the program was generating. The community on the other hand was pre-disposed to believe that other invasions of their autonomy might be attempted in the name of medicine because they had already seen their children snatched from their mothers to be vaccinated. The tepid and conflictive choice to accept vaccination left many with the resolution not to let their homes be invaded

again.

Here we encounter the first important symbolic transformation of the rumour. According to the rumour the secret sterilization vaccines were to be given in the school, not in the home. Since school attendance is a legal obligation to the state, it was the governmnet which was responsible for what was going on there. The scenario of the rumoured vaccine was changed to one still more remote from parental control where the government's complicity was more obvious. At the same time the educational authorities conceived of the school as a "home-like" environment in which they acted in accord with parental wishes in loco parentis. Administration of vaccines in the schools thus constituted a breach of this agreement, and was an invasion of the home environment even though it occurred in the schools. If the doctors could force vaccination in the home, who knows what they might not do in secret collusion with the teachers when the parents were not even present to defend their children. Medical justifications could not be invoked by the educational authorities with the same ease; what remained was the simple invasion of parental autonomy over their children.

Another symbolic transformation in the rumour is the limitation of the threat to male children. Mothers were called upon specifically to defend the future virility of their sons. The over-protective mother who might secretly wish to emasculate her male children was thus revealed and forced to declare her commitment to him. This transformation struck at another differential in the family planning campaign's strategy, most of whose propaganda was directed at the women. The principal opposition to family planning has come not from the women, many of whom are perfectly happy to

be relieved of child bearing after eight or ten pregnancies, but from the men, whose machismo was under attack. The husband (father) felt that the campaign was designed to undermine his role through indirection. The women might even be taking pills without his knowledge, and thus robbing him of his demonstrable virility - more children. (Cf. Figure 10) In order to detect this secret treason, the issue is projected from father onto son, where the mother's obligation as protector of her family is accentuated. If the family planning campaign secretly sought to exploit a weak line in the family structure, the sterilization rumour brought the treason to full consciousness, and mobilized the woman on man's behalf, and at a stage in life when her responsibilities as a good mother were clear and unequivocal. In this way the male's voice in the family planning decision was re-affirmed, and the woman's obligation to resist this threat to family autonomy was re-inforced.

Having identified these transformations, we can now identify more clearly the principal axes common to both family planning and vaccination which were exploited by the rumour.

(1) Both are aimed at the young child, but reach him/her by means of the parents;

(2) Both are clearly sponsored and promoted by public authorities;

(3) In both cases, the medical profession is the agent through which the activities are carried out, and the rational justifications for each is ostensibly medical, but

(4) In each case political issues are latently linked to the medical actions;

(5) The proferred services are not specifically solicited, or even positively valued by the recipient population; and

(6) Both activities call upon the mother to defend the autonomy of the home and her control over the family in the face of outside threats.

Figure 10: "Whatever er Turns Up is Good."

"Uruguay is rewarding mothers with $100,000 pesos for each new child they have."
"Well, let's go there, ma, now that I'm unemployed."

In effect, the sterilization rumour called the women to the barricades to defend the integrity of the family. The only difference was that while some medical justifications might be adduced for supporting and accepting infant vaccination, male sterilization was inherently dastardly, and threw the threat to family autonomy into higher relief.

What the medical authorities failed to perceive, and which the politicians perceived very clearly, was that the medical power to enter the home to vaccinate rested ultimately on public consent and acceptance of the practice, and that when a significant minority of the population no longer consented, medical power had to be curtailed in order to prevent alien political repercussions. The politicians thus beat a hasty retreat. State health officials and finally the Governor issued public statements assuring that no such sterilization vaccine existed, and that severe action would be taken against those who propagated the false rumour. According to the public authorities the rumour was all about nothing. (There is a bit of irony in this position, since many months later the government did acknowledge very quietly that male sterilization vaccines were a subject of active research, and there can be little doubt that such campaigns were discussed at some levels within the government.) A group of mothers who came to visit the Governor received his assurance that he would treat their children "as if I were treating my own children". The public authority thus accepted its basically familial/parental responsibility vis-a-vis the schools. Along these lines, the Secretary of Social and Cultural Affairs, who was administratively responsible for the schools, stated that: "Whatever the inconfessable ends being pursued may be, the state and federal school teachers should be bearers of a message of tranquility and of reality

in the places where the schools are located." (El Porvenir, October 12, 1974: Translation Ours) He thus committed the teachers to being "good parents" above all else. But the depth of public resentment at this time is better measured by the public reaction to the medical presence than in the statements of the public officials. At the panic's height, medical students working in these colonias were denied entry into the community on simple recognition of their white jackets, and in some places they were openly stoned in the streets by irate residents. The governor's statement mollified public opinion on the school issue sufficiently to permit them to be re-opened, but in the face of such opposition it was difficult to imagine how the annual vaccination campaign could be carried out.

After much deliberation it was decided that a complete suspension of the vaccinations might only lend strength and credence to the rumours, and that the campaign should go on. It was agreed, however, that the schools were not to be used as vaccination sites, and that the house-to-house brigades had to obtain clear consent from the parents before proceeding with vaccination. This had the effect of measuring the extent of community rejection and discontent more precisely, and showed what a dismal political/social failure they really were. In a sample week one month after the rumour, 18,321 children were interviewed for polio vaccination, only 7,946 were actually vaccinated, and 2,111 (the hard core, so to speak) explicitly rejected vaccination. This level of coverage was both medically and politically unacceptable, and other means of delivering vaccination had to be considered.

One pilot project which experimented with other tactics was initiated by the fieldwork groups from the Medical School about one month after the

rumour. The students had been slated to carry out house-to-house vaccinations in a colonia in which the sterilization panic had been particularly strong. That the community would reject home visits seemed obvious, and the use of the schools as vaccination sites had already been ruled out. Under the circumstances it was decided to hold a special meeting with the parents in the school the day before beginning vaccination. Four medical students (two Mexicans and two Americans) along with various Medical School faculty members appeared at a well-attended session to answer whatever questions the parents had. The objective of the meeting was educational, and allowed the parents to ventilate their doubts, objections, and anxieties while still officially cooperating with the campaign through their attendance. The meeting was prolonged and animated, and the wisdom of providing the opportunity was vindicated the following morning when a steady stream of parents came voluntarily to have their children vaccinated at a 'neutral' site within their own colonia - the office of the local community improvement association, which they of course controlled (Cf. Hopgood 1977 for a discussion of the role of these associations). By overtly showing respect for the autonomy and responsibility of the parents, the students were able to snatch a small victory from the jaws of a much larger defeat, and demonstrated in the process the feasibility of making social modifications in the program which would make it more acceptable to the community.

The use of neutral sites for vaccination became the model by which the second phase of the mass campaign was structured the following January. Vaccination was to be carried out only in specified community centres, according to a plan developed by public health experts brought in from the

capital, and only in the presence of the parents. In this way the parents' autonomous consent was placed at the centre of the campaign instead of the vaccination itself. The fact that some of the designated centres were primary schools caused some consternation at first (El Norte, January 30 and 31, 1975), but the promise not to vaccinate within the classroom provided a saving constraint. Nonetheless, the vaccination campaign, while a political success in that no further incidents occurred, was a medical failure. Vaccination rates fell to new lows throughout the urban area (El Norte, February 4 and 5, 1975). Apathy and suspicion still reigned, and the state-wide campaign would have fallen far short of its goals were it not for the high rates of vaccination compliance achieved in the rural areas untouched by the sterilization panic. Despite publicity and exhortations, vaccination coverage continued to fall for the next two years under the voluntary plan. The public health officials proved thereby that the use of political authority had been necessary in order to get the medical job done, but the memories of recent conflicts prevented the politicians from considering any return to the old scheme.

At this point we must turn to the question of anthropology's relevance for all of this, because it would be all too easy to extract an over-simplified mandate. The argument would run as follows. The doctors, while medically competent, were socially ignorant of the consequences of their actions. The anthropologist, on the other hand, like the politician, was freed of medical responsibilities and therefore capable of perceiving the broader community reaction. The anthropologist, then, has a professional responsibility to correct this medical blind spot and inform the doctor of the full social implications of his actions. The doctor, on the other

hand, should listen to these social scientific strictures with greater attention, and he will thereby avoid some (if not all) of his social mistakes. This argument has a comforting sound to the anthropologist, since it makes his contributions not just relevant but crucial. Therein lies its fundamental danger, we submit.

We suggested at the beginning of this thesis that we would take as a given the concept that all contacts between anthropology and medicine must be in the form of a reciprocal dialogue if collaboration was to survive. Mutual relevance must exist, not just the wisdom of one before the ignorance of the other, and it is in this mutuality (or rather its lack) that we appreciate the speciousness of the foregoing line of reasoning. It assumes that the anthropologist has all the answers, and all the doctor needs to do is listen. The relevance of anthropology, then, is limited to obtaining a proper forum in which he (the anthropologist) can tell the doctor what he (the anthropologist) knows the doctor needs to know.

In actual fact public health medicine has been in existence for almost as long as anthropology, and has learned a few things about community medicine long before the medical anthropologist entered the picture. In relation to vaccinations, one of the things public health specialists have learned is that vaccination coverage need not be total to be effective. Given the probabilities of vector contact a figure more on the order of 70-75% is the most probably threshold for effective coverage. Only when vaccination coverage falls below this level is there real danger that disease will re-appear with any degree of frequency. The subsequent history of vaccinations and disease in the area we have been discussing illustrates this principle almost perfectly.

Over two years after the sterilization panic, the forces of nature against which the doctor contents took control again in almost apocalytic form to remind him (and the anthropologist) of this fundamental lesson in public health. In May, 1977 the state of Nuevo Leon, along with several other states where the sterilization panic had impeded vaccination, was officially declared an "alarm zone" when fifteen cases of polio were reported, after many years with a minimum annual rate of 2-5 cases. By the end of the hot summer months over sixty cases had been confirmed, most of them precisely in the poor colonias where the earlier compaigns had met the most stubborn resistance, and among the recent arrivals to the urban areas who had not been reached in the intervening years. The threshold of coverage had been crossed, and national officials directly attributed the recrudescence of the disease to the limited success of the annual campaigns following the sterilization panic (Tribuna de Monterrey, May 5, 1977). A new and more effective plan which insured adequate coverage was needed.

Even under these circumstances of semi-crisis, however, health officials did not suggest a return to vaccination. The lessons of the past were not forgotten. Instead, the new emphasis medicalized vaccination still further, making local health centres ("Casas de Salud") responsible for continual year-round vaccination. The old system was declared "paternalistic" in its approach, and the new orientation was to inculcate a greater sense of responsibility in the parents themselves. "Vaccinating his children is a duty of every father just like the father's obligation to send his children to school", the State Public Health Director declared (El Porvenir, January 4, 1978). A crying child but a smiling mother was the new image of autonomous decision presented in television reportage of the

new continual vaccination plan. Changes in emphasis are obvious, and only time will tell whether lost terrain in public health can be recuperated in this way.

In discussing the position of the poor in the political process, the Mexican political scientist Gonzalez Casanova has noted:

> Among Mexico's marginal people there is no manifestation of disconformity. Under normal conditions the marginal "citizen" does not express his disconformity even by violence or unusual agressiveness. Any act of violence, individual or collective, carries a far high price for the marginal population than for others, so it seems that there is more to lose than there is to be gained. Such a contemplative and patient attitude is the result of long experience. The marginal citizen may be on the verge of violence or despair; he may express himself in dreams, stories, and dances filled with phobias, insecurity, and aggresiveness. Yet while no explosion occurs, he is patient; as long as he does not lose all, he is the most acquiescently religious, courteous, and quiet of beings. As in Agustin Yanez's novel, he asks himself: "What good does it do for the poor to get angry? We will only be hit harder." (1970: 127)

Our analysis of the sterilization panic has considered an example of one of these irrational phobias and fears of the marginal man. It allows us to get a much more precise idea exactly where the threshold of ultimate frustration lies, for in our case patience was worn thin, and resulted in violence (however muted). We have tried to show that the marginal man feels he has really "lost all" when his privacy and personal autonomy are no longer respected. In this case sterilization of his male children becomes a metaphor for collective suicide, and he struggles desperately to regain what he has lost. The public vaccination campaign reaped the harvest of accumulated psychological and social anxiety it had been sowing for so long: it became the model target against which respect for personal autonomy must be defended. The obvious emotionalism and irrationality of the sterilization rumours points to the real precipitating factors, and the responses of

public officials to the situation unequivocally shows their recognition of this wider significance. Benito Juarez's famous adage continues to provide the basis for a most Mexican solution "Respect for the rights of others is peace". Anthropologists, we submit, can learn as much from this as doctors.

CHAPTER 8

ANTHROPOLOGICAL ROLES IN MEDICAL EDUCATION: RELEVANT OR IRRELEVANT?

Our thesis set out to explore the emerging area of contacts between anthropology and medicine which has given birth to "medical anthropology" through an examination of one of the new roles these contacts have produced -- that of the teacher of anthropology within the medical curriculum. Our data has come from personal experiences filling this role in Monterrey, and its exposition is now complete. Having completed it, there remains, however, the task of relating it to the questions and issues within the larger relationship of the two fields, and particularly the issue of anthropological "relevance". Did our medical students find things in anthropology which were relevant to their vision of their future professional careers? What can their reactions tell us about the larger picture of contacts? Is there a role for the anthropologist in the medical classroom after all? And what can the anthropologist learn about anthropology, and particularly medical anthropology, by taking up this new role? What can the medical school tell him about the larger society and culture of which it is a part? These are the hard questions which must be answered in order to reveal the underlying interaction between anthropology and medicine which is taking place, and determine whether and in what ways anthropologists teaching in medical classrooms are relevant to anthropology as a whole, and to the practice of medicine as a whole.

Our analysis must rest on a view of the evolution of the anthropologist's role in our field setting, and this is the first topic we must take up. We stressed that at the time we initiated fieldwork, the role occupied

was new and undefined. One thing can be said about this immediately: looked at globally seven years later it is just as true now as then. This might suggest off-hand that no evolution of the role has taken place at all, -- that no role definition has proven its viability, and that the "role" is on its way to extinction. This pessimistic assessment of the global picture is not borne out by our field data, however, which show a clear evolution of the role. This suggests that the slow speed at which anthropology has entered the medical classroom may be due to other factors than the relevance of its message. The availability of anthropologists willing and able to fill the role's requirements -- the factor Supply -- may actually be controlling its spread at least as much as the demand being generated by medical education. It is worthwhile, therefore, to take a look at what the role came to require in our case in order to see what kind of anthropologist would be needed to fill it, and what relevances s/he would need to exploit.

We postulated at the beginning of our study that since the anthropologist's role was new, it was open to innovation and negotiation. Somewhat contrary to this, when we arrived in Monterrey, expectations did already exist about the role we were occupying. Prior experience with others teaching the anthropology course and general cultural knowledge about the discipline set up some very concrete images of anthropology for both the medical students and the medical school administration. These prior expectations greatly affected our initial decisions within the role. The fact that the students' and administration's images of anthropology were not always congruent, and that the students' assessment of the subject was basically negative showed that things had not gone well. The relevance of anthropology had not yet been established -- not even the relevance which the architects

of the school's curriculum envisioned when they put it there in the first place. Because of the difficulties we entered the role "as if" it were new. Key changes in the role were expected almost immediately upon our arrival, and we were given freedom to re-define the course's content and develop the role as we saw fit with as little influence as possible from the past. Thus, the conditions of our initial postulate -- the "newness" of the role -- were in effect fulfilled, even though the facts of the situation would show the contrary, and a series of role negotiations began.

The first issue of role definition to be confronted was the relationship between discipline and sub-discipline. Was our course to impart general anthropology with a medical flavour?, or technical information from the specialized area of medical anthropology which might ultimately form part of the future doctor's basic clinical knowledge? Our own background and training strongly inclined us to the latter objective as the more promising relevance to be established, but the course's position in the curriculum and the students' general level of medical knowledge implied that only the first alternative was really feasible. Fully half of our students never became doctors anyway, and their accumulated experiences in medical settings was rarely greater than that of the man in the street. Whatever professional frustrations it may have meant for the medical anthropologist, orienting the course toward general anthropology with a medical flavour was the only way to adequately reach the level and diversity of the students' interests. True, medical flavour was always there, and the goal of making the course more medically oriented was always before us, but there was a real limit on what the student at this stage could be expected to absorb, and the dosage had always to be carefully applied. Technical literature in medical

anthropology, for example, came to occupy only a minor part of our course, and was seen only toward the end of the course after general anthropology had been covered.

This shift in the course's orientation may harbour a profounder truth about the emerging relationship between anthropology and medicine. Our first impression might naturally be that whenever the two disciplines interact, medical anthropology is automatically created, and a medical anthropologist is automatically what is needed. We find instead that the issue is a bit more complicated, and the role transformation not quite so automatic. What was really required in Monterrey was a general anthropologist capable of handling many kinds of anthropological data, whether a medical application was apparent or not. Such a person becomes a medical anthropologist only by being an anthropologist to begin with. What the anthropologist ultimately learns when he lands in the medical classroom is that he is in demand for the anthropology he knows. The specialization which we call "medical anthropology" refers only to the terrain on which we have landed. The theories and methods used in medical anthropology are, and should be, the same as in any other part of the discipline. Doctors do not want, or expect, us to be divorced from this participation in the central concerns of our own field.

In pedagogical terms, it was Read's conceptual leap which was required in order to establish relevances to the medical students. If the teacher has never made this leap from anthropology to medicine, the students can hardly be blamed for not attempting it in the opposite direction. The more often he can make it, the easier will it be for them to learn how to negotiate it, too. The full resources of the discipline are involved in building these bridges which lead to "conceptual transfers", and they depend on

recognizing and responding to a wide variety of student interests. Medical anthropology, statically conceived, cannot be our sole guide to relevance in medical education. In our case, it was only after we let the interests the students manifested guide us that we began to perceive what topics they thought were more relevant, and these emerged much more clearly in field teaching than in the classroom.

Because of our problems in defining relevant content for the anthropology course, we opted to use social tactics to enhance its perceived relevance and neutralize the students' negative expectations. We turned the course into a part of the selection process of future professionals. Admittedly, this ducked the primary issue -- the development of relevant course content. But when the students knew they might flunk the course and not become doctors, their interest was heightened, however temporarily. By accepting the challenge of trying to measure the abilities the students would really need to be successful in their further studies, the course gained in respectability, and came to perform a function considered bona fide and relevant by both students and administration alike. Participation in the medical selection process also provided a useful criteria for measuring the doses of medical content in the course, as it became clearer which of our students ultimately succeeded in the programme, and what knowledge and skills the course could provide them. By the time our fieldwork period terminated, the attitude among the medical students had changed drastically. If we were greeted at the outset by mayhem and incredulity, by the time our fieldwork ended, the anthropology course had come to be considered the "tough nut" in first semester, and students drilled their anthropology textbooks before exams as if it were anatomy. We attribute most of this change

in attitude to our role shift to active participant in the medical selection process.

But the respectability of the anthropology course could not be buttressed indefinitely by the mere threat of academic failure. Though effective, it was at best only a useful holding tactic. If course content were not relevant, sooner or later the students would lose respect for anthropology again, and means could easily be found to cut it off from the professional selection process. Other alternatives needed to be explored, and in our case led to a second major role transformation.

This came about mainly through our participation in the fieldwork course. From a course in which high demands were made on the students, we moved to a course which was officially only "accredited", and in which compliance rather than interest was the main issue. From the relatively confined limits and passive role of the classroom, we moved into the active role of field anthropologist, accompanying the students on field trips, joining them in community interviews, and ultimately taking two small groups of them into the Chihuahua sierra where doctors had previously feared to tread. In this role we ourselves learned about Mexico and its peoples: it was first and foremost our field experience. Yet at every step of the way our medical students accompanied us; we learned what they learned, and it was often difficult to tell whether they were students or informants. Gradually, the students' choices and decisions in field activities began to tell what they thought was most relevant.

In reality, two different fieldwork roles were explored in this phase, and it is worthwhile to distinguish between them because each offered different limitations and opportunities, and placed the students in a different

relationship. They therefore have different things to tell us about medical-anthropological relevancies.

In the fieldwork course, we functioned as teacher-anthropologist, studying and observing the communities in which the students worked, but the students continued their own role. For the field anthropologist the opportunity available is to do survey research using the students as interviewing manpower, information from which could be fed back to the administration for purposes of institutional planning. The limitation on this opportunity was the tremendous investment required in supervision, and the inconsistency in the results obtained even under the best conditions. Many of the students were not, in fact, very empathic interviewers, created difficult situations with their community informants, and the data they produced was seldom absolutely reliable. Even so, it proved useful to the administration in confronting certain practical decisions connected with the programme, such as the sterilization scare, and most importantly it gave an undeniable look at the students as future doctors. These seemed like role changes which enhanced relevance, and more than off-set the scant value of the research data the students produced.

In retrospect, it is easier to see why this transformation of the role was so necessary and effective than it was at the time. In relation to the students' role the fieldwork course paralleled the transformation in their programmes from basic sciences to clinic. In our case, the community substituted for the clinic, since the intent of the fieldwork programme was to teach community medicine, and it had been telescoped into first semester of the curriculum. In most other respects, however, the transformation for the students was just like that described by Becker's apprenticeship process.

Even in first semester all of the serious students were anxious to make the transition to clinic, and the fieldwork course provided a modest vehicle for canalizing these intents. The students identified almost immediately with the role of doctor, and strove to take up roles involving clinical responsibilities, however limited. Granted, most of them were not seriously interested in community medicine in squatter settlements as a professional future, and the fieldwork course rarely changed this view. Nevertheless, it did take them out of the classroom occasionally into active roles as low-level health aides. Since the career pre-selects for the active and the practical, the students' ability to handle home situations in the vaccinations campaigns proved to be one of the best measures we discovered of skills they would need later as doctors. The anthropologist's active role as field investigator opened up new and more important relevances with medical education than were visible from the passive role of classroom teacher. This recognition leads us to an often-overlooked aspect of the interaction between anthropology and medicine which helps us to see where medical anthropology fits in.

We are often apt to forget that the creation of new roles for anthropologists in medicine stems historically from the work of a certain segment of the parent discipline: applied anthropology. What distinguishes the medical anthropology of today from the earlier contacts between anthropology and medicine is precisely the intent to confront practical problems and to work for feasible solutions which is the raison d'être of applied anthropology. It is here that anthropological thinking first met the working doctor, and the contacts in public health, health care delivery, and indigenous medicine which our thesis has explored in rural medicine in Chihuahua and

the vaccination campaigns in Monterrey would readily be classified by most anthropologists as "applied anthropology". Most of the new roles in which medical anthropologists work derive from the attempt to apply anthropological knowledge to the problems of medical practice. We have therefore created the expectation of being practical, and the medical profession's question is: for just how many different problems can anthropological knowledge prove practically helpful? The role of teacher in the medical curriculum provides a rare opportunity to experiment with the full breadth of this range, but the classroom alone is too static and confined an environment to permit their full exploration. Only situations of practice, simulated or real, can do that job. They were always the activities which put us in closest touch with the medical students and the profession as a whole. Like medical healing, "applied anthropology" is a pan-disciplinary phenomena based on a change in role modality, rather than a specialization of topics. If we recognize that the anthropologist doctors expect in the medical classroom is most likely an "applied anthropologist", we do indeed know something more about the role's demands, even though one may question one's personal ability to fill it.

The other fieldwork role which we explored led in a very different direction. It began with modest excursions connected with the anthropology course. In these the students assumed the role of field anthropologists along with us in order to explore some facet of the local milieu previously unknown to them. This kind of activity selected those among the medical students who were most interested in anthropology -- so interested in fact that they wanted to try out the anthropologist's role. In contrast with the fieldwork course, this type of field experience self-selected for the most

enthusiastic, and "compliance" was never a problem. From fairly modest one-day excursions at the beginning, our explorations with this role transformation reached their logical culmination in the Tarahumara project. But these experiences also taught us an important limitation on their relevance to the medical selection process; they did not always provide a good gauge of the student's aptitude or motivation for medicine. If classroom teaching showed that the anthropologist had to be secure in his role when he landed on medical terrain, our fieldwork experiences taught us that it was equally true that the medical student had to be secure in his professional role before landing on "anthropological" terrain such as the Tarahumara. Some kind of clinical activity which reaffirmed their medical role had to be incorporated if the learning experience was to be medically relevant. If not, only skills and interest in anthropology could be measured and developed.

This limitation might make one think that the role transformation of the medical student into "fellow anthropologist" is undesirable. After all, we are not in the medical classroom as raiders looking for future anthropologists, and the number of students who are, or become, that interested in anthropology must necessarily be very limited. Nevertheless, our experience with the second group in the Tarahumara showed that there was an area, which we called "anthropological medicine", in which the capacities of both anthropologist and doctor would be needed simultaneously. This represented a point of maximal relevance between the two fields rather than the broad, general relevance for which we had been searching, but the relevance was real enough, as we came to realize observing Irigoyen's work in Norogachic. We conclude from these observations that a role does exist for the

anthropologist/doctor (or doctor/anthropologist) whenever the cultural differences between doctor and patient are so great as to interfere with clinical communication and compliance, and that the need for persons with this dual capacity is probably far greater than the medical profession usually admits. Obviously, not all doctors face such cultural barriers in all of their patient contacts, but for those who do face them, they are real enough and often lead to a spontaneous search for anthropological information. The anthropologist as teacher must be equipped to guide this search, and prepared to defend the professional status and credibility as legitimate specialists within medicine of those who take it up. The exploration of anthropological medicine may not put the anthropologist in contact with the "average" medical student (or doctor), but we must recognize that depth of relevance is just as legitimate a goal as breadth, and one may in fact lead to the other. In our field situation, for example, we saw how the issues and problems of rural medicine which the second group (and Irigoyen) faced in Norogachic were broadly similar to the problems of rural medicine in other parts of Mexico, and indeed in many other parts of the world. This may be a point of deeper relevance worth exploring more fully and systematically to see how far it extends, and what kind of contributions anthropology can make to break the vicious circle in which medicine finds itself.

From even this brief analysis of the evolution of our role in Monterrey, we can readily see that the role of anthropologist in medical education is still open-ended. We would be hard-pressed to advance and static prescriptions for its future occupants. And, lest there be any lingering doubt, we can also add that in the four years since our fieldwork terminated, the role has gone through further evolution, and would require a quite different

anthropology course today than was taught then. Different needs would have to be met, and new teaching tactics tried out. We are still in the learning phase of our experience as teachers in medical faculties.

These observations on the evolution of our role also lead to a pedagogical suggestion. May it not in fact be premature to think in terms of model courses, or "authoritative" anthropologies? Isn't our role and relevance in the medical classroom still a little more open than that? Certainly our perception of cultural differences in Mexican education tends to bias our judgment, but our case study suggests rather that more resources need to be explored to meet the varied needs of many different categories of medical professionals. This is quite the opposite of the "closing-in" which model courses and semi-textbooks seem to suggest (cf. Ruffini and Todd 1977). We submit that the case is still very much more open, and we must keep looking for new relevances in the medical classroom, rather than being satisfied with the ones we have already found. Model courses may be a significant step along the path of defining the anthropologist's role, but they are by no means the end of the road.

In the final analysis, we must also admit that none of the role modifications we have described led to the broad and general relevance between anthropology and medicine for which we were searching. This can be appreciated by assessing the attractiveness of the roles the anthropologist offers to the medical students. Neither community medicine nor rural medicine of the type which would demand anthropological knowledge were very popular, or typical of the real career alternatives the students faced. However much the anthropologist may be impressed by the need for both, he is definitely swimming against the current in his dealings with medical students by

emphasizing either. There may be dividends for making the effort, as we tried to indicate in our discussion of the Tarahumara project and the vaccination campaigns, but our experiences in these amply demonstrated their limited appeal to the students and the problems which have to be faced. More honestly, we must recognize that both of these role modifications still leave us far short of general relevance. They help us to appreciate that there are fundamental differences between the medical and anthropological roles which must be confronted. Two of these differences were developed more extensively in our exposition, and give us some indication of what remains ahead.

One of these differences has to do with the activity and passivity of the two roles noted earlier. As we have stated, the doctor's role as clinician is essentially an active one, and nearly all medical instruction was oriented to the needs of that active role. Yet the anthropologist's role in clinical situations is by definition a passive one, since he has no license to practice, and his role is necessarily that of a third-person observer to treatment. When he enters into an active relationship with the doctor, he is either a patient just like any other, or a teacher in the classroom commenting on the clinical experiences of others. The clinical role which is the aspiration and goal of every medical student is denied to the anthropologist by definition. This fundamental truth has several implications.

First, it tells us that the anthropologist who harbours a secret wish to practice medicine via medical anthropology is in for a rude and frustrating awakening. Unless he accepts the challenge and develops real clinical skills, his active role in medicine must be severely limited. Rather, it is the anthropologist who feels at home with the third-person role and

does not try to compete with the doctor who will most nearly fill medical expectations in the clinical setting. Any other course of action seems doomed to lead only to role confusion and competition -- even for the anthropologist who is a licensed physician. The relevance the anthropologist must learn to develop, then, is the relevance of that third-party role for understanding the other two, for despite its passivity, in clinical terms the third-person role can sometimes provide very practical insights into treatment. The practicing physician, we must recall, suffers from a limitation of his own: he can never escape from the clinical role. Its demands force him to direct his attention to certain phenomena, and not to others. If a way can be found to crystallize these third-party observations of medical treatment, a real socio-cultural template of this invisible periphery could be developed and transmitted to the student at a stage in his preparation when he still has time to reflect (i.e. his clinical responsibilities do not demand his total attention) and perceive this periphery. What seems evident, however, is that our literature and experience in the clinic do not yet meet this need. If we have adequate clinical case material which exploits this third-person role rather than apologizing for it, we will be hard-pressed to enhance our relevance in this way in the medical students' eyes. The view from the medical classroom strengthens the idea that a more 'clinical' medical anthropology is needed: more anthropologists must train their sights on concrete treatments and feel comfortable in their passive observer roles (cf. Kleinman 1977). But to develop that relevance the anthropologist must first define that role more concretely for the doctor and the patient, and specify what he is looking for. We still do not know what this socio-cultural template should include.

The other major difference we noted between medicine and anthropology is more subtle, and has more far-reaching consequences for mutual relevance. We noted that scientific medicine as a conceptual system is universalistic, being based on the idea that biological processes are everywhere the same, and that correct treatment in one instance can be applied to other similar cases with similar results. Much of the medical anthropological literature continues to speak about diseases and does not challenge this universalistic medical model. Anthropological knowledge is subsumed into medicalized categories -- the so-called "culture-bound" syndromes -- so that it can be more readily comprehended by the doctor. The goal is to provide a few simple rules by which the physician can find his way through any cultural maze which might complicate his differential diagnosis. This goal is by no means to be condemned, but its pursuit does involve some slippery manoeuvering for the anthropologist.

In anthropology, universalistic categories -- such as society, culture, or symbol -- exist in dynamic opposition with the particulars of ethnographic observation -- just as disease categories exist in opposition to individual cases for the doctor. A half century of fieldwork has also taught anthropologists that the social and cultural particulars he observes are highly variable from place to place and changeable over time. The construction of universalistic categories in anthropology has been an arduous task, and the questions of human similarities and differences can rarely be answered with categorical surety. This has led to a permanent gulf in anthropological communication with the doctor. We try to speak to him through our universals in the medical anthropological literature, but what impresses the doctor are the myriad particulars of our ethnographies -- so much like clinical case

histories when handled in certain ways. Building an adequate conceptual bridge between these two levels will require the medical anthropologist to take a new look at this ancient issue in anthropological thought.

In the meantime our view from the medical classroom suggests that the search for medical universals has left many particular areas of medical anthropology almost unexamined. For the anthropologist recently arrived in the medical classroom, it is an especially painful realization to find that up to this point the comparative ethnography of medical schools has been an almost totally neglected topic in medical anthropology. Sociologists, such as Becker and his associates and Bloom (1973) have taken anthropological methods and applied them brilliantly to the study of U.S. medical schools, but anthropologists have so far been uninterested in providing similar looks at medical schools in other socio-cultural contexts. If scientific medicine is everywhere the same, then what is taught and learned in scientific medical schools must be everywhere the same, too. Our commitment to medical universalism obliges us to be blind to our field experiences, and an important part of the medical "establishment" wherever scientific medicine is practiced has been left out of our medical anthropological picture.

We hope, above all, that the exposition of our field data has convinced the reader that although biochemistry may be everywhere the same, medical schools as institutions are not all alike. For those still unconvinced, we recommend a close reading of Hafter's account of the experimental programme at the Universidad Nacional Autonoma de Mexico as a parallel illustration of our own, and a comparison of it with Nelson and Oleson's comments about their experiences in Egypt. The great anthropological fact which emerges is that each medical school moves in a social and cultural world of its own.

As a consequence, the new teaching roles for anthropologists which have appeared in widely varying settings throughout the world remain forever new and disorienting. It is only by first accepting the ethnographic task of understanding the relationships between the medical school and its surrounding society that the anthropologist can ever hope to orient himself, and establish the many kinds of relevances which being "in" medical education really requires.

On the practical level of educational inputs, a broader appreciation of the medical school's place within society should provide a more valid basis for selecting the course material most relevant to the medical student. If the anthropologist knows nothing about the world in which the doctor will work and its socio-cultural peculiarities, he will remain blind and unconcerned about the problem of achieving relevance which has occupied us here, and his presence in the medical school will be conditioned entirely to the doctor's perception of his relevance. If, on the other hand, the anthropologist takes the initiative and augments his knowledge of the school-professional relationships, and the place of both in the larger society, he can develop a powerful indicator for adapting his knowledge to each of the many different educational contexts in which he might work. Anthropology itself teaches this perspective on our new role, yet in practice we have been loath to apply the lesson. As a result we teach details about "culture-bound" syndromes to students who will never see them even once in their professional life, simply because they are part of our anthropological view of medicine.

A further development of the comparative ethnography of medical schools may also permit us to exploit the almost paradigmatic quality of the medical

curriculum to explore our intellectual relevance more fully. So far anthropologists' contacts with medicine have been in the field laboratory and the clinic, where the diversity of real medical practice is most evident. But participation in medical education brings us instead into contact with the integrating paradigms which organize this diversity of practical circumstances. It obliges us to look with new sobriety at the unity of medicine on a conceptual level -- a unity which the doctor himself may rarely see once he has left the school. Given the problems of medical hyper-specialization which Leighton pointed out, the medical school may in fact be a unique institution within the professional milieu -- the last surviving institution which tries to link up this incredible diversity. As anthropologists, we may be able to exploit this paradigmatic quality of the medical curriculum in order to establish just where we fit into the whole field.

Finally, greater knowledge about medical schools as institutions will allow the anthropologist to see what substantive contributions to his own discipline can be made from the medical classroom. The relationship between the medical school and its milieu is, after all, reciprocal. If knowledge of its socio-cultural context can help us understand our role in the school, by the same token knowledge about the school should also help us understand the context. Our thesis exposition tried to demonstrate that the medical school did indeed reflect faithfully certain characteristics of its surrounding milieu. Not only was this medical school different from those in other countries where scientific medicine is practiced, it was also different from other medical schools within Mexico, reflecting aspects of a regional and local sub-culture. Its peculiar capitalistic structure as a money-making institution, its identification with the "private" sector of education, and

the social class composition of its student body were among the important examples of this inter-relationship. Knowing more about medical schools and medical students, then, can tell us more not only about medicine but also about the whole society and culture upon which they depend. Anthropologists have not exploited this potential of the medical classroom as yet, but we hope our account has demonstrated that the potential is there.

By way of general conclusions, we may say that anthropology's relevance to medicine and medical education remains an open issue. Medical anthropology forms an important part of the new relationship, but unresolved conflicts between theory and praxis in anthropology are also involved. Until this more fundamental issue has been resolved, the anthropologist's relationship with medicine is doomed to be insecure and partial. The role of teacher in the medical curriculum presents the anthropologist with this issue at a new vector, and offers a new opportunity to renegotiate the terms of his contacts. But it also calls for the anthropologist to see his own role in society with new precision. Our tactic has been to use anthropological methods to study the role of the anthropologist. Perhaps the effort of looking at our role in the medical school setting this way, without focusing on psychological problems or culture shock, can also contribute to the growth of anthropological self-consciousness, so that anthropologists may see themselves <u>within</u> society as they really are, with neither scientific, political, or religious veils to hide their actions. Under that kind of light perhaps the role of medical teacher may seem more beneficient and rewarding than some of the other roles anthropologists have already occupied, and we shall find the will to face the hard questions which its occupation poses.

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APPENDIX I

Figure 1. The Objectives of the University of Monterrey Medical School.

Objectives:

1. "The function of the Institute of Health Sciences is to create and develop the professional scientific environment adequately so that the student acquires habits of study, develops his aptitudes completely, and forms the sense of responsibility which characterizes the modern university graduate."

2. "The objective of the University curriculum in Medicine is to prepare the university-trained man as a competent professional, conscious of his possibilities and limitations, capable of continuing to perfect himself through his own efforts throughout his life."

Figure 2. The Curriculum of the University of Monterrey Medical School.

Formative Stage.

General Studies - First Semester.

1. Methodology I
2. Statistics I
3. Mathematics I
4. English I
5. Social Biology
6. Social Anthropology I
7. Psychology and Mental Health I
8. Preventive Medicine and Social Service (Total hours - 22)

General Studies and Basic Sciences - Second Semester

1. Methodology II
2. English II
3. Social Anthropology II
4. Psychology and Mental Health II
5. Cellular Biology I
6. Biophysics I
7. Biochemistry I
8. Human Anatomy I
9. Preventive Medicine and Social Service II (Total hours - 30)

Basic Sciences - Third Semester

1. Introduction to Medicine
2. Human Anatomy II
3. Cellular Biology II
4. Genetics
5. Biochemistry II
6. Biophysics II
7. Preventive Medicine and Social Service III (Total hours - 30)

Multidisciplinary Laboratories and Basic Sciences - Fourth Semester

1. Propedeutics and Introduction to the Clinic
2. Introduction to Physiology
3. Pharmacodynamics
4. Microbiology and Parasitology
5. Introduction to Public Health
6. Preventive Medicine and Social Service IV (Total hours - 25)

Clinical Science Blocks

Fifth Semester

1. Infections - (Attack and Defense)
2. Digestive System
3. Nutrition and Metabolism
4. Preventive Medicine and Social Service V

Sixth Semester

1. Nervous System
2. Endocrine System
3. Reproductive System
4. Preventive Medicine and Social Service VI

Seventh Semester

1. Cardiovascular System
2. Respiratory System
3. Renal and Urinary System
4. Preventive Medicine and Social Service VII

Eighth Semester

1. Growth and Development
2. Skeletal-Muscular System
3. Hematology
4. Preventive Medicine and Social Service VIII

Ninth Semester

1. Dermatology
2. Ophthalmology and Otorhinology
3. Psychopathology
4. Pathology
5. Preventive Medicine and Social Service IX

Tenth Semester

1. Rotating Pre-Internship
2. Preventive Medicine and Social Service

Eleventh Semester

1. Rotating Pre-Internship
2. Preventive Medicine and Social Service

APPENDIX 2 Selected Course Outlines.

A. Course Outline of Social and Cultural Anthropology, Spring 1973.

Objectives:

1) Introduce some of the concepts used in anthropological research - society, culture, ecosystems, and personality - and show their application in specific cases taken from the anthropological literature.

2) Present anthropological methodology and how it relates to methods of medical investigation.

3) Establish the reasons for studying medicine within anthropology, and what contribution it can make to the practicing doctor.

Program of Study:

1. Introduction. Course Objectives.

2. Definitions. What is Anthropology?
   (a) Sub-fields of the discipline.
   (b) Relation of Anthropology to the natural sciences and the humanities.

3. Historical development of the discipline.
   (a) European anthropology.
   (b) North American anthropology.
   (c) Anthropology in Latin America.

4. Basic Theoretical Concepts.
   (a) Society.
      (1) Types of societies.
      (2) Schools of thought: social evolutionism, French and English structuralism.
   (b) Culture.
      (1) How does culture affect man? Beliefs, customs, norms and values.
      (2) The problem of primitivism: cultural typology.
      (3) Schools of thought: functionalism.
   (c) Personality.
      (1) Relation with psychology, psychiatry, and philosophy.
      (2) School of 'personality and culture': problems and historical development.
   (d) Human Ecology.
      (1) 'New' Archaeology.
      (2) Study of the Environment.
   (e) Eclectic Synthesis: new tendencies and views.

5. Methodology.
   (a) The study of man by man: effects of personality on the definition of problems.
   (b) Methodology of 'Participant Observation'.
   (c) Quantitative Methods: social statistics.
   (d) Psychological tests.
   (e) Life histories.

6. Medical Anthropology: the comparative study of medical systems.
   (a) The therapeutic act.
   (b) Medicine and Religion: power over death.
      (1) Shamanism.
      (2) Healing cults.
      (3) Historical sources of Western medicine.
   (c) Latin American Popular Medicine.
      (1) Categories of illnesses.
      (2) Curanderismo and the curandero.
      (3) Materia Medica.
   (d) Competition between medical systems.
      (1) Applied Anthropology.
      (2) Sample case histories.

7. The Doctor within Society.
   (a) Medical socialization.
   (b) Class and ethnicity.
   (c) Medicine and politics: drug use.
   (d) Social institutions of medicine.

Textbook: Pertti Pelto, The Study of Anthropology.

Selected Readings:

1. 'Medical Anthropology', Lynn Tamaki, Ms.

2. 'Humoral Medicine in Guatemale', Michael Logan (1972)

3. 'The Hot-Cold Theory of Disease: Implications for Treatment of Puerto Rican Patients', Alan Harwood (1971)

4. 'Peruvian Hallucinogenic Folk Healing: An Overview', M. Dobkin de Rios, Ms.

5. 'Magical Fright', A. Rubel (1964)

6. 'Urban Illness: Medical Resources, Urban Structure and Response to Illness in Seville', I. Press (1971)

7. 'Squatter Settlements', Wm. Mangin (196?)

B. Course Outline of Social Anthropology I, Fall, 1975.

Textbook: Other Cultures, John Beattie.

Program of Study:

1. Introduction. (First Unit)
   (a) What is Anthropology?
   (b) How has Anthropology developed as a scientific discipline?
   (c) What is Culture?
   (d) What is Society?
   (e) Evolutionary theory.
   (f) Functionalist theory.
   (g) New theoretical tendencies.
   (h) How does the anthropologist work?
   (i) Review of the textbook.

2. The Study of Society. (Second Unit)
   (a) The Eskimos.
   (b) The Tarahumara.
   (c) Studies of Complex Societies: The United States, Canada, and Mexico.

3. Mexican Anthropology. (Third Unit)
   (a) Archaeology.
   (b) Prehistory of the New World.
   (c) High Civilizations and the problem of independent origins.
   (d) Archaeology of the Maya.
   (e) Indigenism.
   (f) Anthropology applied to human problems.
   (g) Theory and ideology of Indigenism.
   (h) Indigenous groups today.
   (i) Anthropological studies of Mexico.

C. Course Outline of Social Anthropology II, Spring, 1975.

Objectives: The principal objective of the course is to apply some of the concepts and theories developed in the study of general anthropology to the field of medicine, and the professional work of the doctor. In this sense the course is specifically about Medical Anthropology. Another important objective is to develop in the student the capacity for independent investigation and the application of empirical and scientific knowledge to the study of social problems.

Textbook: Cerocahui: una Comunidad en la Tarahumara, F. Irigoyen (1974)

Program of Study:

Unit 1. Introduction. Review of important concepts from general anthropology. Interests and problems common to anthropology and medicine.

Assigned Reading: 'El Sistema de Salud en El Agua Puerca, S.L.P.', J. Manrique Casteneda (1971)
'Antropologia Medica y Ecologia', Ysunza Ogazon (1974)

Unit 2. Population Policies. Consideration of the social problems related to world demographic expansion and the role of the doctor in this phenomena.

Assigned Reading: 'Grupo Familiar y Matrimonio en una Zona Rural de Argentina, Minuchin de Itzigsohn et al. (1973)

Unit 3. Other Medicines: Aztec Medicine. Ethnohistorical study of a non-Western Medicine.

Assigned Reading: 'Ideas Rectoras de la Medicina Nahuatl', Martinez Cortez (1967)
'Funcion Social de la Medicina Precortesiana', Aguirre Beltran (1966)

Unit 4. Religion and Medicine: the Fidencistas. Structural and functional study of a religious healing sect.

Assigned Reading: Selections from El Nino Fidencio y el Fidencismo, Garza Quiroz (1972)

Unit 5. Medical Services for Indigenous Peoples.

Assigned Reading: Textbook.

Unit 6. The Doctor-Patient Relationship. Influences of differences in language and values.

Assigned Reading: 'Some Changes in Mexican Village Curing Practices Induced by Western Medicine', J. Brown (1963)

Unit 7. Folk Illnesses.

Assigned Reading: 'El Susto en Hispanoamerica', A. Rubel (1967)

Unit 8. Transcultural Psychiatry. Exploration of a subdiscipline of medicine based on anthropology. Intensive study of the case history of an Eskimo adolescent.

No assigned reading.

APPENDIX 3 Interview Schedule for Tarahumara Field Course (1974)

1. Family Data.

1) Name, age, and sex of each family member.
2) First language and bi-lingualism of each family member.
3) Any illness of a family member during the previous six months.
4) Type of medical attention received.
5) Number of children stillborn (age, sex, date, cause).
6) Number of children not stillborn who later died (age, sex, date, cause).
7) Length of time married.
8) Whether children were born at home, or in the clinic.

2. Housing Data

1) Number of rooms.
2) Number of occupants.
3) Kitchen inside or outside the house.
4) Sleep on the floor, on a mat, or in a bed.
5) What part of the year is the house occupied, in what season.
6) Possession of a second house, how much time is it occupied, and in what season. How many hours away is the second house?
7) Possession of a cave, how much time is it occupied, in what season, and how many hours away is it?
8) How frequently is the second house (or cave) visited?

3. Accident Data

1) Name, age and sex of person who suffered accident.
2) When did the accident occur (season, and day or night)
3) Type of accident.
4) Circumstances of accident.
5) Other persons present.
6) Instruments associated with accident.
7) Where did the accident occur.
8) What type of medical attention was received, who offered it, and what kind of remedies were applied.
9) Time required to heal, any permanent physical damage.
10) Other details of interest.