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ANTHROPOLOGY AND THE SOCIAL ENGINEER: A CASE STUDY
IN THE PROFESSIONALIZATION AND ELABORATION
OF THE SOCIAL SCIENTIST'S ROLE

by

Barry Richard Bainton

A Dissertation Submitted to the Faculty of the
DEPARTMENT OF ANTHROPOLOGY
In Partial Fulfillment of the Requirements
For the Degree of
DOCTOR OF PHILOSOPHY
In the Graduate College
THE UNIVERSITY OF ARIZONA

1979

Copyright 1979 Barry Richard Bainton
I hereby recommend that this dissertation prepared under my direction by Barry Richard Bainton entitled Anthropology and the Social Engineer: A Case Study in the Professionalization and Elaboration of the Social Scientist's Role. be accepted as fulfilling the dissertation requirement for the Degree of Doctor of Philosophy.

Edward H. Sarcie
Dissertation Director

As members of the Final Examination Committee, we certify that we have read this dissertation and agree that it may be presented for final defense.

Paul R. Turner

Final approval and acceptance of this dissertation is contingent on the candidate's adequate performance and defense thereof at the final oral examination.

11/78
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A doctoral dissertation is a rite of passage, marking the death of the student role and the birth of the professional role. It is an ending and a beginning. As such, it represents a unique literary form for it must serve this dual purpose in the life of the author. The dissertation marks the end of a long pedagogical process in which the student learns the "sacred" language of his discipline, the complexities and subtleties of its folklore, the techniques and fine points of its ritual, and, in the dissertation, discloses the divine revelation that comes to him from his communion with the gods. It is a beginning because it marks his right to join in full standing with the tribe's legions of warriors. The substance of the revelation, i.e., the dissertation, establishes his place in their ranks.

The normal anthropological dissertation generally falls into one of two types. The traditional dissertation is descriptive representing the natural history of some aspect of anthropological concern. In this form, the author displays his scientific skills as an observer and his abilities to synthesize these observations into a coherent fabric representing the phenomena. The second approach is problematic representing a scientific inquiry into a problem posed by the discipline's theoretical system. In this form, the student displays his scientific skills to construct a situation to test a theoretical proposition. The present dissertation falls somewhere between these
two types, and represents the product of fifteen years as a "student" of anthropology. During this time I have been both participant and observer in the anthropologist's tribe.

As a participant, I have been active in the rituals of the graduate department and the annual massing of the clans. I have written and presented papers, published a few of these, taught classes, designed courses, participated in the "meat market," and founded a professional association. I have read extensively from the folklore, engaged in archaeological surveys and digs, conducted ethnographic studies, made physical measurements of school children, assembled ethnographic collections, designed museum displays, and done philological studies of Mayan glyphs.

As an observer, I have noted the changes and growth in the profession in the past two decades. I have seen the discipline and profession change from a small intimate group to a large complex diverse body. I have seen some warriors turn into gods and grow old. I have seen old gods die. I remember when Phil Leis walked into his Comparative Religion class at Brown and canceled the class because -- Melville Herskovits had died. I have observed the changes in the way instructors have counseled students going into the field for the first time in the proper way to deal with informants. At first they advised building good rapport with them, later to also pay them for their time, and now some advise, do something meaningful for the group -- even bending the research to meet a community need. Once anthropologists sought their funding from private foundations, and were relatively free to "do their own thing" in the field. Today, most rely on the
government for support and are more tightly regulated. Human subjects committees were unheard of when I began my studies, while today they can drastically alter one's research design.

As an observer, I have felt that anthropologists and anthropology have much to offer the world. I have been disappointed when they have failed to see this potential and instead sought to avoid personal commitment. They appear foolish when in moments of righteous zeal they direct their associations to ban war and genocide, and yet refuse to seek the power, much less use power, in a way that would permit them to realize these noble goals.

It is as a participant-observer of anthropology that I decided to undertake this study. The study is both an ethnography of anthropology and an evaluation of the profession. It explores the profession from an evolutionary and dynamic perspective and is the product of my development as a theorist during this period. I am convinced that we, as anthropologists, are today in the middle of a radical transformation of our discipline and profession. I see our discipline evolving as an organizing perspective for the merger of the social sciences. By the beginning of the next century we will be training our students to become social scientists or engineers with a specialty in anthropology, just as today physicists train their students to be physicists and engineers while specializing in optical, nuclear, high energy, or solid state physics. Second, I see us evolving an engineering role in the social sciences as government and industry become more dependent on scientific management. Third, I see a day not too distant when we
will have a truly experimental social science as space stations and a lunar colony are established.

The purpose of this study is to describe the evolution of our profession, the forces that have and are shaping it, and suggest ways we may adapt to the future. While I feel a certain loss and sadness for what has been lost, the data convince me that what I have written here is a reasonable evaluation of the past, present, and our foreseeable future as a discipline and profession. I leave it to the reader to decide for himself if the case has been made.

I am indebted to a multitude of people for this product. To those at Brown University where I did my undergraduate work, I owe my love of anthropology. These include Dwight B. Heath, Alex Richardelli, Bets Giddings, and Judy Huntsman. Phil Leis opened new vistas for me through his seminar on the History of Ethnological Theory. During our quiet Saturday and Sunday morning coffee breaks, the late J. L. Giddings more than anyone taught me to look on the dead past as a key to understanding the present. Those days in Bristol are very precious. The late Charles Smiley taught me to see the vital linkage between man's earthly struggles and the dynamic pace of the universe.

The Peace Corps and the training team at Cornell University prepared me to experience the variety and uniformity of the human condition, and how in a small way we can become masters of our own destinies.

The University of Arizona has provided me the freedom to explore myself both as a person and as an aspiring anthropologist. There is something very unique about the University's Department of
Anthropology which has inspired the growth of a cadre of applied anthropol­ogists in which I count myself. William Kelly gave me the opportunity and counseling that allowed me to spend a year exploring the body of applied literature and to develop the theoretical orientation to synthesize it. To Thomas Weaver, I owe the opportunity to work on the Gila River Project and to prove to myself that I can do formal field work.

James Officer deserves special thanks for his strong insistence that this study reflect both my potential and the potential of the material, and for pointing out the concept of "voluntary association." It was the key to much of my understanding. If I have failed, it is not because of Jim; rather it is in spite of him.

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source of energy which without I doubt it would have been com-
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The late Thomas Segundo, Chairman of the Papago Tribe, taught
me that the greatest sin an anthropologist can commit is to withhold
his skills from those he works with and studies.

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role I have chosen for myself.

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To the others, too numerous to name, you know who you are, thank you!

Finally, to three very special people, I owe the most. To my parents, thank you for the years of patience, trust and confidence that I would reach this shared goal. I hope in some small way I lived up to your expectations.

To my wife, Denise, who has suffered the most and endured the most -- I am happy to announce that I will no longer use the excuse, "wait until I finish my dissertation." You more than anyone have made this possible. Thank you.

If I have failed when all was made available to me, it is not the fault of those named above. Any fault belongs with me, any glory I must share with them.
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ABSTRACT

The study examines the proposition that the development of the scientific social engineer role is the logical outgrowth of the processes of professionalization and role elaboration taking place in the social sciences in 20th century American society. A theoretical framework is presented based on the anthropological concept of the voluntary association and the model of professionalization developed by Wilensky, modified by employing Vickers' concept of professional elaboration. The role of the social engineer is examined with specific reference to the program evaluator role. The beginnings of the process of professionalization are shown by an examination of the history of the development of the evaluator role. From this analysis a number of issues are raised. These are examined in more detail in the case history of the development and professionalization of one of the social sciences, American anthropology. The historical development of American anthropology is analyzed in terms of the professionalization process and in terms of three major factors that have contributed to that process -- social mass, institutional structure, and unevenness of scale. The effects of the professionalization of American anthropology on the development of the role of the applied anthropologist are then examined. From this analysis and an analysis of the applied context of program evaluation, the scientific social engineer role is shown to represent a qualitative change in the role of the social scientist.
Finally, a number of recommendations to incorporate the new role of the anthropological social engineer into the future development of the anthropological profession are made.
Man seldom pauses to reflect as he passes from one era to another. Indeed, usually he does not know he has made the passage until he looks back (Bagdikian 1960:v).

Social engineering, the design and development of social systems through conscious human intervention, is a major innovation of civilization. The earliest social engineers, historically, were the priests and public officials of the early city-states which required new forms of social control for allocating public resources and regulating internal and external affairs. These early social engineers relied upon divine revelation and the magic of the written work to design and operate their social systems. Later they refined these tools into formal systems of philosophy and law based on tradition and changed through trial and error. Today this era of trial and error social engineering is passing, and, as a result of the social science revolution, we are entering a new era of scientific social engineering.

Today's social engineer faces a situation similar to that faced by the mechanical engineer of a century ago when there was a:

... comparative absence of theoretical foundation for most engineering achievement until about 100 years ago. This is not to say that the intellectual climate created by Newton, Hooke, Boyle, and many others during the scientific revolution did not prepare the ground for the industrial upheaval that followed; but there is very little evidence that the engineers themselves were conscious of it. For a century or more they got on very nicely without much theoretical framework and when science
began to catch up with engineering, they — or their successors — were slow to realize that times had changed, that further progress had to be based on physics and chemistry. Is there a lesson in this for us today? (Institution of Mechanical Engineers 1963:1).

The early engineer was a craftsman. More often than not he learned his craft through an apprenticeship. His right to pursue the craft was frequently protected by some form of organization such as a guild.

Where the early engineer was a craftsman, today he is professional. The transition was slow. Emmerson (1973:246) states,

A craft becomes a profession when its art and artifice are guided by the exercise of philosophical thought and the application of scientific principle. The stage at which a craft becomes a profession defies precise definition, there is rather a merging of the one into the other.

The social engineer has been and continues to be a craftsman. Although many social engineers today are members of professions, their distinct role as professional social engineers has yet to be recognized. To understand this transition from craftsman to professional we need to understand the nature of the professionalization process.

**The Purpose of the Study**

My thesis in this study is: The development of the scientific social engineer role is the logical outgrowth of the processes of professionalization and role elaboration taking place in the social sciences in 20th century American society.

Professionalization of the social engineer role is taking place on two fronts. First is the increased use of social science in the training curriculum for traditional social engineering careers. Undergraduate programs leading to professional degrees require exposure to a wide range of social sciences. Also pre-professional training for
admittance to law, public and business administration schools generally requires the undergraduate student to major or minor in a social or behavioral science prior to being accepted into a professional school.

The second front is the emergence of the applied social scientist role. The applied social scientist is an individual whose basic training is in a social science and because of some set of circumstances finds himself in a role where he works in an engineering capacity. A traditional role of this type is the consultant. In recent decades this role has become institutionalized in business and government and some social scientists spend the better part of their occupational time in it. However, training for this role has not been formally incorporated in the training of social scientists.

The purpose of this study is to examine the transition from traditional to scientific social engineering and the process of professionalization in the role of the social engineer. The primary focus is this second front -- the emergence of the applied social scientists as a social engineer. Specifically, I will examine the development of scientific social engineering and the forces, or factors, in the professionalization of American social science which have influenced this development. Finally, I will examine the potential impact these developments may have on the future of American social science.

The Study and Method

The method I have chosen for this study is the case history approach. The case history I will present is that of American Anthropology. The study is based on both historical and experiential data. The theoretical framework is drawn from anthropology, sociology and
social psychology. The historical material is drawn from library and documentary research. In Chapter 2, I define the role of the social engineer in terms of the various roles he plays in the governance of human affairs and the role played by government in the elaboration of these roles. In Chapter 3, I examine the history of one of these roles, the program evaluator, as an example of the introduction of the scientific perspective into social engineering. The historical reconstruction presented here is unique and may be subject to debate, but the line of development from Fredrick Taylor, in my view, may be reasonably argued. The analysis presented in this chapter raises two questions: how has the professionalization of the social scientist role aided or hindered the development of the scientific social engineering role; and, what factors have been at work to both inhibit and foster the development of a social engineering role among social scientists? These questions are answered in Chapters 4, 5, and 6 where I examine the history and development of American anthropology as a case study of the process of role development.

Chapter 4 examines the historical development of American anthropology and the professionalization of scientific anthropology. The analysis is based on primary documentary materials appearing in the publications of the major anthropological organizations. Secondary sources are used where primary materials were not available or when the use of primary data would have duplicated work already available in the literature. Experiential data have also been incorporated when I felt this would illuminate a point. I have been associated with anthropology since 1962 both as a student and a professional applied
anthropologist. As a result I have been a participant-observer in the events in the profession during this period. In Chapter 5, I analyze the history of scientific anthropology's organizational development in terms of the theoretical framework present in the next section of this chapter. The purpose of this analysis is to identify the factors and processes that have helped to shape the profession. In Chapter 6, I extend this analysis to the development of applied anthropology. The assumption is that a scientific social engineering role develops in a social science when social scientists begin to apply their theories to practical, rather than theoretical problems. The questions I attempt to answer in this chapter are: why has the development of applied anthropology lagged behind the growth of the anthropological profession; and, how have the factors and processes affecting the development of the anthropological profession helped to stimulate and retard the development of a scientific social engineering role for anthropologists?

In Chapter 7, I return to an analysis of the program evaluator role as an example of the environmental context of the social engineer. I present this context as a model. The Model of the social engineering context is based on my personal experience in a number of engineering roles over the past 14 years, i.e., Peace Corps volunteer, program evaluator, community developer, program planner and program designer. The Model provides a basis for the conclusions presented in Chapter 8.

In Chapter 8, I will draw a number of conclusions about the process of the professionalization of the scientific social engineer role in general, and the potential impact of this process on the
anthropological profession in particular. Specifically, I will examine the current state of scientific social engineering and, in light of the analysis presented in the earlier chapters, attempt to describe the alternatives available for the development of a professional role. These alternatives will then be used to evaluate the impact of the scientific social engineering role in the organization of American anthropology.

**Who Are the Social Engineers?**

Hammurabi, Alexander the Great, Caesar Augustus, Mohammed, Queen Elizabeth I, Thomas Jefferson, John D. Rockefeller, Henry Ford, Fredrick Taylor, among others were social engineers. The social engineer is the individual skilled in the craft of designing and constructing systems of human relations. Today, the lawyer, the public administrator, business manager and the politician perform the traditional professional social engineer roles. No all individuals occupying these roles, however, qualify as engineers. The critical test is whether the individual is primarily engaged in the design and development of social systems. One who spends his time maintaining an existing social structure is a social technician. The social engineer is concerned with solving social technology problems, while the social technician is concerned with the fine tuning of an existing social technology.

The applied social scientist is a social engineer. Unlike other social engineers, he relies on the scientific theories of the social sciences as a basis for his designs, and he uses the "laws" or
"principles" discovered by the social scientist as a basis for developing his social innovations. Where the other social engineers rely on tradition and undemonstrated propositions, or principles, the applied social scientist brings the principles and philosophy of the scientific method to the engineering situation. The major difference between the scientist-engineer and the traditional social engineer is the former's reliance on the scientific method in decision-making and product design. Whereas, the difference between the scientist and engineer is in the purposes of their respective labors. The scientist seeks to expand the body of knowledge, and the questions he seeks to answer are determined by that body of knowledge. The engineer seeks to resolve problems confronting society and he selects from the body of scientific knowledge those facts and theories which will help to resolve the problem. The scientist's product is an increment in the total body of knowledge. The engineer's product is an innovation in the way society manages its problems.

Theory of Professionalization

While Emmer son observes that the transition of engineering from a craft to a profession defies precise definition, a considerable body of theory has been developed to describe the concept, "profession," and the process, "professionalization." This theory can be applied to the study of the development of the scientific social engineer role.

Profession Defined

In 1928, Carr-Saunders defined a profession as follows:

... an occupation based on specialized intellectual study and training, the purpose of which is to supply skilled
service or advice to others for a definite fee or salary (quoted in Vollmer and Mills 1966:4).

Talcott Parsons defines "profession" in terms of its place within the overall sociocultural system.

I conceive a profession to be a category of occupational role which is organized about the mastery of and fiduciary responsibility for any important segment of a society's cultural tradition, including responsibility for its perpetuation and for its further development. In addition, a profession may have responsibility for the application of its knowledge in practical situations (Parsons 1959:547).

After surveying the literature of the sociology of occupations, Ernest Greenwood (1957) concluded that there are five attributes that distinguish the profession from other occupational forms. He observes that all professions appear to possess:

... (1) systematic theory, (2) authority, (3) community sanction, (4) ethical codes and (5) a culture (Greenwood 1957:45).

Vollmer and Mills (1966:2) state:

... a profession is really an ideal type of occupational institution. ... Therefore, it seems more useful to analyze and describe the characteristics of occupational institutions in terms of the concept of professionalization, assuming that many, if not all, occupations may be placed somewhere on a continuum between the ideal-type 'profession' at one end and completely unorganized occupational categories, or 'non-professions,' at the other end. Professionalization is a process, then, that may affect any occupation to a greater or lesser degree.

A profession is an institutional form found in western civilization and is therefore open to institutional analysis. Malinowski (1960:52) defines an institution as "... an organized system of purposeful activities." He states that (1960:41) "... scientific anthropology consists in a theory of institutions, that is, a concrete analysis of the type units of an organization."
Institutions are the structural elements of a sociocultural system. They are the specific functional units of the system which satisfy the whole range of basic needs of both the system and its individual members. These needs may be instrumental, i.e., a basic need for energy or materials, or integrative, i.e., a basic need to facilitate the transmission of energy or materials from one part of the system to another. Malinowski (1960:40) states:

Culture is an integral composed of partly autonomous, partly coordinated institutions. It is integrated on a series of principles such as the community of blood through procreation; the contiguity in space related to cooperation; the specialization in activities; and last but not least, the use of power in political organization.

When we study an institution, we are studying a sub-system of a larger sociocultural system. This sub-system may also be defined as an action system. Talcott Parsons (1966) has described the functional structure of an action system. The system's stability is determined by its integrity and its ability to perform four basic functions. These functions are pattern maintenance, integration, goal orientation and adaptation. Pattern maintenance is the system's ability to insure the normal operation of the societal activity over time, what Bohannan (1963) has termed "synchronic change." In structural terms, it is the function performed by the charter and norms in Malinowski's institution. Integration is the system's ability to bind its constitute parts together. In Malinowski's terms, it is the function performed by different activities and material objects as these relate to the internal workings of the system. Goal orientation is the system's ability to order and direct activities of its members toward the satisfaction of the system's needs. Structurally, this function is performed by the
roles assigned to members and groups in Malinowski's institution. Adaptation is the ability of the system to adjust to the environmental context in which it exists, and further, to obtain and convert the free energy it requires to sustain itself. Again, in Malinowskian structural terms, this function is performed by those activities and material objects related to the external activity of the system.

The Context of the Profession

An industrializing society is a professionalizing society . . . . Two indices of this relationship may be drawn from American experience: One is an increase in the proportion of the labor force in the white-collar occupations generally, and the professions and semi-professions specifically. The other is the increase in the number of occupations trying to acquire the symbols of professional status, following a program of action spearheaded by their formal associations, which might lead to recognition as professions (Goode 1960:902).

Industrialization of the West began in the 19th century; today we are in an advanced stage of that process. This has brought about changes in the structure and function of professions in Western socio-cultural systems. Vickers (197^:178-179) recently observed six major changes taking place in the structure and function of professions.

First, in many professions, the members are now wholly or mainly functionaries, whole-time officials in governmental or business organizations. . . .

Second, most professionals are also technologists. Their skills include the mastery of elaborate techniques. . . .

Third, the general level of education of the population has risen so much as to mute the distinction which once gave prestige to the "learned" professions as such. . . .

Fourth, the area of professionalism has hugely widened . . . .

Finally, the professionalization of our activities, especially in the field of management and government, have produced what . . . can only be called the multi-professional profession.
The professionalization of business and government, according to Vickers, makes it increasingly difficult to define a single professional qualification which has always distinguished the leader of the professional team. Vickers identifies one more aspect of professionalization — professional elaboration. By professional elaboration he means that once a profession becomes firmly established in its environment, it becomes, itself, an environment capable of spawning new professions.

The Profession as a Social Structural Form

Anthropologists have discovered a wide variety of social structural forms. In recent attempts to place these forms into an evolutionary perspective, Sahlins and Service (1960) argue that different levels of sociocultural integration can be identified on the basis of the underlying principle of organization that is used by a society's members to structure their interpersonal relations. Service (1962) has carried this argument a step further by identifying what he terms: band level, tribal level, and chiefdom level societies. He demonstrates that at each level a different or more elaborate structural form is made possible by the elaboration of an organizational principle or the addition of a new principle, e.g., consanguinity, territoriality, etc. One structural form not included in Service's analysis, but which has drawn the attention of a number of anthropologists in recent years, is the "sodality" (Lintor 1936) or "voluntary association" (Officer 1964; Little 1965; Kerri 1976). This social form
is based primarily on a principle of "common interest" shared by group members.

Sodalities, or voluntary associations, incorporate individuals from various backgrounds into a group to carry out some socially significant activity within the larger socio-cultural system. The membership of such groups is more fluid than that of groups formed by ascribed statuses such as families or territorial groups. Some voluntary organizations are very informal while others display varying degrees of formal structure. Of those displaying a formal structure, Officer (1964:8) identifies six shared characteristics.

1. They are organized primarily according to the voluntary principle.
2. They possess some kind of collective representation, such as a name, by means of which they are distinguished from other groups of similar nature.
3. Their structures include one or more statuses, the occupants of which are vested by the membership with the authority to supervise interaction whenever the unit, or any of its sub-units, is convened.
4. They possess some procedure, such as payment of dues, by means of which the official membership is revalidated at intervals.
5. Their members do not carry out their principle occupational roles, nor derive a major portion of their income, from participation in the group.
6. Their members have an interest or set of interests in common which are satisfied through affiliation.

These characteristics make voluntary associations a very versatile social structural form. Should it cease to perform any of these functions or go out of existence, the loss will have a minimum impact on the society at large and on the lives of the individual members. This quality makes the voluntary association an ideal structural form for coping with rapid change. Also, since membership is voluntary, it
is an ideal form for coping with changes in social mass, i.e., population.

In his study of voluntary associations in West Africa, Little (1965) found the development of such organizations frequently takes place in urban settings. Kerri (1976) finds a similar phenomenon reported in the literature on voluntary associations he reviewed. Kerri's study included a world-wide sampling of studies of voluntary associations. In addition to urbanization, he found that voluntary associations are the social form that most commonly arises in periods of transition from traditional toward industrial societies.

The profession may be defined as one form of voluntary association based on common vocational interest. It is distinguished from other vocational common interest groups by a set of distinctive characteristics.

Goode (1960:903), for example, lists ten features that distinguish the profession from other occupational types.

1. The profession determines its own standards of education and training.
2. The student professional goes through a more far-reaching adult socializational experience than the learner in other occupations.
3. Professional practice is often legally recognized by some form of licensure.
4. Licensing and admission boards are manned by members of the profession.
5. Most legislation concerned with the profession is shaped by that profession.
6. The occupation gains in income, power, and prestige ranking, and can demand higher caliber students.
7. The practitioner is relatively free of lay evaluation and control.
8. The norms of practice enforced by the profession are more stringent than legal controls.
9. Members are more strongly identified and affiliated with the profession than are members of other occupations with theirs.
10. The profession is more likely to be a terminal occupation. Members do not care to leave it, and a higher proportion assert that if they had it to do over again, they would again choose that type of work.

The Professional Status and Role

When one is admitted to a profession, one attains the status of a professional. The status is achieved through a process of specialized training. The training is directed toward preparing the initiate for full status in the profession. He is required to master a body of specialized knowledge and the skills to use that knowledge in a manner deemed of value to the sociocultural system of which the profession is a part. Once the initiate demonstrates his mastery, he is granted a social license to exercise all the rights, including making a living from the practice of these skills, and to be held accountable for all the responsibilities society affords the status.

Vickers (1974) distinguishes six elements that form the performance requirements of the professional role, and which distinguish it from other occupational classes. He argues (1974:168-69) that the professional has a need for special knowledge. This knowledge is applied to a set of special skills which he possesses. These skills are: (1) understanding some types of situations; (2) designing new situations within the limits of the law of the system; (3) advising; and (4) operating on his media in a way that reflects his understanding of the situation and in accordance with a set of standards by which he expects to be judged.

Finally, the professional has special responsibilities to the lay client to whom he makes available this mixed body of expertise and sometimes other responsibilities, perhaps conflicting ones, to the lay public who are affected by it (Vickers 1974:169).
Many students of the professions and professionalization prefer to focus on the process rather than the concept "profession."

The Process of Professionalization

Professionalization may be conceptualized on two levels. On the individual level, it refers to the enculturative process described above. On the organizational level, it refers to the institutionalization of a professional status and role set in the larger sociocultural system. In order to understand the professionalization process it is important to view the process in this larger context. This context is the entire set of voluntary associations found in the particular industrializing or industrialized sociocultural system. Anthropologists who study this social structural form have commented on the range and diversity this form takes. There are three key factors that can be used to distinguish between sub-sets of this organizational type. These are: degree of structural formality, principle of organization, and primary function the organization performs for the membership relative to the larger sociocultural system.

Anthropologists have observed that voluntary associations range from very informal groups to highly formalized group structures. Thus, if we were to classify voluntary associations, we may rank them along a continuum from least formal to most formally structured.

Second, some voluntary associations are based on an inclusive principle of membership, that is, anyone may join the group who wished to, provided that he meets the minimum requirement for membership, i.e., pay dues, attend a meeting, etc. Others are based on an exclusionary
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membership principle. In this case, individuals are admitted to mem-
 bership only after completing an intense and extensive enculturation
process and their performance is approved by the membership. Voluntary
associations may be classified into those organized on the inclusive
principle and those on the exclusive principle.

The third factor is the primary function the association per-
forms for the membership vis-à-vis the sociocultural system at large.
Officer (1964:17-20) identifies four functions voluntary associations
perform for their membership. These are: (1) social contact or com-
panionship; (2) the acquisition of status; (3) the enhancement of
status; and (4) the protection of status. While Officer examined these
functions on the level of the individual vis-à-vis the voluntary associ-
ation, it is reasonable to apply these same functional categories to
the analysis of the association on the organizational level. On this
level, the association serves as the vehicle for carrying out these
functions for the membership, as a whole, in reference to the society
at large. Voluntary associations can be classified in terms of the
primary function it performs for its members in this context.

Malinowski (1960:41) observes that "... all evolutionary or
diffusion processes happen, first and foremost, in the form of insti-
tutional change." Since a voluntary association may be described as
one type of institution, we may examine the evolution or development
of a voluntary association as one form of institutionalization. Fur-
ther, if we assume that a profession is one form of the general class
of occupational institutions, we may define professionalization as a
particular case of institutionalization. Finally, given the
characteristics of voluntary associations defined above, we may analyze
the development of a profession in terms of the changes that take place
in the structural formality of the occupational group, the principle of
organization of the group, and the function that the occupational
voluntary association plays for its membership vis-à-vis the total
society.

Caplow (1954) and Wilensky (1964) have proposed developmental
models of professionalization based on the analysis of the histories
of a number of professions. Wilensky, basing his model on the analysis
of 18 professionalized occupations, outlines eight steps in the process.
A general weakness in his, and other models, is the absence of a clear
description of the first steps in the process. Wilensky, for example,
states that the first step begins when people "... start doing full-
time the thing that needs doing" (Wilensky 1964:142). From the per­
spective presented here, this would include the entire period from the
formation of informal, inclusive, socially oriented voluntary associ­
ations through to the formalization of the association as a status
enhancement organization. While this criticism does not negate the
value of his developmental model (which is described below), it does
point to the need to begin the analysis at an earlier developmental
stage. We need to be able to distinguish between those occupationally
oriented voluntary associations which do not advance to full profes­
sional status from those that do. The analysis of voluntary association
formation and development is therefore a necessary step in the total
analysis.
Once an occupational group has identified itself, Wilensky describes seven other steps that are common in the development of the professions he studied. These steps are:

1. establish training schools;
2. form a professional association;
3. evolve a pecking order;
4. undergo a conflict between the old guard and the newcomers;
5. compete with neighboring disciplines;
6. seek legal support for the job territory and the group's code of ethics;
7. develop a code of ethics for internal control and the protection of clients (Wilensky 1964:142-145).

This model is incorporated in the analyses of the social engineer and the anthropological profession that follows. In addition to the developmental aspects of the professionalization process, i.e., the structural changes that take place in the occupational group's organization, we need to describe the dynamic factors that contribute to this development.

The Dynamic Factors

An institution is a dynamic system of interactions between individual members of the organization and between the organization and its environment. The dynamic factors that influence these interactions may be divided into two types, those that foster growth and change and those that retard growth and change. When these factors are in proper balance they maintain a tension in the system which results in dynamic equilibrium. The set of growth factors may be defined as the social mass which is composed of the total number of individuals in the institutional system, i.e., population; the relationship between these individuals, i.e., the status system; and the intensity of their
relationship to one another, i.e., the prestige system. The set of retarding factors may be defined as the institutional structure which is composed of the sub-cultural value system, i.e., traditions; and the organizational structure, i.e., structural inertia. When the effects of one or the other sets of factors becomes too strong, the effect is a disruption in the dynamic equilibrium bringing about an unevenness of scale (Wilson and Wilson 1945). The unevenness of scale creates a situation in which the institution undergoes change until a new balance is struck between the major factors, and dynamic equilibrium is restored.

The Analysis

In the study which follows, we will examine the development of the social engineering role in light of the professionalization process. We will examine the process by which this occupational group has defined itself, the organizational structure that has emerged, and the influence of social mass, institutional structure and unevenness of scale on this development. Because the scientific social engineer role is still developing, the analysis must be very general in scope. From the analysis, a number of issues are raised. In order to examine these issues, a more detailed analysis of one of the social sciences that has produced scientific social engineers is made. The anthropological profession is used as the case study. From this analysis, I will demonstrate how changes taking place in the profession have influenced the development of the scientific social engineering role in anthropology and finally, describe a number of issues that this role raises for the anthropological profession.
CHAPTER 2

THE SCIENTIFIC SOCIAL ENGINEER

We have found material wealth, and government programs, far beyond our dreams of a few years ago; yet perhaps we count the wrong things — for the new wealth and activity seem to destroy as many pleasures as they bring us, and the new programs seem irrelevant, even hostile, to many of the purposes they were designed to achieve (Robert F. Kennedy 1967:XVII).

American society places a positive value on growth and change. Both our industrial and labor institutions see growth and change as key ingredients in their economic well-being. Governmental institutions, in the 20th century, have become major forces in promoting and protecting these values. Today, government's role in promoting growth and change has expanded, beyond the simple concern for the nation's security and its economy, into the areas of its citizens' health, education, and welfare. While all of these institutions value growth and change highly, uncontrolled growth and unanticipated change are seen as threats to institutional stability. Today, policy makers are making a major effort to manage the forces of growth and change to insure orderly development. Within this context, there has evolved a set of roles for those who are responsible for controlling growth and predicting change. This role set I define as the social engineer.

In this chapter I will describe the three major functional roles the social engineer plays in the management of modern American
institutions. Then I will examine the role played by government in the development of one of these roles, the program evaluator.

**Functional Roles of the Social Engineer**

The primary mechanism for developing social innovations and bringing about societal change is policy making. Policy is an ideational structure through which the members of a sociocultural system, or their representatives, organize and structure their priorities and allocate the system's resources. The basic instrument for carrying out policy is the program. A program is a planned set of organized activities performed by a specifically designated organization or organizational type and is designed to achieve a socially and politically desired end. That is, a program is a social invention designed to accomplish a social end. Policy formation is a political function; program design is an engineering function.

The social engineer may perform one or more engineering functions during his professional career. These functions are: program planning, program development, and program evaluation. I will describe each of these.

**Program Planning**

The rational planning of activities is a necessary first step to insure against uncontrolled growth and unanticipated change as a result of a given policy. Depending on the existing state of knowledge about the problem area to be addressed by the policy, the sociocultural system through its planners can exert a greater or lesser control over
the outcome resulting from a given policy's application. The planner is a specialized role which has developed to perform this function.

The planner is responsible for identifying the public's felt needs, on the one hand, and anticipating threats to the public welfare on the other. In addition, he is responsible for designing alternative organizational and institutional means for coping with these needs. The planner is often referred to by the public as "the architect" or "designer" of a program. Planners, whether trained in a scientific tradition or apprenticed to another planner, play the role of a social engineer. They draw up their training and experience to devise the social forms that will meet the many, often conflicting, political and economic needs that go into establishing a policy.

Throughout the world, governments have come to rely on planners to assist in the formulation of policy alternatives and program designs. Within the planning field, a number of specialties have evolved, e.g., economic planning, social planning, health planning, industrial planning, urban planning, regional planning, etc. Despite this specialization, the underlying function is the same -- to create a program design that will accomplish a socially defined objective within the policy makers' specifications.

Although the planner role has become more formalized in recent decades, and their training more intensive, specialized and technical, the role and its function in society is little different from that of four thousand years ago when rulers of early civilizations began consciously planning and managing the lives of their citizens. Only the tools and techniques have changed. Theological and philosophical
principles have given way to legalistic and scientific concepts as the basis for planning. Greater knowledge and experience, enhanced by more rational and sophisticated tools for analysis, have expanded the realm of phenomena that can be predicted, planned for, and controlled.

Program Administration

A plan is little more than an ideational construct. If the program design is not implemented, the whole planning exercise contributes little to the growth and change of a sociocultural system. Program implementation is required if change is to result. Program implementation can be broken down into three phases: (1) program development; (2) program operation; (3) program termination. The program administrator, or manager, is responsible for program implementation. Both social engineers and social technicians are frequently found in this role. Whether an administrator is playing the engineer or technician role is determined, in part, by the program's stage of development. In the developmental stage, the administrator is responsible for implementing the plan. This requires assembling the resources needed to put the plan into operation and the creation of an organizational framework to carry out the program. In addition, the administrator requires the skills to modify the plan in light of the real situation, so that the policy objectives and specifications can be achieved within the bounds imposed by the policy and the actual constraints confronting the program. In this context, the administrator performs in a role situation very similar to the field engineer who, for example, must make on site decisions to modify the design
of a bridge because of unanticipated factors found at the construction site.

In a similar manner, during the terminal stage, the program administrator is responsible for disassembling the organizational structure and salvaging the program's resources in order to insure a smooth transition with a minimum of disruption to the sociocultural system. He is responsible for implementing and making the necessary modifications in the termination plan in the same way he would if he were developing the program. This is also an engineering function.

Both these roles require the administrator to convert an ideational construct into a behavioral reality. While scientific training is not mandatory to effectively perform in this role, an underlying understanding of the principles governing the formation of social institutions and the institutionalization process is needed. In both of these roles the administrator also requires analytical skills.

In the operational stage, the administrator is responsible for the maintenance of the program within more or less clearly defined parameters. These parameters set rather rigid limits on his freedom of action. Given a set of operational conditions, the administrator is required to know how he can change these conditions to improve the program's effectiveness or efficiency. His responsibility is to fine tune the program's operation. Generally his alternatives have already been proscribed by law or regulation so that his freedom of action is limited to choices between pre-existing alternatives rather than to modifying the basic design. This requires a high degree of technical knowledge and skills. Since most administrators are employed by
programs in their operational stage, schools of business and public administration tend to emphasize the technical side of the role rather than the engineering side. Despite this training emphasis, some administrators do develop the skill to perform in the social engineering role.

The Program Evaluator

A well integrated system is also a self-regulating system. By self-regulating, I mean the system has the capacity to monitor its environment and its own actions as they affect the environment, and based on the information available, to modify its activity so as to maintain its dynamic equilibrium. That is, the system has a set of feedback mechanisms, or procedures, that allow it to adjust its own performance. Program evaluation performs this function for policy makers and program administrators.

Program evaluation is a measuring process used to generate information about program performance and impact. Program evaluation is a management tool used to aid administrators in the management of program activities. As a process and a tool, program evaluation is one aspect of overall program management. The evaluation process generates information relating to the assessment of a program's effort, effectiveness and efficiency in accomplishing its objectives. Evaluation research provides valuable feedback to the program's policy apparatus.

The purpose of evaluation is to measure the effects of a program against the goals it sets out to accomplish as a means of contributing to subsequent decision making about the program and improving future programming (Weiss 1972a:4).
A program evaluation attempts to determine whether a program is achieving government objectives and considers both its positive and negative impacts (Hatry, Winnie and Fisk 1973:9).

... evaluation is the process of determining the value or amount of success in achieving a predetermined objective. The following four steps are inherent in such a process: formulating the objective; identifying proper criteria to be used in measuring success; determining and explaining the program's degree of success; and recommending further program activity (Schulberg, Sheldon and Baker 1969:6).

Evaluation refers to the procedures of fact-finding about the results of planned social action, which in turn move the spiral of planning ever upward (Hyman, Wright and Hopkins 1962:3).

The program evaluator is responsible for: designing means for measuring program performance; making the measurements; analyzing and interpreting performance data relative to the program's specifications; and recommending ways the program's performance can be improved. The program evaluator is a specialist in the measurement of social phenomena.

Traditionally, the evaluator role has focused on the fiscal performance of programs. In recent years, however, advances in the social sciences have increased our knowledge about the dynamic processes of social systems and ways these processes can be measured. As a result, social scientists have become involved in the design and implementation of evaluation systems. In this capacity, social scientists have taken on the role of social engineers when they apply their skills to meet the needs of their clients rather than their colleagues.

Program evaluation has contributed to the development of scientific social engineering. As social science measurement techniques have gained acceptance as the standard procedure for evaluating
programs, the consumer of scientific evaluative research products requires more knowledge of social science language, theory and techniques or else he must rely on in-house consultants for interpretation of such products. Today scientifically trained social engineers are better prepared than their non-scientist colleagues to use these products in their work or to perform the role of consultant.

When social program evaluations are designed into the program at the outset, the program can be treated as a social experiment. As an experiment, the program becomes a laboratory for testing social policy and the evaluator may function in much the same way as a basic research scientist. The idea that social programs can be treated as social experiments is relatively new; yet when such experiments have been performed, major advances in management and administrative practices have frequently resulted. The planners and administrators responsible for such experiments require a higher degree of scientific sophistication than do those who are simply administering an on-going program.

Discussion

The problems facing modern society require an increased level of knowledge and skill on the part of those responsible for managing society and its institutions. Within the class of managers three general specialized roles have developed to carry out the basic functions required to manage the modern state or institution. These roles are: program planner, program administrator, and program evaluator. Those who occupy these roles and design, develop, implement and
evaluate new social technologies are social engineers. In recent years, social engineers have begun to rely more and more on the knowledge and skills developed by the social sciences. It has become increasingly important for social engineers to be trained in the social sciences. As a result, it is now possible to distinguish between the traditional social engineer and the scientific social engineer. Contributing to this distinction, and to the development of modern scientific management, is the recognition by managers of the part played by psychological and social factors in effective program management. This has led to the use of behavioral, as well as fiscal, data in the evaluation of program effectiveness, and has made the role of the program evaluator a critical link in the management process. Therefore, in my discussion of the social engineer which follows, I will focus on the program evaluator role. A similar analysis from the point of view of the planner or administrator would, I feel, lead to the same conclusions.

**Government's Growing Role in Program Evaluation**

The development of program evaluation can be traced to two major developments of the late 19th century: the development within political science of the study of public administration and the use of science by Fredrick Taylor to study manufacturing processes. In this section I will focus on the development of public administration studies and its effect on the way government administers its programs. The second developmental line will be examined in more detail in the next chapter.
Evaluation of program activity has developed more slowly in the public sector than the private sector. In the late 1870's Frederick Taylor began his work at the Midvale factory which led to the development of scientific management. A decade later, Woodrow Wilson (1887) published his article, "The Study of Administration," and he together with others, e.g., Frank J. Goodnow and Leonard D. White, led the development of the public administration concept (Pfiffner and Presteus 1967:10). As the concept developed in political science, public administration was first studied from a normative and philosophical perspective. As the concepts of scientific management began to diffuse throughout industry, they were picked up by students of public administration. This led to the development of a structural-descriptive approach in the study of public administration. Critics of the research that developed incorporating this perspective, observe that this approach,

... tends to restrict the field to organizational and personnel management combined with financial and legal control. The individual must fit into on-going system and 'managers must manage' (Pfiffner and Presteus 1967:11).

More recently a behavioral research perspective has been incorporated into the study of public administration. The behavioral approach is "concerned essentially with the systematic study of human behavior in an organizational context. ..." (Pfiffner and Presteus 1967:13). All of these approaches have contributed to the development of public administration theory.

The theoretical assumptions of public administration have had a bearing on the way government employees, especially those in the
executive branch, have conceptualized their role. As long as administra tors viewed their role as enforcers of legal and historical precedent, policy and its execution could be evaluated in terms of the legal interpretation and historical precedents for that policy. With the advent of the structural and behavioral approaches, the role of the administrator has shifted to that of a facilitator of policy implementation and policy production. This conceptual shift places the evaluation focus outside of the immediate ideological frame of reference and onto the organization itself and its product -- public policy.

Rossi (1972) attributed the growing importance of the social sciences in United States' public policy formation to the evolution of the governmental function toward the development of a liberal welfare state. During the New Deal we saw the first heavy use of social scientists, primarily economists, in policy planning and implementation. Their role was especially important in the creation of social welfare programs designed to bring an end to the Depression. The policy assumption of the period, was that there was nothing wrong with the people, but rather the problem was with the economic system. This assumption in turn dictated the criteria that were used to evaluate these programs. Were people being employed? One outcome of the first evaluative efforts was to demonstrate that the government did not have the tools to either monitor or evaluate the state of the national economy or the social welfare of the nation.

To rectify this situation, a number of new instruments were needed. In 1940, the Census Bureau expanded the detail of its educational attainment data. The development of area probability sampling
techniques made possible the systematic and periodic collection of labor force data which was begun in the 1940's with the development of the Current Population Survey by the Department of Labor. Standards for measuring economic performance were first established in 1948 with the development and adoption of the Gross National Product (GNP) concept. This need to measure and monitor the state of the socio-economic environment has stimulated the continued growth of the government's role in data gathering and evaluation. Despite progress in this area, the budgetary process used to translate policy into programs lagged behind.

By the mid-1940's, it became apparent to government officials that if the government was to continue in its activist role, some changes would be required in the operation of the Executive Branch. A commission, The Commission on Organization of the Executive Branch of the Government, also known as the Hoover Commission, was established to make a study and recommendations for such changes. In 1948, the commission published its report which led to a reorganization of the Executive Branch. One of the Commission's findings, Finding Number Six, set the stage for the present method of Program Budget. The recommendation stated,

... the budgetary processes of the government need improvement in order to express the objectives of the Government in terms of the work to be done rather than in mere classifications of expenditures (Hoover Commission 1948:213).

In a separate report on Budget and Accounting, the Commission explained the significance of this finding in further detail. The key recommendation was the concept of a "performance budget."
Recommendation No. 1: We recommend that the whole budgetary concept of the federal government should be refashioned by the adoption of a budget based upon functions, activities, and projects; this we designate as a "performance budget."

Such an approach would focus attention upon the general character and relative importance of the work to be done, or upon the service to be rendered rather than upon the things to be acquired, such as personal services, supplies, equipment and so on.

Under performance budgeting, attention is centered on the function or activity — on the accomplishment of the purpose — instead of on lists of employees or authorizations or purchases.

Executive and legislative review of functional estimates and program justifications under the performance budget should center around two basic questions:

First, What is the desirable magnitude of any major government program or function in terms of need, relation to other programs, and proportion of total governmental expenditures?

Second, How efficiently and economically can an approved government program be executed? (Commission on Organization of the Executive Branch 1949, quoted in O'Donnell 1966:211-213).

Congress approved legislation in 1949 and 1950 making the performance budget mandatory but supplementary to other forms of budget presentation.

Throughout the 1950's and the early 1960's, the government continued in its activist role. In 1965, President Johnson announced that a new planning and budgeting system would be instituted. The system, developed by industry, is known as Planning-Programming-Budgeting System or PPBS. Earlier in the decade, PPBS had been adopted as a management technique by some branches of the Executive, i.e., the Department of Defense under Robert McNamara. The President's statement served to extend the influence of the PPBS budgeting and management process to the whole Executive Branch. Implementation, however, has
been much slower. Those departments and branches with easily objectifiable functions were quick to adopt the new system, e.g., the Defense Department, Post Office, and others. Departments with less objectifiable functions and goals have taken longer, e.g., Department of Health, Education and Welfare. As a result of the change in budgetary method, departments have shifted away from the simple accounting of money spent to accounting for their activity by the specific policy goals they seek to achieve; that is, the effect of their efforts directed to obtaining their objectives, the costs of such benefits, and the effectiveness and efficiency of the methods applied, are now all subject to review.

To help to achieve the goal of improved governmental operation, the Office of Management and Budget was created within the Office of the President to oversee and evaluate the activities of the Executive Branch. Also new methods have had to be developed to facilitate the evaluative process. One of these is MBO, Management by Objective, another process borrowed from the private sector (Drucker 1954). The basic premise of MBO is:

The clearer the idea of what one wants to accomplish, the greater the chances of accomplishing it.

Real progress can only be measured in relation to what one is trying to make progress toward (Brady 1973:66).

The implementation of MBO has been slow, partly due to the technical problems of objectifying rather loosely defined goals, as Hyman et al. (1962) have shown, and partly due to resistance on the part of administrators charged with developing MBO plans. In many ways the impact of MBO on managers and administrators is similar to
the impact that time and motion studies have had on industrial workers. MBO gives top management and administrators the tools for assessing the performance of middle and low level management.

Since 1964, Congress has incorporated these new approaches in all major social legislation by requiring a research and evaluation component be included in the implementation and administration of the programs funded under such legislation. The impact of this policy can be seen in the Catalog of Federal Domestic Assistance (Office of Management and Budget 1977, 1965) and in the legislation establishing the programs described therein. For example, environmental legislation requires environmental impact assessments be conducted before a project can be initiated.

The Legislative Reorganization Act of 1970 expands the responsibility of the Congress' General Accounting Office (GAO) and brings the Legislative Branch into the evaluation process. GAO reviews now extend beyond fiscal and management accountability into the area of program accountability to determine,

... whether programs are effectively achieving the objectives intended by Congress and whether alternative approaches have been examined that might accomplish the objectives more efficiently or more economically ... GAO's objective thus may be summarized as to furnish to those responsible for making the difficult political judgments information that is relevant and helpful to the formulation of those judgments, and thereby contribute to the overall responsiveness of government to the nation's needs (Staats 1973:50-51).

Recent adoption of the Sunset laws which automatically terminate programs after a specified period of time unless Congress specifically re-authorizes them, has also increased the importance of evaluation. The Food and Agriculture Act of 1977, for example, carries the
provision that all programs authorized under the Act are to be either re-authorized at the end of five years, or else, they are to be automatically terminated. The Sunset concept, applied to public programs, will radically change the nature and development of social and human services programs in the future.

In order to plan, administer, and evaluate such programs, the federal government has been increasing the number of social scientists in its employ. While there are no exact figures on the number of social scientists, their particular responsibilities or backgrounds, one gets the impression from the professional literature put out by the various social science professional associations and from the popular press that there has been a sharp increase in the number of social scientists planning, administering and evaluating government programs.

Discussion

As the processes of government have been subjected to objective study by political scientists specializing in public administration, government has responded by incorporating their findings to improve governmental operations. Moving in tandem, as the methods and techniques of political science have become more scientific, the processes of government have taken on more scientific methods. Government has also gone beyond the techniques of political science and taken on a number of new techniques of scientific management developed in the private sector, e.g., PPBS, MBO, etc. In addition, government has become a major sponsor of social science research, applying the findings from such research to the process of policy formulation. This has
made scientific program evaluation an important link in the policy making process.

The question we need now to ask is: why has it taken so long for government to adopt a scientific perspective in policy legislation? The answer is to be found in the history of scientific program evaluation, the topic I discuss in the next chapter.
Social program evaluation is the systematic accumulation of facts for providing information about the achievement of program requisites and goals relative to efforts, effectiveness, and efficiency within any stage of program development. The facts of evaluation may be obtained through a variety of relatively systematic techniques, and they are incorporated into some designated system of values for making decisions about social programs (Tripodi, Fellin and Epstein 1971:12).

The roots of program evaluation can be traced to the evolution of accounting practices, which have their beginnings in the early civilizations of Mesopotamia, Egypt and the Indus Valley. Here the priests began keeping records of the tribute paid to the gods. Sometime during the 15th century, in Europe, the double entry bookkeeping system was invented making it possible for the first time for merchants to keep accurate accounts of their credits and debits. In addition to fiscal accounting practices, other social statistics became important management tools for business, government and the churches. In the 18th and 19th centuries these early records, and the procedures for assembling them, formed the intellectual capital upon which social scientists began to build their disciplines. Hauser (1967), elsewhere, has described the historical development of these early statistics, especially as they have developed in the United States.

While these early studies were descriptive and allowed the public and the government to periodically assess the nation's progress,
they did not constitute evaluations of that progress as I am using the term "evaluation" here. In this chapter I will describe the development of systematic, scientific program evaluation. From this description I will show that the development of scientific social program evaluation has been dependent upon the advances in basic social science research and technique. Then I will examine the development of the professional role of the program evaluator in order to identify those factors which are influencing these social engineers and beginning to create among them a sense of common concern and interest that may lead to the formation of a new profession.

The Beginnings of Scientific Program Evaluation

The first steps toward a scientific evaluation of human activity were taken in the last quarter of the 19th century under the direction of Fredrick Taylor. Although he was not the first to describe a manufacturing process -- Adam Smith (1937) described the operations required to manufacture pins in his An Inquiry Into the Nature and Causes of the Wealth of Nations, first published in 1776 -- Taylor introduced a new element into this type of study.

The difference between the early industrial studies and Taylor's work is the way that Taylor approached the problem of worker productivity. Commenting on one of the early production tables, Taylor stated:

This table involves no study whatever of the movements of a man, nor of the time in which his movements should have been made. Mere statistics as to the time which a man takes to do a given piece of work do not constitute "time study." "Time study," as its name implied, involves a careful study in which work ought to be done (quoted in Kakar 1970:70).
Time and Motion Studies

Taylor contributed to the development of the concept of a standard level of performance and devised a method for establishing that standard. The method involved experimenting with the particular manufacturing process to determine the most efficient method for producing a unit of work. First experiments were conducted to determine the most efficient method of using a piece of equipment to make the product and then the workers' actual performance in making the product was measured. The workers' performance was then evaluated against the experimentally derived standard. At a time when America was beginning to industrialize, this was a revolutionary step in industrial management.

Taylor began work at the Midvale Iron Works in 1878 when he was 22 years old.

In the year Taylor joined Midvale, there were perhaps four hundred men employed there. In a way, it was a microcosm of the industrial world of the period of transition between relatively small- and large-scale production, bigger than the typical factory before the start of industrial expansion and smaller than the steelworks of the early twentieth century. The term "transitional" applied not only to the size of the labor force but also to the kind of technology and management style (Kakar 1970:42).

While management was responsible for managing the owner's capital, the organizational structures of these transitional factories did not provide the tools for them to control the costs of production. The real power rested in the hands of the foreman who oversaw the actual production. Kakar (1970:109-111) cites an example of how this power was exercised. The basic method of manufacture was the rule of thumb. Sometimes patterns were made for the article to be produced and
sometimes they were not. Management had no way of gathering information on the real costs of producing a single item, instead they computed the cost on the basis of the total costs of the entire lot. Not only did managers not know how much it cost to produce a single item, they had no way to project what the ideal cost should be. Taylor observed these weaknesses at Midvale and set about to develop a method which would give managers the tools they needed. Taylor described the essence of his method in a 1912 paper entitled, "The Present State of the Art of Industrial Management," presented to the American Society of Mechanical Engineers (Kakar 1970:202).

1. Divide the work of a man performing any job into simple elementary movements.
2. Pick out all useless movements and discard them.
3. Study, one after another, just how each of several skilled workmen makes each elementary movement, and with the aid of a stopwatch select the quickest and best method of making each elementary movement known in the trade.
4. Describe, record and index each elementary movement, with its proper time so that it can be quickly found.
5. Study and record the percentage which must be added to the actual working time of a good workman to cover unavoidable delays, interruptions and minor accidents, etc.
6. Study and record the percentage which must be added to cover the newness of a good workman to a job, the first few times that he does it. (This percentage is quite large in jobs made up of a large number of different elements comprising a long sequence infrequently repeated. This factor grows smaller, however, as the work consists of a smaller number of different elements in a sequence that is more frequently repeated.)
7. Study and record the percentage of time that must be allowed for rest, and the intervals at which rest time must be taken, in order to offset physical fatigue.

The constructive work of time study is as follows:

8. Add together into various groups such combinations of elementary movements as are frequently used in the same sequence in the trade, and record and index these groups so that they can be readily found.
9. From these several records, it is comparatively easy to select the proper series of motions which should be used
by a workman in making any particular article, and by sum-
ming the times of these movements, and adding proper per-
centage allowances, to find the proper time for doing
almost any class of work.

10. The analysis of a piece of work into its elements almost
always reveals the fact that many of the conditions sur-
rounding and accompanying the work are defective; for
instance, that improper tools are used, and that the
machines used in connection with it need perfecting, that
the sanitary conditions are bad, etc. And knowledge so
obtained leads frequently to constructive work of a high
order, to the standardization of tools and conditions, to
the invention of superior methods and machines (quoted in

An important element in Taylor's approach was tying all costs
of production to a product unit. Taylor personally promoted a system
of paying workers on a piece-rate basis. This brought strong worker
opposition. Under the old system of production quotas, workers were
able to control the cost of production by completing their quotas
quickly but not turning the work in until later when the work shift
ended. The Taylor system radically altered this practice, by making
the worker's wage contingent on the number of pieces he turned in
during a work shift.

The basic simplicity of industrial activity lent itself to
systematic study. Beginning with the basic requirements of the machine
with a given efficiency, it was possible to develop standards for the
most efficient man-machine relationship. Once the standard obtainable
level of performance from a given level of capital investment (repre-
sented by the cost of the machine and plant) was known, management
could then use this knowledge to manage labor through the piece-rate
to maximize the return on investment. Taylor provided the scientific
theory and method that allowed management to take real control of the
manufacturing process. Taylor's method brought about a revolution in American management practices which dominated the reorganization of American industry well into the third decade of the 20th century.

Evaluation of Industrial Social Organization

The next major step in scientific industrial management came in 1927 with the experimental studies in human relations conducted at the Hawthorne Works of the Western Electric Company in Chicago by F. J. Roethlisberger and William J. Dickson. Western Electric, in cooperation with the National Research Council of the National Academy of Science, began a Taylor-type study in November, 1924 to explore "... the relation of quality and quantity of illumination to efficiency in industry" (Roethlisberger and Dickson 1939:14).

Although the results from these experiments on illumination fell short of the expectations of the company in the sense that they failed to answer the specific question of the relation between illumination and efficiency, nevertheless they provided a great stimulus for more research in the field of human relations (Roethlisberger and Dickson 1939:18).

Influenced by the work of Radcliffe-Brown, the researchers began to focus on the structures and functions of the plant. The plant's social organization, they found, performed two functions: an "economic function" which is oriented toward the production of the product, i.e., the traditionally accepted function of the industrial plant; and a "concern function" which is oriented toward the creation and distribution of satisfaction among the members of the organization. Each function relates to a specific problem facing any industrial organization. These are: (1) the need to maintain external balance in the market place; and (2) the need to maintain the internal balance
of the organization. The Taylor method provided tools to study and manage the former but not the latter. The Hawthorne researchers opened a whole new area for evaluation by developing a method to evaluate the internal dimension. As they observed:

A great deal of attention has been given to the economic function of industrial organization. Scientific controls have been introduced to further the economic purposes of the concern and of the individuals within it. Much of this advance has gone on in the name of efficiency or rationalization. Nothing comparable to this advance has gone on in the development of skills and techniques for securing cooperation, that is, for getting individuals and groups of individuals working together effectively and with satisfaction to themselves. The slight advances which have been made in this area have been overshadowed by the new and powerful technological developments of modern history (Roethlisberger and Dickson 1939:552-553).

The industrial organization was found to be composed of two separate systems, the technical organization and the human organization. This organization is outlined in Figure 1, "The Hawthorne Model of Industrial Organization," where the emphasis is on the Human Organization component.

The Hawthorne researchers brought the scientific perspective to bear on problems arising from the human organization. A number of experiments were constructed in which different organizational concepts and principles were applied to work situations. Extensive behavioral data were collected from observations of the workers under various working conditions and the results were evaluated in terms of their overall impact on production and worker morale. From these studies a body of theory and practice was developed which has become the basis for many of the modern practices in industrial relations and a whole new school of industrial management developed from this effort. The
1. Technical Organization

2. Human Organization
   2.1 Individual
   2.2 Social Organization
      2.21 Formal Organization
         2.211 Patterns of Interaction
         2.212 Systems of Ideas and Beliefs (Ideological Organization)
            2.2121 Logic of Cost
            2.2122 Logic of Efficiency
      2.22 Informal Organization
         2.221 Patterns of Interaction
         2.222 Systems of Ideas and Beliefs (Ideological Organization)
            2.2221 Logic of Sentiments

Figure 1. The Hawthorne Model of Industrial Organization. — (Roestlisberger and Dickson 1939:566)
discovery of the human organizational system has stimulated the development of a number of social science sub-disciplines, e.g., industrial psychology, industrial sociology and industrial anthropology.

While the Taylor and Hawthorne approaches differ in terms of their research issues and methodologies, they also shared a number of common features. First, these evaluation studies were conducted in a clearly defined research universe, e.g., the factory, the shop, etc., where the entrance and exit of participants could be controlled. Second, each was conducted in a context where there were clearly defined organizational goals, e.g., increased profit, increased worker satisfaction, from which to evaluate the data they collected. Third, the research was carried out in an organization with a clearly defined authority structure which sanctioned and legitimized the study. Fourth, the social activity being studied was part of the overall program process; that is, the people being studied were part of the manufacturing process and their activity contributed to the quality of the final product.

People as Producers and Product

As a result of World War II and its aftermath, the federal government became involved in evaluative research on a large scale. Under the war time and post-war conditions the questions raised by the policy makers were more complex than those raised by industry. Not only were these policy makers interested in the best way to organize people in a program for effective action, but they were also interested in the reaction of people as products of the program. This required a new type of evaluative study. In this section I will briefly describe
two evaluative studies which are examples of this type of evaluative research.

A major series of evaluative studies during World War II were the Studies in Social Psychology in World War II (Stouffer et al. 1949) carried out by the Research Branch of the Information and Education Division of the War Department.

The Research Branch existed to do a practical engineering job, not a scientific job. Its purpose was to provide the Army Command quickly and accurately with facts about the attitudes of soldiers which, along with other facts and inferences, might be helpful in policy formation (Stouffer et al. 1949:5).

The work of the Research Branch was broad in scope and covered such issues as: why soldiers in the South Pacific were not taking their Atabrine as regularly as the Army felt they should, and the problem of demobilization after the war. The war drastically altered the way evaluators approached their research problems. The policy makers' goal was to win the war in the shortest time possible, and to design programs that would facilitate this process. In particular, they were interested in programs that would make the G.I.'s more effective combatants. Thus many of the programs were designed to change human behavior, and people became the products of such program activity. The urgency policy makers felt, and the realities of the battlefield, did not lend themselves to experimental research. The Research Branch scientists developed a method to measure a program's impact in terms of attitude changes produced by the program in the program's subjects. By introducing these new methods, they added a new dimension to evaluation. Among the techniques developed were the scalogram technique, and the Guttman and Likert scaling techniques which have become
standard techniques in both applied and basic attitude and social psychological research.

The Research Branch was only one of the many war time projects that helped to introduce a generation of social scientists to the field of social engineering. Others include: The Community Analysts of the War Relocation Authority (Spicer 1973; Graninger 1973; Leighton 1945), the Yale Strategic Area Studies (Foster 1969), the Committee on Food Habits (Metraux 1973; Nelson 1973), and many others. After the war, some of these social scientists remained in applied careers while others returned to academic careers. Federal involvement in economic and social planning did not end with the war, in fact it has increased. With this involvement the need for evaluative research has also increased. Federal programs, unlike those of industry, are generally broader in scope and reflect the political process that led to their creation. The goals tend to be defined broadly and generally, reflecting more the consensus that led to their winning political support than the precise statement of measurable outcomes that are required for the scientific evaluation. This has created a new set of problems for the program evaluator. Although not federal sponsored, the Encampment for Citizenship project is a classic case of programs of this type and is a case study in the problems faced by evaluators of programs with global goals.

The Encampment's goals, as reported by Hyman et al. (1962:8) were,

... to prepare young Americans for responsible citizenship and citizen leadership, to educate them in the meaning of democracy ... and to train and equip them in the techniques
of democratic action. Elsewhere, a sampling of the goals includes training in 'freedom with responsibility,' the provision of 'information and clarification on current issues,' the reduction of 'confusion,' 'helplessness,' and 'apathy.'

Broad program goals, such as these, are difficult to evaluate (Riecken 1952; Meyer and Borgatta 1959). The evaluator's first task is to reduce the general goals to a set of specific concepts more amenable to measurement. The process outlined by Encampment evaluators (Hyman et al. 1962) for developing these specific concepts is:

1. Locate the "region" in which the concepts are set, i.e., do they pertain to the individual or collective region of action?
2. Locate the sub-regions within the region where the concept is set;
3. Organize these sub-regions into levels of hierarchy;
4. Elaborate the specific concepts and variables within each sub-region to be measured; and
5. Be as comprehensive as possible, i.e., take a number of measures of each (Hyman et al. 1962:9-10).

Second, the evaluator must take into account the program's unanticipated consequences. The technical problem is to conceptualize how these consequences may occur. There are, according to Hyman et al. (1962:12), four sources of unanticipated consequences.

First, for programs that have been in operation before, even though some consequences were unanticipated, they have nevertheless been demonstrated in previous cycles. Indications of these consequences may be found by examining past program records. While such information may be developed too late for the past or even the present program cycle, it can be programmed into future cycles.

Second, an unanticipated consequence often is simply an extreme quantitative value of an intended effect, but at the extreme value it is transformed in its meaning (Hyman et al. 1962:13).
The statistical extremes may have a more profound effect on the mean, or extreme competence in the program may be "transformed into over-confidence," which may blind the staff to the consequence.

Third, ... there are other unanticipated effects of the program, some of which, if recognized would be desirable and others undesirable (Hyman et al. 1962:13).

Such effects may arise in the course of the program as a natural but unplanned consequence of the program activity, e.g., the location of the agency drawing a different clientele than originally planned for in the program.

Fourth, the literature provides such guidance in conceptualizing unanticipated consequences (Hyman et al. 1962:14).

A thoughtful, and comprehensive, review of the literature may identify recurring patterns in the effects of certain actions planned by the program.

The Encampment study, like others of the period (Opler 1954; Riecken 1952; Hovland, Lumsdaine and Sheffield 1949), helped to further clarify the process of evaluation and the scientific evaluator's role in two ways. First, although the experimental research model is the classical scientific research design, the Encampment staff found that this design is not always applicable to programs of this type.

A paradox worth pondering is that, although the design has been attractively displayed for sale, very few evaluators have actually 'bought it,' and among those who have, the product has usually been found deficient (Hyman et al. 1962:20).

Second, they found that the evaluator's role took second place to the program's service responsibilities to the client. Thus the evaluator must frequently adjust his approach to the research problem
so that he can make a series of progressive observations over time. Each observation attempts to isolate some aspect of the program's concept, objectives, and their consequences. This may require a variety of techniques rather than one observational method being used on different occasions over time. The Encampment evaluation, for example, took five years to complete.

Discussion

Studies, such as those cited above, have helped to build a body of theory and technique specifically designed to meet the needs of social engineers in all three engineering roles described in the last chapter. Each study reflects the development that has taken place in evaluative techniques and this development, in turn, has expanded the scope of human activity that can be subjected to evaluation. Taylor's contribution can be seen in the impact that time and motion studies have had on the organization of American industry. By breaking down the elements of a work process into its simplest components, many of these elements have been reduced to a set of mechanical movements and making it possible for machines to replace human workers in many of the more routine operations. The human relations approach has led to improvements in the work environment and the way management treats the worker. The development of techniques to measure public attitudes has changed the way industry markets its products and the way politicians attempt to gain political support. Finally, the development of techniques to measure the performance of programs with global goals has changed the ways administrators and policy makers account for their performance to their constituents and sponsors.
The growth and development in evaluative techniques have gone hand in hand with the growth of social science. Sometimes one has provided the basis for growth in the other, and at other times, they have grown together.

As more and more evaluators come to their jobs with social science backgrounds, a sense of professional identification has begun to develop. In the section that follows, I will discuss these developments. Potentially, the development of the evaluator's professional identity may change the organization and training of social scientists.

**Towards a Professional Evaluator Role**

**Development of Professional Organizations**

In the early 1970's a movement to organize program evaluators into professional groups began along two lines. The first line of development is found among applied social scientists engaged in program evaluation activities who have begun to identify one another within their disciplines and their traditional professional organizations and who have begun sharing their mutual interests and concerns about evaluative research and the evaluator role. Here they have sought to foster this identification by means of seminars, symposia and colloquia. Some of these groups have evolved into allied professional organizations which serve to enhance their status relative to the traditional academic social scientist. The formation of the Society for Applied Anthropology, and more recently the Society of Professional Anthropologists, reflects this process in anthropology.
Organizational efforts that have proceeded along this developmental line tend to reflect the push and pull effects the applied social scientist feels as a result of the conflicting demands of his occupational role, and his professional training and loyalty to the discipline. The push comes from colleagues who do not ascribe the same status to applied work products that they grant to traditional research products. The new sub-disciplinary group provides a means for mutual support. The pull comes from the strong identity the applied social scientist has with the parent discipline and its methodology which he uses in the applied, or evaluative, context. As a result, social science evaluators tend to be isolated from one another because of disciplinary lines.

The second line of development has taken place within the program context. Federally sponsored social and human services programs are for the most part funded on a categorical basis, e.g., education, alcoholism, mental health, drug abuse, child abuse, etc. These categorical programs are generally supported by a large and diverse constituency made up of politicians, individuals with a personal interest in the problem, professional administrators, clinicians, paraprofessionals, research scientists, and others. These constituents frequently organize an association, e.g., National Council on Alcoholism, to promote their political, humanitarian, professional and scientific interests, in a particular social problem, e.g., alcoholism. The association members meet regularly to exchange information to make their efforts more effective. Within this context, evaluators have the opportunity to meet and discuss issues of common concern related
to the evaluation of such programs and to exchange ideas on methodologies and techniques of evaluation. Because of the multi-disciplinary nature of these programs, evaluators may come from a number of academic or clinical backgrounds.

Some program associations, e.g., Alcohol and Drug Programs Association of North America, tend, however, to reflect the structure of the agencies that provide the particular social or human service. The clinicians are the most power group in such associations. Thus, the evaluator who plays a minor role in the agency's daily clinical practice, also plays a minor role in the association's affairs. This situation helps to create a common bond between evaluators which serves to break down disciplinary and other status barriers between them. As a result, there have been a number of special conferences on evaluation bringing evaluators together from specific program areas (Abt 1976; Abert 1974; Garwick and Brintnall 1974; Markson and Allen 1976; Rossi and Williams 1972; Yaffee and Zalkland 1973). The organizational efforts have helped to forge a sense of professional identity among these practitioners that has not developed among those who more closely identify themselves with their social science discipline. Such conferences have provided evaluators with the opportunity to recognize and understand the common problems they face. Participants have discussed a range of organizational and technical problems that transcend disciplinary and program boundaries. Thus, such national conferences are providing an environment that is fostering a new professional identity.
Attempts have also been made to organize evaluators on the local level. In 1973, I participated in an effort to organize a local Tucson based evaluator group, the Southern Arizona Evaluation Association (SAEA). Members were evaluators and evaluation program staff members drawn from the Research Division of Tucson Unified School District One, the Evaluation Division of the City of Tucson's Model Cities Program, three local mental health agencies, the local drug and alcohol programs, and several local consulting firms. The members met together on a monthly basis for about a year and a half, but eventually the SAEA dissolved. The dissolution can be traced to a couple of factors. First, the group was very heterogeneous in composition making it difficult to plan activities that interested everyone. The membership was made up of individuals from different disciplinary backgrounds, e.g., educational psychology, sociology, anthropology, systems engineering, statistics, etc., with different levels of training, e.g., B.A., B.S., M.A., M.B.A., Ph.D., D.ED., etc., and performing different roles in their organizations, e.g., directors, evaluators, data analysts, computer programmers, interviewers, statisticians, etc. With such diversity it was difficult to maintain a common focus. Second, the evaluation market in Tucson was very fluid at this time which led to a high turnover in the group's leadership and membership. For example, the Model Cities Program ended about the same time a number of health research and planning organizations were undergoing reorganization. Many of the key members of the group were forced to seek employment in other fields, or in other communities.
In response to a questionnaire published in *Evaluation Magazine* at my initiation (Bainton 1974), four evaluator organizations in addition to the Tucson group were identified. These groups are: The Bay Area Mental Health Program Evaluation Group (30 professional evaluators), Society of Government Research and Management Consultants (Washington, D.C.), the Southern Regional Conference on Mental Health Statistics (organized in 1960 with a membership of approximately 200), and Evaluation Training Network (associated with Phi Delta Kappa in Bloomington, Indiana). Since receiving the questionnaire responses, I have been able to identify two additional groups. One is the Program Evaluation Resource Center in Minneapolis, Minnesota, which publishes *Evaluation Magazine* (an NIMH sponsored experimental journal). This group has been the major force in sponsoring and developing the goal attainment scaling technique. The other group is the American Education Research Association's (AERA) Special Interest Group-Education Research and Development Evaluators (SIG-ERDE). The purpose of this group is,

... to establish a point of professional identification for educational evaluators in all educational research and development settings; to stimulate interest in educational evaluation; to promote the development and training of professional educational personnel; to foster an exchange of ideas and methods among professional evaluators in all educational research and development settings; and to facilitate cooperative research and evaluation (Beverly Anderson, personal communication 1976).

The aforementioned Evaluation Training Network has begun to take steps to become a national evaluation organization. Organized first as the Phi Delta Kappa sponsored Evaluation Training Conference which was held in Snowman, Colorado in August 1975, the Conference
participants decided to form an organization "...to improve understanding of and the ability to carry out the evaluative function."
The organization has taken the name of Evaluation Network and has solicited membership nationwide and has begun publishing a Newsletter.

Evaluation Literature

All of these organizational efforts are helping to develop a common culture among evaluators, a trait Parsons attributes to professions. A culture is more than an organization, however, it is a set of shared beliefs and practices. Many of the early evaluative studies are published in monographs and journals associated with the researcher's discipline of primary orientation. Only recently a literature has begun to appear which is clearly identifiable as evaluation research. The proceedings of the conferences cited above are one major source of this new literature. In addition, the federal government is publishing an increasing number of evaluative studies that have been performed as part of its categorical grant programs. Also, private consulting firms are beginning to publish evaluation reports as part of their responsibilities under their research contracts. Taken all together, this literature is developing a set of common practices and a shared ideology among evaluators which transcends their individual backgrounds.

In addition to this case study literature, a number of textbooks and guides to evaluation research have recently appeared aimed at the student and the administrator interested in evaluation research. Among these are Social Program Evaluation (Tripodi, Fellin and Epstein
1971), Evaluation Research (Weiss 1972a), Evaluating Action Programs (Weiss 1972b), and Practical Program Evaluation for State and Local Government Officials (Hatry et al. 1976). These, and similar publications, are designed to introduce the informed reader to the range and variation in evaluative methods, the role of evaluation in administration and management, the evaluation process, and the application of evaluative results in the planning and management functions.

Recently, specialized evaluation journals have also begun to appear. Evaluation Magazine, mentioned above, was the first and carries articles ranging from the philosophical to the mundane, the theoretical to the technical. Sage Publications has recently begun three publications -- Evaluation Quarterly, Evaluation and the Health Profession, and Evaluation Studies Review Annual. As the evaluation field continues to develop, we may anticipate more journals will appear. Sage Publications, Inc. has also recently developed a two volume work entitled the Handbook of Evaluation Research which brings together a wide range of articles in all phases of program evaluation (Guttentag and Struening 1975).

Discussion

The organizational developments and the development of a distinct literature within the evaluation field are the beginnings of a professional culture. The evaluator finds himself in a context radically different from the traditional academic research context. The evaluation context has its own culture and organization. Trying to adjust to the professional demands of this context can create role
conflicts for the social scientist accustomed to, or trained for, the traditional academic research role. The conflicts arise when the evaluator's self-concept as social scientist differs from his responsibilities as an evaluator. The need for a professional culture is brought about by these contextual differences and the evaluator's need for a distinct identity that accommodates these ambiguities.

**Summary**

In this chapter I have shown how scientific program evaluation has developed from the early time and motion studies of Fredrick Taylor to the modern social program evaluation incorporating a number of scientific theories and techniques. In the process there has begun to develop within the ranks of those who engage in evaluative work a sense of professional identity. The questions we must now address are: how has the professionalization of the social scientist role aided or hindered the development of the scientific social engineering role; and, what factors have been at work to both inhibit and foster the development of a social engineering role among social scientists? In the next three chapters I will attempt to answer these questions in terms of the case history of American anthropology, one of the social science disciplines.
CHAPTE R 4

PROFESSIONALIZATION OF ANTHROPOLOGY:
A CASE STUDY

Anthropology ... is the science of man, but it is also a
trait of European civilization and its point of view is that
of the European observing the rest of mankind. So the
growth of the science is intimately bound to the knowledge
and outlook of Europe (Mitra 1933:1).

In this chapter I will analyze the development of the anthro­
pological profession in terms of the theoretical framework described
in Chapter 1. I will conduct this analysis in two phases. First, I
will examine the organizational development of anthropology in terms
of the function anthropological voluntary associations have played in
the development of the anthropologist's professional role. This will
permit me to sketch the basic lines of the organizational development
of anthropology and will provide the basic data for the second phase
of the analysis, the identification of the stages of professionaliza­
tion as outlined by Wilensky (1964). My purpose here is not to ques­
tion this model, but rather to use it as a tool to measure the progress
anthropology has made toward full professional status. It is assumed
by most anthropologists that anthropology is a profession; this analy­
sis will permit me to test that assumption.

Variations on a Theme

Anthropologists think of themselves as members of a single
universal discipline and that American anthropology shares the same
values and concepts as those held by other anthropologists around the world. While there is some validity to this position, such a position ignores certain realities that make American anthropology unique. Part of the confusion arises from the way anthropologists have approached the history of their profession. These histories (Harris 1968; Penniman 1965; Lowie 1937; Voget 1975, among others) have centered on the intellectual history of anthropology. From this vantage point it is easy to see that there is a universal anthropological culture. Anthropology emerged from the social philosophies of the 18th century and has developed intellectually along a number of different lines which have not necessarily been restricted by national boundaries. However, from an organizational standpoint, the development of anthropology in each country has been unique reflecting the sociocultural context of the time and place of its development. About the same time the intellectual lines were being formed in Europe and the United States, major new social and cultural forces were coming to the forefront. These forces contributed to the rapid growth and development of two new intellectual perspectives that emerged in the period — science and engineering. Anthropology was drawn into the intellectual vortex. In Europe, Queen Victoria's reign dominated the period. Basalle, Coleman and Kargon (1970:3) observed, "Victorian social scientists virtually established the new discipline of anthropology. In the United States, anthropology also found fertile fields in which to grow. Mitra (1933:211) concludes in his study of American anthropology that:

... our regional study of science in America has shown the rise of anthropology here from the science of the
American Indian, beginning with the discovery of the New World in 1492, and the theological speculation arising therefrom. Thus it has been eminently objective and regional from its very start. Philology, Geology, Prehistoric Archaeology and still later evolutionary Biology only modified its outlook. Its museum methods, its German geographical lead, and its close association with the remarkable development of Experimental Psychology and Social Sciences, mark American Anthropology by the very history of its experience as distinct from the anthropology of Europe.

As American anthropology has grown in the 20th century, its theories and perspectives have been exported, along with other cultural traits, to other nations. While American anthropologists may feel that they are spokespersons from a pan-human science, others have seriously questioned this assumption. Recently one Mexican anthropologist, Guillermo Bonfil Battala, commenting on the conservative thought in American applied anthropology, observed:

To date, the theory of applied anthropology has been one of the items imported into the underdeveloped countries - an imported item, as many others. We receive from producing countries (such as the United States, England, France and other European nations) many well-elaborated theoretical postulates, some of them perfectly adjusted to our reality and to our needs; but others are infused with a different spirit, foreign to our interests and on occasions, decidedly contrary to them (Battala 1966:253).

The development of anthropology in the United States must be studied and interpreted in terms of the sociocultural context of the United States. This development represents a variation on a theme — the theme of man and his culture.

The Development of Anthropological Voluntary Associations

The development of American anthropology is directly linked with its organizational development. At each stage in the development of the discipline, the organizational structure of the period has both
reflected the changes in the discipline and has fostered further development. This development is analyzed in this section. The criteria for selecting the end point for each of the following periods to be described is the presence of a major change in the organizational structure of American anthropology.

The history of American anthropology may be divided into five distinct developmental periods. These are: the pre-formative period (1812-1881), the formative period (1882-1902), the pre-professional period (1903-1945), the professional period (1946-1972), and the post-professional period (1973-present). These periods are based on the primary function the anthropological voluntary organizations performed for the profession. As stated in Chapter 1, the functions that a voluntary association performs for its individual members vis-à-vis the collective membership of the group may also be used to describe the function that the voluntary association performs for the group vis-à-vis the society at large. This is the position taken in the discussion which follows.

Pre-formative Period (1812-1881)

The pre-formative period begins with the formation of small voluntary associations whose members share an avocational interest in the various subject matters that eventually evolved into the core of the anthropological discipline. It ends when a number of people begin to pursue these interests on a full time vocational basis. During the period in between, the social mass of the discipline begins to form and take definite shape.
While the definitive history of this period has yet to be written, for our purposes, the beginning of the period can be roughly set as 1812 when Dr. Isaiah Thomas and others founded the American Antiquarian Society in Massachusetts. The purpose of the Society, as set forth in its Act of Incorporation, was to collect and preserve "... the antiquities of our country and of curious and valuable productions in art and nature..." (Mitra 1933:199). Among its activities was an attempt to obtain "... accurate surveys of all the ancient mounds... in the western part of the United States..." (Mitra 1933:200). In 1832 the Algic Society was founded in Detroit devoted to the archaeology and ethnology of the Indian (Mitra 1933:202). The first of the modern anthropological associations, the American Ethnological Society (AES), was founded in 1842 in New York (Bates 1965:64). Henry Rowe Schoolcraft, who had been a member of the Algic Society, and Albert Gallatin, who had been active in the American Antiquarian Society, were among the AES founders. The AES's purpose was to make "... inquiries into the origin, progress and characteristics of the various races of men" (Bates 1965:64).

These early groups were composed of amateur anthropologists drawn from the local community, and provided a focus for a growing popular interest in the archaeology, ethnology, and linguistics of North America. Such groups represented small pockets where those sharing such interests could come together to discuss common issues and to encourage one another's work. Many groups were short lived and their existence has all but faded from the discipline's collective memory. But they served a purpose by helping to create a collective
identity, and laying the foundation of knowledge that later became the focus of the new anthropological discipline.

While some groups passed out of existence, others have exhibited an erratic organizational history. The American Ethnological Society is a case in point. In the 1860's the Society became inactive. In 1871 it was revived and reorganized, at first under the name of the Anthropological Society of New York (Mitra 1933:202), and later changed its name back to the American Ethnological Society. Once again it fell into inactivity only to be reactivated in 1899 when it merged with the Anthropology Club of New York. In 1900 the AES was reconstituted and then, in 1916, it incorporated. Throughout its life the AES sponsored a number of publication series: Transactions (1845-53), Bulletin (1860-63), Journal (1871-72), and Memoirs (1905-present). These provide a wealth of anthropological data and helped to spread the knowledge gained from individual efforts to the larger audience of emerging professionals.

The growth of organized anthropology was part of a larger phenomenon -- the growth of organized science in the United States. The focus of this organizing effort was the American Association for the Advancement of Science. Formed in Boston in 1847, the American Association for the Advancement of Science (AAAS) was modeled after the British Association. Anthropology was included in the AAAS from the beginning.

In early years the society was organized into sections, varying in scope and character. Since 1851, Anthropology was represented in Section E - Ethnology and Geography. In 1856, Anthropology came to be considered under Section B - Natural History. Since 1857-59, it was considered under Natural History, as Ethnology. In 1876-77 came the permanent
subscription of Anthropology under Natural History. . . .
Since 1882, Section H (as in the British Association) represents Anthropology. Morgan was the first Chairman. The papers more often dealt with local subjects, archaeology first coming in for the largest share of attention, and then ethnology (Mitra 1933:203).

Such anthropologists as Lewis Henry Morgan, Erminnie Smith, Alice Cunningham Fletcher, and Roland Dixon, among others, participated actively in the programs of the AAAS. The AAAS provided an organizational environment in which a number of new sciences could grow and flourish.

The mid-19th century marked a period of rapid change in American science. New scientific organizations began bursting on the scene and unlike the earlier groups, many of these were national, rather than local, in character, e.g., the American Philological Association (1869) and the Archaeological Institute of America (1869). The emergence of these new scientific organizations took place across the full spectrum of American science at that time. A movement arose within the ranks of the AAAS for more specialized organizations and anthropologists were drawn into this movement. In 1882, at its Montreal meeting, the AAAS was reorganized into nine sections each representing a major branch of American science. It was hoped that this would stem the tide of the movement for new and independent scientific organizations in the United States. The move, however, proved to be too little, too late, as Bates (1965:125) observes:

... the specialization movement was too strong for the scientists to be content merely with forming specialized divisions within the American Association for the Advancement of Science. The founding of independent specialized societies did not abate but rather increased and by 1890 the multiplication of special technical societies had become a recognized potential danger to the Association.
The struggle on the national level was to spill over into American anthropology in the next period.

The Formative Period (1883-1902)

While other scientific disciplines were organizing national societies, anthropologists continued to gather in small local groups. National activities were still carried on within the structure of the AAAS. The founding of the Anthropological Society of Washington (ASW) in 1879 marked a new stage in the development of anthropological organizations. Lamb (1906:566) has given us a detailed history of the formation of the ASW.

The objective of the Society, as stated in the constitution, was to encourage the study of the natural history of man, especially with reference to America, and including Archaeology, Somatology, Ethnology and Philology.

The first meeting drew a group of 25 persons representing a number of governmental agencies, as well as persons in medicine, the military, geology, and antiquarians. The group quickly crystallized and at the next meeting adopted a constitution. The constitution "... made it the duty of all members to seek to increase and perfect the materials for anthropological study in the national collections at Washington. ..." (Lamb 1906:566). The Society's business operations were given over to a Board of Managers so that precious time at its regular meetings would not be taken away from its anthropological work. John Wesley Powell was elected the first president of the ASW and he reflected a change taking place in the leadership of American anthropology, not only in the role of the anthropologist, but also in the role of the anthropological associations. In a paper
entitled "On Limitations to the Use of Some Anthropological Data," delivered on February 1, 1881, Powell questioned the quality of the anthropological work being done by amateurs. Reviewing the previous two years of the Society's activity, he found that much of the anthropological material collected was worthless. He concluded that "... anthropology needs trained devotees with philosophic methods and keen observation to study every tribe and nations of the globe almost de novo; and from materials thus collected a science might be established" (quoted in Lamb 1906:569).

In this statement Powell reflected the concern that simply having an interest in anthropology was no longer a valid criterion for status in the discipline. Instead, there had to be a qualitative change in what anthropologists did and the ASW should help to organize these efforts. The call was not without reason, for anthropologists were beginning to find full time employment in their discipline.

Another anthropological association to appear at this time was also founded in Washington by women who were active in the field. In 1885, the Women's Anthropological Society (WAS) was formed with two objectives.

... first, to open to women new fields for systematic investigation; second to invite their cooperation in the development of the science of anthropology (Lurie 1966:35-36).

Among the leaders of this group were Alice Fletcher, Mitilda Stevenson, and Zelia Nuttall. For a number of years this group met separately from the ASW until 1896 when the two groups began meeting jointly. In 1899, the two merged. In New York, the American Ethnological Society was rejuvenated in 1899 and merged with the
Anthropological Club of New York, a group founded by Boas a few years earlier. Some of the former Women's Anthropological Society members joined the AES at this time.

By the mid-1890's the separatist movement in American science was in full bloom. The question of a separate national anthropological organization first arose at the Section H meeting in Montreal in 1896. The proponents for such an organization felt that it would unite American anthropology. Among the early supporters of the movement were D. G. Brinton and W. J. McGee. The discussions within the discipline continued over the next six years. The two major anthropological associations, the ASW and the AES, represented the two major factions in the debate, as we will see later. The outcome of the discussions, debates, and maneuvering between the factions was the formation of the American Anthropological Association (AAA) in 1902.

The Pre-professional Period (1902-1945)

The creation of AAA brought about a major change in the organization of American anthropology. First, it established anthropology on an equal footing with the other sciences with its own organization to represent its interest and no longer made it one of many subordinates to the AAAS. But this did not mark a clear break with the movement for an American science; instead it marked a change in the role anthropologists saw for themselves in the movement. Second, it represented an adjustment to the changing environment of American society, and the development of the profession specifically.

During the last quarter of the 19th century not only did anthropologists begin to pursue vocations in their discipline, but
also a number of training programs were started at American universities (see next section) and by 1903 there had developed a small core of professionals. The problem facing them and their new organization was twofold. First, the membership had to be increased to insure the stability of the group, i.e., the social mass of the professional body had to grow. Second, the newly acquired status had to be enhanced both for the benefit of the members and as a means for attracting new members.

The membership of the AAA increased throughout the Preprofessional period as members were exhorted by their leaders to enlist new members. Membership during this period was based on an inclusive principle requiring only the payment of dues. Several classifications of membership were available based on the amount of dues paid. Yet, in the literature, we find that within the membership there were more profound differences beginning to emerge. Those who thought of themselves as professional anthropologists were already beginning to distinguish themselves from those who took their identity by simply being members of the AAA.

This core group of professional anthropologists was in many ways different from the members of earlier anthropological associations. First, they were employed as anthropologists either in museums or the newly created academic departments of anthropology. To them anthropology was an occupation and not just an avocation. Second, many of them had undergone formal training in anthropology at one or another of the universities offering degrees in the field. Third, many in this group saw themselves as scientists and the role of the
association was to help them enhance both their individual and collective status as scientists. As their numbers grew, they began to exert more power within the association.

To help enhance the status of anthropology, the AAA assumed responsibility for publishing the *American Anthropologist*, a journal initiated by the Anthropological Society of Washington in 1888. Stern and Bohannan have recently made a study of the contents of the *American Anthropologist* and find that there are definite periods in the content which reflect changes in the profession (Stern and Bohannan 1970). Between 1899 and the early 1920's the journal articles represent a hodge-podge of interest. Most of the articles deal with very specific descriptive studies of local concern. Stern and Bohannan (1970:6) comment:

> The *Anthropologist* was obviously seen, at this period, as the point to concentrate the 'evidence' which should be 'in' before we 'theorize beyond our data.' This was the influence of the early professionalization, but unless one knows the literature more widely and something of the history, the *Anthropologist* itself looks like a policyless jumble on the part of a too permissive editor.

In addition to its recording function, the journal served as a "newsletter" keeping members abreast of developments in the profession and the careers of colleagues. This demonstrates that while the organization may have been attempting to enhance the status of the profession, it had not lost its social function which in turn, reflects the very personal nature of the profession at the time. Individual members of the profession could readily discuss more theoretical and general issues on a personal basis. The discipline at this time appears to have been dependent on a body of oral tradition.
By the middle of the 1920's a new theme emerged in the pages of the American Anthropologist which Stern and Bohannan characterized as, a change in tone and a liberalizing of subject matter at the same time that method becomes more precise (Stern and Bohannan 1970:6).

This represents a movement away from the specific descriptive article and an increase in middle level theoretical articles based on comparative data drawn from several sources (e.g., sites, ethnic groups, etc.). By 1947 the journal began to reflect the new kinds of activities anthropologists were becoming engaged in. As the quality of papers improved, the status of anthropology was enhanced. The shift from "evidence" to "theory" marks the transition from the descriptive natural historian role toward the scientific role that anthropologists had sought since their early affiliation with the AAAS.

Throughout this period the organizational structure of the AAA remained that of a club. Sol Tax (1960:512) observes:

In those early days of the 1930's we had no organization. Every year one of our senior men was honored by being elected president, chosen by a nominating committee, rubber stamped by the Council. The President did little except make a Presidential address at the Annual Banquet, which cost little more than a dollar or two. All the work was done by the Secretary-Treasurer who, of course, did it all himself, wrote letters by hand, and received complaints and no thanks. Then, of course, there were the Editor and the Memoirs Editor, who worked hard and well, and the program and arrangements chairman of the Annual Meetings. Most costs were absorbed by the universities where we worked.

Despite this club-like organization, subtle changes were taking place in the leadership structure of the association. Sorenson (1964) has made a study of the leadership patterns in the AAA from the period of 1902 to 1963. He recognizes three periods in the development of the association which are shown in Table 1.
Table 1. Leadership characteristics of AAA: 1902 to 1963.

<table>
<thead>
<tr>
<th>Period</th>
<th>No. of Office Holders</th>
<th>Modal Age</th>
<th>% Ph.D.'s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period I</td>
<td>1902-1922</td>
<td>20</td>
<td>41-50</td>
</tr>
<tr>
<td>Period II</td>
<td>1923-1943</td>
<td>35</td>
<td>51-60</td>
</tr>
<tr>
<td>Period III</td>
<td>1944-1963</td>
<td>60</td>
<td>41-50</td>
</tr>
</tbody>
</table>

*Based on Sorenson 1964.

From the table it can be seen that with each succeeding period the number of professionally trained anthropologists occupying leadership positions increased. In addition, there emerged a pecking order based on sub-disciplinary specialization. Classified by sub-discipline, Sorenson found that archaeologists are well represented in all periods having held a total of 49 positions. Ethnologists, also, show a strong presence with a total of 37 positions. Social anthropologists became a major force in the association during the third period when they held 20 of their 24 leadership positions. Other fields have been less well represented. Physical Anthropology (11), Linguistics (8) and Folklore (1). The overall trend has been for cultural anthropologists, i.e., ethnologist and social anthropologists, to assume the leadership of the profession.

As early as 1918, further differentiation within the field of anthropology began taking place when the first sub-discipline to break off from the parent organization was physical anthropology. That year, physical anthropologists formed the American Association of Physical
Anthropologist and launched a new journal, the *American Journal of Physical Anthropology*. This was followed in 1924 by the founding of the Linguistic Society of America which began publication of *Language* in 1925. The Society for American Archaeology was formed in 1934 and began publishing *American Antiquity* the following year. A group of anthropologists stationed in Washington, D.C. during World War II formed the Society for Applied Anthropology in 1941 and began a journal entitled *Applied Anthropology* (later changed to *Human Organization*).

Finally, through these organizations, anthropologists also became active in national affairs which helped to further enhance their status as social scientists. Anthropologists assisted in gaining passage of the Antiquity Law of 1906. In 1917, W. H. Holmes was appointed Chairman of the Committee on Anthropology of the National Research Council which led to the work that helped to establish the "normal" physical standards of the nation (Holmes 1917). During the New Deal and the Second World War anthropologists were involved in many activities associated with federal programs that reflected favorably on their position in the scientific community and further enhanced their status as professional social scientists.

**The Professional Period (1946-1972)**

At the October, 1945 meeting of the Anthropological Society of Washington, concern was expressed about the growing division within the discipline and a proposal was made to form a new professional society that would reunify the profession. Although no action was taken at the time, the organizational structure of the discipline was raised as an
issue. These concerns found formal expression in a committee report prepared for the AAA by John Cooper, Regina Flannery and Frank Setzler. The report touched on the following areas: (1) the need for more active involvement by anthropologists in such organizations as the National Research Council, Social Science Research Council and the American Council of Learned Societies; (2) the need for regional anthropological associations; (3) more open leadership to overcome the tendency for certain schools and theoretical approaches to dominate the profession; (4) a need for a public relations effort to show how anthropology might be used for various types of projects; (5) the need for internal reorganization to pool the office work of the various organizations; (6) the possibility of drafting employment standards and criteria for professional status; and (7) the need to develop a code of professional ethics. All of these recommendations pointed to a change in the primary function of the professional associations, from status enhancement to status protection. It also pointed to a more important role for the AAA in professional affairs.

In 1946, a Committee on Professional Standards was created within the AAA which issued a report entitled, "Suggested Requirements for Professional Status in the Field of Anthropology" (American Anthropological Association 1946:690-91). In the report the Committee stated that,

To qualify as a professional anthropologist, ordinarily one must have earned the doctorate with anthropology major (or in some cases... equivalent doctorate) from a recognized department, or where academic training has been limited to the master's or bachelor's degree with anthropology as major or as field of concentration, this must be supplemented by substantial research in anthropology presented in a report.
or reports of demonstrated quality, published or otherwise made accessible to science (AAA 1946:690).

These recommendations were incorporated in the 1946 AAA Constitution.

The new constitution shifted the emphasis in how membership was to be determined. Membership was divided between members and fellows. Any person interested could become a member but without voting privileges. Only fellows had voting privileges and could hold office. The criteria for becoming a fellow were: (1) one had to have made a significant published contribution in the field of anthropology; or (2) he must possess a bachelor's or master's degree in anthropology, or a doctorate in an allied field and be actively engaged in anthropology; or (3) he must possess a doctorate in anthropology; or (4) he had to be a life member of the association as of December, 1946. Also the member had to be elected by a majority of the Executive Board in order to become a fellow. Thus, the association moved from being an inclusive group to being an exclusive group.

The Constitution was modified in the 1950's (AAA January 1961:3) and again in 1969 (AAA 1969:1) to change some of the membership categories and to clarify others. But these later revisions have not changed the basic principle established in 1946. That change wrested power from the amateurs and vested it in the scientists.

The AAA also took on the function of protecting professionals from public attack. This protection has taken three forms: from outside attacks against individual anthropologists; from outside attacks against the profession as a whole and its interests; and, from attacks by one anthropologist or group of anthropologists against another.
While these efforts have not always been successful, they have clearly established the AAA's right to be involved in such matters. The following cases will serve to illustrate each of these roles.

One of the first attempts by the AAA to defend a member against outside attack came in 1948 when Richard G. Morgan, Curator of Archaeology at the Ohio State Museum, was dismissed by the Board of Trustees of the Museum for alleged communist affiliation. The Executive Board of the AAA immediately came to his aid (AAA June 1948a:1). As a result of this action, the Trustees agreed to withhold permanent action in the Morgan case until a full and thorough hearing had been held in the matter. Morgan, however, failed to respond to the Trustees' offer to present his side of the case and thus was dismissed. Homer Barnett questioned the AAA's action (AAA September 1948b:1-2) and as a result the AAA Board reconsidered its role in the Morgan case deciding only that it could act as amicus curiae, but would not defend Morgan because his professional competence was not at issue in the case.

In another case, Felix Keesing's professional qualifications were questioned by Drew Pearson in a newspaper article attacking Keesing's appointment to the South Pacific Commission (AAA June 1948a:1). After a letter was written by Harry Shapiro, then President of the AAA, to Pearson in Keesing's defense, Pearson retracted his story.

The professional association has also been called upon to protect the profession against outside influences that have attempted to subvert professionals and thereby undermine the status of the profession. In 1965 and 1966 anthropologists, and other scholars, found themselves, because of their relationship with the United States
government, in an awkward position vis-à-vis the authorities in their host countries where they were engaged in foreign research. The disclosure of Project Camelot and the CIA involvement in Chile brought to a head the federal government's conflicting interests in supporting legitimate foreign scholarship and its security interests in affecting events in foreign nations. Stephan Boggs, the Secretary to the AAA, discussed the problem in his article, "The Problems of Access" (Boggs 1965a:1), published in the November, 1965 Fellow Newsletter of the AAA. Boggs, speaking for the AAA, raised three issues presented by these conflicting interests. First, such confusion would lead to distrust of foreign scholars by host country governments. Second, the disclosure lent strength to President Johnson's concern about government supported social science research in foreign areas. Third, the disclosure might have a negative impact affecting future federal support of overseas research (Boggs 1965a:1). The relationship between anthropologists and the government continued to be a major issue throughout this period and the AAA played a major role in representing the profession in these discussions (Boggs 1965a, 1965b, 1966; AAA 1966; Beals and Executive Board 1967; Romani and Vasquez 1967).

The Viet Nam war debate had its impact on the anthropological profession when cases were brought before the AAA which pitted anthropologist against anthropologist. For example, a group of students broke into the personal files of several anthropologists in California and published the documents they had found there. These documents indicated that the anthropologists had been engaged in research allegedly directed to helping the U.S. Army in its counter-insurgency
program in Thailand. The case was brought before the newly formed AAA Ethics Committee. In the process of deciding the case, the Ethics Committee, itself, became an issue. As a result the case was never truly resolved. These cases demonstrate the role anthropologists have come to assign their professional association.

The Post-professional Period
(1972-Present)

One of the issues brought up in the 1946 reorganizational plan was a proposal by Ruth Benedict, then President of the AAA. Benedict proposed that a permanent Secretariat be established which would free the association's officers of administrative affairs and provide professional support to follow through on association policy. In August, 1947, a Secretariat was established, funded in part by the AAA and a grant from the Carnegie Corporation. Erminio Voegelin was hired as the first Executive Secretary for the AAA. In the years that followed, the Secretariat grew as it took on more functions. Stephen Boggs served as Secretary in the early 1960's at the time when the dispute over federal government involvement in overseas research erupted. The fact that the AAA had a full time staff greatly increased its ability to respond to the issue. By 1970 the association recognized the need to expand the powers of this office and created the position of Executive Director of the AAA. The Executive Director and his staff have become responsible for the day-to-day operations of the AAA. This has permitted the AAA to become more responsive to the needs of individual and collective groups of anthropologists. At the same time, the reorganization of the Executive office has put association affairs on a
sound business basis. By 1972, the date I am using for the beginning of this period, the staff had grown to a level that the Executive Office could begin to meet many of these needs on a routine basis.

The creation of the Executive Office marks a transition in the organization. In the past, the AAA has been a loose collective of volunteers who donated their time for association affairs; today the association has become an institution capable of independent action. The association through its Executive Office has begun efforts to promote anthropological interests in the scientific community and in the general public. In addition, it now provides anthropologists with a forum in which to air professional concerns out of the public light. The Ethics Committee is beginning to take an active role hearing cases relating to professional conduct among anthropologists. The AAA through its General Council has taken positions on major social issues and instructed the Executive Office to follow through on these issues. The AAA has sponsored the creation of the Anthropological Research Services as an organizational mechanism for seeking out and promoting anthropological research support. In the process, the AAA has entered a new period where it is enhancing its own status in the scientific community. This is made possible by the fact that anthropologists acting through the AAA and similar organizations were able to achieve, enhance, and now protect their individual statuses.

**Discussion**

The Pre-formative period, in American anthropology, is marked by the development of small local voluntary associations of amateur
anthropologists. Persons were drawn to these groups by their interest in antiquities, American Indian customs and languages and other subject matter that eventually formed the core of the American anthropological disciplines. The primary purpose of such groups was social although, as we have seen, such groups also helped to build the body of anthropological literature. During this period the AAAS served the purpose of bringing anthropologists into the mainstream of the American Scientific movement. The anthropologists of the time, however, were amateurs whose principle occupations included the law, medicine, the military, the arts, etc. During the last quarter of the 19th century, this began to change.

The Formative Period is marked by a change in the anthropologists' perception of their role and that of their associations. Powell and his associates at the Bureau of American Ethnology were employed full time in anthropological activity and they became concerned about the quality of anthropological work being sponsored by the anthropological associations. Such work reflected on them as scientists, and on the discipline as they perceived it. In calling for more scientific anthropology, Powell was calling upon anthropologists to raise their status to that of the other sciences. The associations could play a major role in such efforts directed toward status achievement. Others also saw a need to establish anthropology on a par with other scientific disciplines and to them, this meant the formation of a national anthropological association. This led to the formation of the AAA.
The Pre-professional Period is characterized by consolidation and growth. Anthropological organizational efforts were consolidated into one organizational structure which allowed the professionally trained anthropologists to take over the leadership of the discipline. It also decreased the role of the amateur in the development of the profession. In the process the status of anthropology as a social science was enhanced. At the same time there began a movement for further differentiation within the discipline that was marked by the formation of a number of sub-disciplinary associations. Membership in anthropology remained inclusive during this period. But by the end of the period, both the inclusive principle and the differentiation were eyed as potential threats to the unity of the discipline and its standing in the social sciences.

In the professional period, the AAA became the major spokesman for the discipline, and the guardian of anthropological interests. This was made possible by the reorganization of the AAA which in effect vested power over disciplinary affairs in the hands of the professionally trained and certified anthropologists and further reduced the role of the amateur to that of titular membership. During the professional period the association has achieved a new status among anthropologists. Rather than being the simple club of the Pre-professional Period, it has become a mechanism through which anthropologists are able to voice their disciplinary and professional concerns to one another and the general public. In the Post-professional Period we may expect to see the increasing importance of the AAA in the development of the anthropological profession. To understand how the AAA's role can be
expected to increase we need to shift our analysis from the organizational development, to the analysis of the profession in terms of the professionalization process.

The Professionalization of American Anthropology

Where does American anthropology stand today in the professionalization process? The answer to this question can be found in an analysis of the history of the profession from the standpoint of the Wilensky model, described in Chapter 1.

The model describes nine steps in the professionalization process. These are: (1) start doing full-time the thing that needs doing; (2) establish training schools; (3) form a professional association; (4) evolve a pecking order; (5) undergo conflict between the old guard and the newcomers; (6) compete with neighboring disciplines; (7) seek legal support for the job territory and the group's code of ethics; (8) develop a code of ethics for internal control and for protection of clients; and (9) undergo professional elaboration. I will examine the history in terms of each of these steps.

1. Start doing full-time the thing that needs doing. Simply stated this means that what individuals have been doing avocationally becomes for some an occupation. During the Pre-formative Period, anthropological activity was an avocational interest of a diverse group of individuals whose principal occupations and/or source of income lie in non-anthropological activity. This changed about the time of the beginning of the Formative Period when some persons found an occupational outlet for their anthropological interests.
Congress, on March 3, 1879, created the Bureau of American Ethnology, as a part of the Smithsonian Institution, and John Wesley Powell was named its first director (Judd 1967:3). The Bureau provided an environment where individuals could begin to spend their full time pursuing their anthropological interests (see Judd 1967 for a full account of the BAE). In addition to the Bureau, other institutions, especially museums, evolved during this period. These provided additional opportunities for those with anthropological interest to pursue these as a full time occupation. From this small core of full time anthropologists there evolved the occupational classification of "anthropologist." When universities began offering courses and degrees in anthropology, the occupational market for anthropologists expanded further. Today, those seriously interested in anthropology can find an occupational outlet for those interests. But occupational activity does not necessarily mean professional activity, as the literature of professionalization shows. There is a need for theoretical as well as skills training if an occupational activity is to achieve professional status.

2. Establish training schools. This means that the occupational group must sponsor, in some way, the development of an enculturative mechanism to qualify new members drawn to the occupation with the basic skills and knowledge to perform as effective members of the occupation. Sometime during the end of the Pre-formative Period and early Formative periods, courses in anthropology began to appear in the curriculum of the nation's colleges and universities. The record of these early courses is obscure. As Herskovits (1953:5) observes:
Those who held university teaching posts occupied their chairs for too short a period to permit the impact of their work to be felt in the future development of their science through the accomplishments of a corpus of students trained by them.

Powell, in his 1879 address, was one of the first to recognize the need for formal preparation for the role of anthropologist. It took nearly a decade before the call was answered. In 1888, Franz Boas came to the United States to establish the first academic department of anthropology at Clark University. One of his students, A. F. Chamberlain, was the first to receive a Ph.D. in anthropology earned in the United States. Chamberlain went on to succeed Boas at Clark. In succeeding years other academic departments were founded at Columbia, Harvard, Chicago and Berkeley. As we will see in the next chapter, the development of training schools in anthropology progressed slowly until the end of the Pre-professional Period. Today, these training schools produce almost all of the anthropologists who pursue anthropology as an occupation. But such training alone does not create a sense of professionalism within the occupational group. Not all those who undergo such training choose to pursue careers in the area of their training. Nor does the loyalty one develops toward one's training school necessarily translate into loyalty to the discipline and its goals. There is a need for a point of focus after one leaves the university. Indeed there is a need for a structural unit in the society that will reinforce the training for even those who chose to teach and practice the discipline and from which they can take their identity.

3. **Form a professional association.** As we saw in the last chapter, one of the problems facing the social engineer, and especially
the program evaluator, is the lack of a single professional association that can give voice to the common concerns they face in the occupational setting. Anthropologists, as we have seen above, have made substantial progress in establishing their professional status through their professional associations. The first professional anthropological association was the American Anthropology Association. Unlike the earlier anthropological associations, the primary purposes of the AAA has been to promote the science of anthropology. Earlier groups were concerned with the activities of the anthropologist and not the promotion of the discipline. The goal of the AAAS, for example, was to promote American science and not specifically anthropology. Anthropology's placement within the AAAS structure, as Mitra (1933) has shown, changed continually during the mid-19th century. Only after external pressures forced the AAAS to reorganize did anthropology gain a distinct structural identity within the AAAS.

The AAA, on the other hand, has provided anthropologists with an organizational structure in which their discipline has been capable of independent growth; that is, the AAA has provided the autonomy that a profession requires (Hall 1969). National in scope, the AAA broke down the regionalism that plagued the profession in the Pre-formative and Formative periods, helping to unify the discipline and at the same time to promote specialization. Unified through the annual meeting and a national journal, the American Anthropologist, individuals from across the country had an opportunity to identify one another and their common interests in sub-disciplinary affairs. As we saw in the
discussion above, the major sub-disciplines established themselves during the Pre-professional Period.

The AAA also provided the context in which the scientist anthropologists were able to take command of the discipline. Stern and Bohannan (1970) have demonstrated this through the changes in the content of the American Anthropologist. During the period they term "the first professionalization," articles reflected the interests of the informed amateur. When more theoretically oriented articles appeared in the next period they reflect the greater sophistication and training of the authors indicating the role of the formally trained anthropologist in the AAA ranks. These changes also are indicative of the emerging pecking order in the discipline.

4. **Evolve a pecking order.** As the discipline became more formally organized a status structure emerged and individuals occupying a more prestigious status tended to have more influence in the discipline than others. I will discuss the status and prestige structures in detail in the next chapter.

The evolution of a pecking order has important consequences for the development of anthropology as a profession. The pecking order represents the leadership in the discipline, and in the process of leadership formation the standards of the discipline emerged. This provided a basis for evaluation of professional performance. The early training programs established the standards for preparing professional anthropologists and became the model for other professional training programs for anthropologists. The instructors in these schools also provided role models for the new recruits. Since these
schools were dominated by those who espoused the scientist role, this led to the rise of the scientist anthropologist to the leadership of the profession. The rise of the scientist role as the preferred role led to internal conflict within the discipline which was made up of amateurs and science-oriented members.

5. **Undergo conflict between the old guard and the newcomers.**

Generational conflict is a common phenomenon in organizations undergoing a rapid change and growth. Anthropology is no exception. A generational conflict took place in anthropology at the end of the Formative Period between the new "professional" anthropologists and the old guard. The issue was whether an anthropologist was to be an anthropologist first and a scientist second, or a scientist first and an anthropologist second.

Beginning at the 1896 meeting of the AAAS, a movement arose within the ranks of the Section H membership to create a separate national anthropological organization. Two factions developed within the profession. The separatist faction centered in Washington among the members of the Anthropological Society of Washington (ASW), led by W. J. McGee. The unification faction centered in New York among the membership of the newly merged American Ethnological Society (AES) and the Anthropology Club of New York, led by Franz Boas.

McGee and his supporters wanted an independent organization which would include all persons with anthropological interests. They argued that if anthropology was to truly become a distinct discipline, then anthropologists must declare their independence and sovereignty within the scientific world. The purpose of such a national
organization would be to enhance the members' professional status. But to organize such a group, memberships would have to be based on an inclusionary rather than exclusionary principle. Only by declaring their sovereignty within the scientific world would anthropologists have the right and power to determine what that status would be.

This position found expression in the AAA's 1903 Constitution where Article II states:

The objects of the Association are to promote the science of Anthropology; to stimulate the efforts of American anthropologists; to coordinate anthropology with other sciences; to foster local and other societies devoted to Anthropology; to serve as a bond of union among American anthropologists and American anthropological organizations present and prospective; and to publish and encourage the publication of matters pertaining to anthropology.

Article III states:

Persons interested in anthropology may be elected on nomination of three members of the Association and on payment of dues shall become members of the corporation with full rights of voting and holding office (McGee 1903:187).

By contrast, Boas' position picked up the thread of Powell's earlier criticism of the profession. Anthropologists must enhance their status as scientists and this could only be done within the general movement of American science. If anthropologists wanted their organization to be inclusive, this should be done within the framework of the AAAS. To do this, they should petition the mother organization, AAAS, for the right to develop an organizational structure which could serve to foster the discipline. Boas proposed that there be at least two classes of members in such an organization. The first class would be composed of scientists certified by the membership of AAAS. The second class would be composed of anthropologists whose membership
would be determined by the organization based on criteria ratified by the scientist members.

Quoting Boas (1902:808):

I should advocate a movement originating in the American Association for the Advancement of Science, by which the Section of Anthropology should be authorized to take the name of a national anthropological society, and to levy assessments for their own particular purposes, and by which only such members of the American Association should become members of the Section as fulfill the requirements set by the special council selected by the Section. This would lead to a distinction between members at large and members united in special societies -- a process which I believe would be wholesome for the advancement of the best interests of science.

The separatist movement won. Several reasons can be found for their success. First, they were in keeping with the times that saw the explosive growth of independent scientific societies. Second, the separatists were far more adroit in manipulating the politics of the situation than the unification faction, as Stocking (1960) has shown. Third, the separatists were centered in Washington with the ASW. This was the center for professional anthropology at the time. Fourth, the ASW, a relatively young association, had proven itself to be innovative, e.g., by first publishing a national journal, the American Anthropologist (old series), and by bringing women into its membership. On the other hand, the unification faction was located in New York with the AES. The AES, although one of the earliest anthropological organizations to be formed in the nation, had never been able to overcome a chronic problem of disorganization. Section H, being composed of members from both factions, was effectively neutralized as an institutional power in the conflict.
Such generational conflicts are not rare in the history of the American anthropology. For example, Boas's students helped to lead the effort to reorganize the AAA in 1946, supporting the earlier view of their mentor. When separatist pressures began within the sub-disciplines toward the end of the Pre-professional Period, the unification faction was able to release the pressures that threatened to tear the discipline asunder by reorganizing the AAA. In the mid-1960's, another reorganization of AAA brought an end to another generational conflict involving the status of graduate students in the association. Today we see pressures once again building for a generational conflict. This time the issue is between those who continue to pursue traditional career paths and control the professional status system, and those employed in non-traditional roles or are otherwise excluded from the status system because of changes taking place in the university environment.

6. **Compete with neighboring disciplines.** Where the pecking order helps to structure the values of the profession, generational conflict tends to question some of the assumptions implicit in that structure. While generational conflict represents a source for change within the profession, conflict or competition with neighboring disciplines represents an external source for change. The rise of social anthropology in the 1930's marked a change in anthropological perspective in the United States. Up until this time the dominant theoretical perspective in American anthropology was the cultural historical approach. The question arose: is social anthropology an appropriate aspect of anthropology or is it sociology? Because of the similarity in subject
matter, anthropology and sociology have been in competition throughout much of their history. Also, in the 1930's the psychological anthropology movement also raised questions about the appropriate place of anthropology in the behavioral and social sciences (Voget 1975). Both these movements reflected the growth in the theoretical dimensions of American anthropology. While the competition in the theoretical domain is a valid example of the competition between disciplines, the competition between academic departments of anthropology and sociology has had a greater impact on the development of the anthropological profession. For it is in the recognition of anthropology as a separate discipline, that anthropology has been able to obtain the public support needed to further its growth as a discipline and a profession.

During the 1950's and 1960's when American higher education underwent a period of explosive growth, many new anthropology programs began in Sociology, or Anthropology and Sociology Departments. Within the university environment these new anthropology programs had to compete with sociology for students, new faculty, and eventually for designation as independent departments. The real politik of the university, combined with the traditions of the academy, fostered a competitive environment. In the university, the department is the major functional administrative division. The department chairman or head (depending on the particular administrative model used at the specific university) is, among other duties, responsible for preparing and administering the department's budget. Control over the budget determines, in large measure, the direction the department will take, and the style the department will reflect. For the anthropological program
to develop in the combined department, it had to compete with the interests of the sociology program. If, as appears to have often been the case, the chairman was a sociologist, the anthropological program was generally viewed as an adjunct to the sociological program. Thus, the anthropologists' interest in developing a comprehensive anthropological training program for their students was often subordinate to the chairman's primary interests to create a comprehensive program for the sociology students. This type of competition in many cases has led to the eventual fissioning of the combined departments into separate departments of anthropology and sociology.

7. Seek legal support for job territory and the group's code of ethics. In addition to a distinct identity within the academic community, a profession requires the support of the community at large so that members can pursue, without undue interference, those activities deemed by the profession as important to its interests. This may require that the community's governing body, whether national or local, provide legal protection for the activities of the profession's members. Generally such protection comes in the form of professional licensure and certification which may also include the right of the profession to be self-policing in matters of professional conduct. Anthropology has just begun to become involved in activities of this nature.

The passage of the environmental protection laws has greatly strengthened the force of the Antiquity Law of 1906. Under these new laws, environmental impact statements are required prior to the implementation of federally sponsored projects that may alter the
environment. Included in the law is the requirement that the historical and archaeological impact also be assessed. Archaeologists have claimed that they have the expertise to make such assessments and the government has recognized this claim by hiring archaeologists to carry out such studies. This has led to a tremendous growth in the market for trained archaeologists, which in turn, has raised questions about what standards should be applied in determining who should be hired to carry out such work and who should judge the quality of the work being produced. Recently, the Society of Professional Archaeologists has been formed by contract archaeologists to develop and monitor professional standards. The purpose of such standards is twofold. First, they will insure that the work being done in the environmental impact field meets minimum scientific standards. Second, it will greatly strengthen the control of professional archaeologists over who works in this area.

Cultural anthropologists, who make up the majority of professional anthropologists, have yet to define an area of exclusive expertise over which they might petition for legal support. However, the revelations of Project Camelot and the Thai case, cited earlier, have raised the issue of professional responsibility. The position papers prepared by the AAA (Boggs 1966; Beals and Executive Board 1967) attempted to gain Congressional support for the profession and protection of its interests. In order to achieve such support, however, the profession must be able to demonstrate its ability to govern its own members, which leads to the need for a formal code of ethics and the machinery to enforce the code.
8. Develop a code of ethics for internal control and the protection of clients. A profession, according to Hall (1969), is characterized by members who have a strong belief in the right of self regulation and the autonomy of the individual practitioner to make decisions regarding his own performance and the use of his skills in the best interests of his client. Such judgments about the interests of the client, however, must be evaluated against the values of the professional group if the group's collective interests are also to be protected. This is especially true if the professional group has won legal support to monopolize a particular field of activity in the community's interest. Thus, the professional group will establish a code of ethics which it uses to police the conduct of members.

In the 1946 reorganization plan of the AAA, the question was raised about the need for a formal code of ethics for anthropologists. In 1947, the first step was taken in this direction when the AAA published its statement on Human Rights (AAA 1947). In 1951, the Society for Applied Anthropology adopted a formal code of ethics which recognized two major responsibilities that applied anthropologists have toward their clients and the community at large. First, he must advise the client about the anthropological perspective, i.e., his holistic perspective, and the impact that this perspective may have on his execution of the client's commission. That is, the applied anthropologist must cast the issue in terms of what he recognizes as an interrelated system of human relationships and that it is his intention to take whole systems into account. Second, the code makes the applied anthropologist personally responsible for his actions and
thereby enjoins him from engaging in actions that would have an irreversible untoward effect on individuals, groups, etc., or on the physical environment. Barnett (1956:183) observes that the code, "... would put a premium upon stability or some form of equilibrium. ... If this is what is intended, the anthropologist is placed under heavy obligation, not only to determine what a good whole is but also to evaluate the contributions of its parts."

In 1963, a new statement of ethics was issued by the Society for Applied Anthropology. The new code defines the applied anthropologist as a scientist and specifies his four specific responsibilities in terms of specific reference groups. His first responsibility is to science; his second to his fellow man; third to the people he studies; and fourth to his clients. This code was clarified further in 1974 (Society for Applied Anthropology 1976). While these codes attempt to spell out responsibilities, the codes are essentially guides that have no compelling authority, since the SFAA has little power to enforce them.

The American Anthropological Association adopted a Statement of Professional Responsibility in 1970. The statement developed following the disclosure and debate over the Camelot affair and covers six basic areas of responsibility. These are: (1) relations to those studied; (2) responsibility to the public; (3) responsibility to the discipline; (4) responsibility to students; (5) responsibility to sponsors; and (6) responsibility to one's own government and to host governments. The statement reflects the times and concerns of the drafters, and sharply reflects the academic focus of the profession. As a guide for non-academic anthropologists, the statement fails to
address the issue of anthropologists in the employ of a client, and their responsibility to look after the client's interests. At this writing the statement is under review by the AAA and perhaps these issues will be addressed in a revised statement.

As the profession matures, it undergoes role elaboration which poses additional problems for self-regulation. To be effective, the ethical code must be broad enough to incorporate such development and also the enforcement procedures must be strong enough to maintain the profession's control over members' conduct. At present neither the Society for Applied Anthropology nor the AAA have the power to impose the ultimate sanction on a member for breaches in professional ethics. The ultimate sanction is the expulsion of a member and rescission of his right to practice the profession.

9. Under professional elaboration. Vickers (1974) observes that many professions today are actually multiple professions. That is, the practitioners of the profession engage in many different roles, each requiring different specialized skills and knowledge and, at the same time, linked together by an underlying common core of skills and knowledge. Anthropology in recent years has been undergoing elaboration in its subject matter as seen in the number of new sub-disciplinary associations that have formed. Yet, these sub-disciplines all tend to be associated with the basic academic/scientist role. Major changes are now taking place which will vastly alter the roles anthropologists play in society. These changes will be examined in the section on the unevenness of scale in the next chapter, and are
the focus of the recommendations made in the final chapter of this study.

**Discussion**

In this section, we see that anthropology has undergone most of the steps that one would expect in the professionalization process. These developments began during the Formative Period and gained momentum in the Pre-professional Period. By 1946, most of the major stages in the professionalization process had been completed. The professional period has seen the solidification of the process. Three issues, however, remain, although progress is being made in each. These are: securing legal sanction for and protection of the anthropologist's job territory; the establishment of an enforceable code of ethics to insure client protection; and the further elaboration of the anthropologist's role in society.

**Summary**

In this chapter I have focused on the process of professionalization in American anthropology, as a case study of the process of professionalization in the social sciences. While the developmental time table may vary between the different social sciences, the basic process outlined here is applicable across disciplines. The growth in the field of anthropology has been shown to be linked with the organizational development of the discipline and the function the organization performs for its members relative to the community at large. The organizational structure begins by providing a social context in which individuals share their interests in the body of phenomena that will
later become a discipline. Later, the organization(s) serves as a mechanism whereby the discipline through its members achieves recognition by the community as a legitimate area of activity. Once this status has been achieved, the devotees shift their emphasis and use their organization(s) to enhance their own standing in the community. In the case of anthropology, and the other social sciences, this resulted in the enhancement of anthropology's and social science's standings as branches of science. Once recognized as branches of science, the organizations took on the function of protecting that status. In the late stages of this process, the organization's membership criteria shifts from an inclusive principle to an exclusive principle which marks its transition from an academic discipline into a profession.

The analysis of the development of American anthropology based on Wilensky's model shows that the professionalization process began much later than the development of the discipline. Although anthropological organizations formed at the beginning of the 19th century, it was not until the last quarter of the 19th century that we find some anthropologists pursuing their discipline as a vocation. Then some years later, formal training in the discipline began and a distinct national professional association was founded. The 20th century has been the major period of professionalization in anthropology.

This analysis helps to explain why the development of scientific social engineering has been slow. It has only been during the last 50 years or so that the study of social phenomena has been established on a scientific basis. Lacking a social science, it is
understandable that social engineering would not be established on a scientific basis. Yet, one might ask, why has the engineering dimension of social science lagged behind rather than developing in tandem with the social sciences. The explanation can be found in a more detailed analysis of the development of the social sciences during the period of professionalization. In the next chapter I will examine the role such factors as social mass, institutional structure, and unevenness of scale have played in the development of anthropology as a social science.
CHAPTER 5

FACTORS INFLUENCING THE PROFESSIONALIZATION OF AMERICAN ANTHROPOLOGY

Change in any part of a stable system sets in motion a series of compensatory adjustments in its other parts and in their mutual arrangements until a new equilibrium is reached (Goodenough 1966:322).

The development of scientific anthropology has been influenced by the organizational development of anthropology in the United States. The question I will address now is: what factors have contributed to the organizational development of American anthropology? The answer to this question will help us to further understand the development of the scientific social engineer role. For, if it can be shown that there are specific factors that have served to promote or retard the development of scientific anthropology, we may then look to these as an explanation of the development or lack of development of the scientific social engineering role within the anthropological profession, and by extension, to the development of the role within the social sciences.

It is hypothesized that the development of the anthropological profession has been influenced by three major factors: the growth in social mass, institutional structure, and unevenness of scale. These concepts were defined in Chapter 1.
Growth in Social Mass

By far the most dynamic factor is development of the social mass. Social mass can be defined in terms of three dimensions: the population of the profession, the status structure of the profession and its prestige structure. Population is the number of individuals and collective groupings in the profession. The status structure is the network of interrelationships between individuals and/or groups within the profession and can be described in terms of the activities these perform in the professional sociocultural system. The prestige structure is related to the status structure but conceptually distinct. The prestige structure is the distribution of power and influence within the profession. Both the status and prestige structure represent systems of interaction between the profession's members, i.e., the profession's population.

The Population

Statistical data about the anthropological profession's population are poor, especially for the early periods of the profession's history. Therefore I will use several different measurements to demonstrate the growth of the profession's social mass. The following variables are examined: (1) growth in the number of anthropological training programs; (2) the growth in the number of persons employed in academic programs; (3) the growth in the number of students enrolled in these programs; and (4) the growth in the production of professional anthropologists, i.e., Ph.D. anthropologists.
Number of Programs. A professional training program is defined here as a college or university program leading to a Bachelor's or higher degree in anthropology.

In 1888, Franz Boas established the first professional training program at Clark University; by 1972 the number of such programs had grown to 253 (Office of Education 1975). A composite of the available statistics is presented in Table 2. The data are graphed in Figure 2. Although the data are not completely comparable, they do provide a set of data points that indicate a trend. From Figure 2, five growth periods based on the rate of increase in the number of total anthropology programs are discernible. These are: Period I (1888-1917); Period II (1918-1940); Period III (1941-1950); Period IV (1951-1968); and Period V (1969-1972). These data indicate that the number of professional training programs have increased between each period and at an accelerating rate. Figure 2 gives the impression that this growth will be continuous. But the scale of the graph, expressed in absolute numbers, is deceptive. A better indicator of the rate of growth is the log of these numbers. These log values are plotted in Figure 3. In this figure, we see that Period III is the period of greatest growth and there is a leveling off in Period IV. Although Period V shows the sharpest growth in Figure 2, in Figure 3 we see that the rate is not as sharp as Periods II or III. This suggests that between 1918 and 1950, the major growth in anthropological programs took place. Since then, the growth rate has tended to level off.
Table 2. Anthropology programs in American institutions of higher learning: 1888-1972.

<table>
<thead>
<tr>
<th>Date and Extent of Survey</th>
<th>Anthropology, Sociology-Anthropology Staff, Full or Part Time</th>
<th>Total Institutions Surveyed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1888 U.S.</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>1894 U.S.</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>1899 U.S.</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>1901 U.S.</td>
<td>7</td>
<td>121</td>
</tr>
<tr>
<td>1917-18 U.S.</td>
<td>9</td>
<td>203</td>
</tr>
<tr>
<td>1940-41 U.S. and Canada</td>
<td>37</td>
<td>273</td>
</tr>
<tr>
<td>1948-50 U.S. and Canada</td>
<td>114</td>
<td>604</td>
</tr>
<tr>
<td>1968 U.S.</td>
<td>188</td>
<td>-</td>
</tr>
<tr>
<td>1972 U.S.</td>
<td>253</td>
<td>-</td>
</tr>
</tbody>
</table>

Sources: 
1 Voegelin 1950
2 Office of Education 1975
Figure 2. Growth in the number of anthropology degree programs: 1888-1972.
Figure 3. Program growth rate expressed as a logarithmic function.
Persons Employed in Academic Positions. The growth rate of new programs gives no indication of the proportion of the profession's growth that can be accounted for by the increasing complexity in these programs. This can be measured by observing the growth in the faculty population size.

In 1963, Lasker selected a sample of 66 institutions offering programs in anthropology that were included in Voegelin's (1950) study. From her survey, which was done for the year 1960, she found an increase in the total number of professionally employed anthropologists. I have taken Lasker's list and made a count of the faculty members listed in the 1970 Guide to Graduate Departments (AAA 1971). The results of this survey are presented in Table 3. From the table it can be seen that over the 20-year period there has been a substantial increase in the population. This increase can be expressed in terms of the average number of faculty per department per period. These averages are: 3.9 (1950), 6.4 (1960), and 34.2 (1970). The data indicate that part of the leveling off in the program growth rate can be accounted for by the increased faculty sizes. These data also indicate that the period between 1960 and 1970 was one of very rapid total population growth. By 1970, this growth is reflected in all ranks and in both the number of Ph.D.'s and non-Ph.D.'s employed.

The growth during the 1960-1970 decade appears to have taken two forms. First, the number of Ph.D. anthropologists increased significantly during the period and was distributed fairly evenly among the three highest ranks. Second, there is a significant increase in the number of non-Ph.D.'s which was largely confined to the Assistant

<table>
<thead>
<tr>
<th>Rank</th>
<th>1950</th>
<th>1960</th>
<th>1970</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ph.D.</td>
<td>non-Ph.D.</td>
<td>Total</td>
</tr>
<tr>
<td>Professor</td>
<td>73</td>
<td>4</td>
<td>77</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>47</td>
<td>0</td>
<td>47</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>51</td>
<td>16</td>
<td>67</td>
</tr>
<tr>
<td>Instructor</td>
<td>14</td>
<td>21</td>
<td>35</td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
<td>15</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>198</td>
<td>56</td>
<td>254</td>
</tr>
</tbody>
</table>

Source: 1 Lasker 1963  
2 American Anthropological Association 1971
Professor and Instructor ranks. The average number of non-Ph.D.'s per faculty rose significantly, however, over the 20-year period. These averages are: .85 (1950), .56 (1960), and 8.4 (1970).

The data indicate up until the 1960-1970 period this growth rate in the number of programs and their ability to produce new Ph.D.'s in anthropology kept up with the demand for new professionally qualified anthropologists. The demand was generated by both the expansion in the number of programs and the size of the faculties. In the period from 1960 to 1970, the demand exceeded the supply and the criteria for employing anthropologists in a professional capacity, i.e., an academic position, were changed in order to fill the demand as seen in the increase of the non-Ph.D. faculty. The increased demand stimulated an increase in the production of Ph.D. anthropologists as we will see below.

The Number of Anthropology Students. This variable is an indicator of three phenomena: (1) the demand for anthropological education placed on faculties and programs; (2) the potential manpower available to the profession in the future; and (3) the productivity of the existing programs. The number of students can be measured in terms of the number of degrees awarded in anthropology. D'Andrade et al. (1975: 757) present a table in which they show the number of anthropology degrees awarded for the academic years ending 1948 to 1974. The last three years in their table are estimates which I have corrected based upon more recent data from the Office of Education which report the actual number of degrees conferred during these years (Office of Education 1977a). These data are presented in Table 4. While the total
Table 4. Number and percentage of anthropology degrees awarded by degree and year: 1948-1975.

<table>
<thead>
<tr>
<th>Academic Year Ending</th>
<th>Bachelor's No.</th>
<th>Bachelor's %</th>
<th>Master's No.</th>
<th>Master's %</th>
<th>Doctorates No.</th>
<th>Doctorates %</th>
<th>Totals No.</th>
<th>Totals %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1948</td>
<td>139</td>
<td>73.5</td>
<td>26</td>
<td>13.8</td>
<td>24</td>
<td>12.7</td>
<td>189</td>
<td>100.0</td>
</tr>
<tr>
<td>1949</td>
<td>190</td>
<td>75.4</td>
<td>45</td>
<td>17.9</td>
<td>17</td>
<td>6.7</td>
<td>252</td>
<td>100.0</td>
</tr>
<tr>
<td>1950</td>
<td>352</td>
<td>79.4</td>
<td>69</td>
<td>15.6</td>
<td>22</td>
<td>5.0</td>
<td>443</td>
<td>100.0</td>
</tr>
<tr>
<td>1951</td>
<td>364</td>
<td>81.3</td>
<td>89</td>
<td>19.9</td>
<td>35</td>
<td>7.8</td>
<td>488</td>
<td>100.0</td>
</tr>
<tr>
<td>1952</td>
<td>284</td>
<td>69.6</td>
<td>73</td>
<td>17.9</td>
<td>51</td>
<td>12.5</td>
<td>408</td>
<td>100.0</td>
</tr>
<tr>
<td>1953</td>
<td>284</td>
<td>70.8</td>
<td>80</td>
<td>20.0</td>
<td>37</td>
<td>9.2</td>
<td>401</td>
<td>100.0</td>
</tr>
<tr>
<td>1954</td>
<td>235</td>
<td>66.2</td>
<td>87</td>
<td>24.5</td>
<td>33</td>
<td>9.3</td>
<td>355</td>
<td>100.0</td>
</tr>
<tr>
<td>1955</td>
<td>289</td>
<td>67.1</td>
<td>95</td>
<td>22.0</td>
<td>47</td>
<td>10.9</td>
<td>431</td>
<td>100.0</td>
</tr>
<tr>
<td>1956</td>
<td>303</td>
<td>69.6</td>
<td>89</td>
<td>20.4</td>
<td>44</td>
<td>10.0</td>
<td>435</td>
<td>100.0</td>
</tr>
<tr>
<td>1957</td>
<td>329</td>
<td>72.0</td>
<td>80</td>
<td>17.5</td>
<td>48</td>
<td>10.5</td>
<td>457</td>
<td>100.0</td>
</tr>
<tr>
<td>1958</td>
<td>372</td>
<td>74.7</td>
<td>79</td>
<td>15.8</td>
<td>50</td>
<td>10.0</td>
<td>501</td>
<td>100.0</td>
</tr>
<tr>
<td>1959</td>
<td>374</td>
<td>68.6</td>
<td>120</td>
<td>22.0</td>
<td>51</td>
<td>9.4</td>
<td>545</td>
<td>100.0</td>
</tr>
<tr>
<td>1960</td>
<td>449</td>
<td>72.3</td>
<td>117</td>
<td>18.8</td>
<td>55</td>
<td>8.9</td>
<td>621</td>
<td>100.0</td>
</tr>
<tr>
<td>1961</td>
<td>425</td>
<td>69.8</td>
<td>112</td>
<td>18.4</td>
<td>72</td>
<td>11.8</td>
<td>609</td>
<td>100.0</td>
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<tr>
<td>1962</td>
<td>499</td>
<td>78.6</td>
<td>87</td>
<td>13.7</td>
<td>49</td>
<td>7.1</td>
<td>635</td>
<td>100.0</td>
</tr>
<tr>
<td>1963</td>
<td>594</td>
<td>72.5</td>
<td>143</td>
<td>17.5</td>
<td>82</td>
<td>10.0</td>
<td>819</td>
<td>100.0</td>
</tr>
<tr>
<td>1964</td>
<td>768</td>
<td>74.4</td>
<td>160</td>
<td>15.5</td>
<td>86</td>
<td>8.3</td>
<td>1032</td>
<td>100.0</td>
</tr>
<tr>
<td>1965</td>
<td>994</td>
<td>79.0</td>
<td>180</td>
<td>14.3</td>
<td>85</td>
<td>6.7</td>
<td>1259</td>
<td>100.0</td>
</tr>
<tr>
<td>1966</td>
<td>1250</td>
<td>79.8</td>
<td>228</td>
<td>14.5</td>
<td>89</td>
<td>5.7</td>
<td>1567</td>
<td>100.0</td>
</tr>
<tr>
<td>1967</td>
<td>1564</td>
<td>78.9</td>
<td>317</td>
<td>16.0</td>
<td>102</td>
<td>5.1</td>
<td>1983</td>
<td>100.0</td>
</tr>
<tr>
<td>1968</td>
<td>1887</td>
<td>78.2</td>
<td>385</td>
<td>16.0</td>
<td>141</td>
<td>5.8</td>
<td>2434</td>
<td>100.0</td>
</tr>
<tr>
<td>1969</td>
<td>2339</td>
<td>77.7</td>
<td>523</td>
<td>17.4</td>
<td>150</td>
<td>4.9</td>
<td>3012</td>
<td>100.0</td>
</tr>
<tr>
<td>1970</td>
<td>3103</td>
<td>80.6</td>
<td>553</td>
<td>14.4</td>
<td>195</td>
<td>5.0</td>
<td>3851</td>
<td>100.0</td>
</tr>
<tr>
<td>1971</td>
<td>3810</td>
<td>80.3</td>
<td>712</td>
<td>15.0</td>
<td>224</td>
<td>4.7</td>
<td>4745</td>
<td>100.0</td>
</tr>
<tr>
<td>1972</td>
<td>4594</td>
<td>81.2</td>
<td>814</td>
<td>14.4</td>
<td>250</td>
<td>4.4</td>
<td>5658</td>
<td>100.0</td>
</tr>
<tr>
<td>1973*</td>
<td>5625</td>
<td>82.8</td>
<td>807</td>
<td>11.9</td>
<td>361</td>
<td>5.3</td>
<td>6793</td>
<td>100.0</td>
</tr>
<tr>
<td>1974*</td>
<td>6002</td>
<td>82.6</td>
<td>885</td>
<td>12.2</td>
<td>376</td>
<td>5.2</td>
<td>7263</td>
<td>100.0</td>
</tr>
<tr>
<td>1975*</td>
<td>5624</td>
<td>80.3</td>
<td>993</td>
<td>14.2</td>
<td>386</td>
<td>5.5</td>
<td>7003</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: D'Andrade et al. 1975:759

*Office of Education 1977a. These figures correct the estimates made by D'Andrade et al., for whom the data were not available at the time of their study.
number of degrees has increased significantly each year, the major source of growth has been in the number of Bachelor degrees representing 73.5% of all degrees in 1948 and 80.3% in 1975. While the total number of Ph.D.'s awarded each year has increased, proportionately this group has been in a decline since 1963, as shown in Figure 4.

The student population increase helps to explain the change in the faculty composition during the 1960 to 1970 period. The level of Ph.D. production did not keep up with the undergraduate demand for anthropology courses. Thus, while the departments were able to increase the sizes of their faculties to accommodate the demand, they had to do this by hiring non-Ph.D. anthropologists. The differences in demand between the 1950 to 1960 period and the 1960 to 1970 period are shown in a comparison between the percentage increase in the number of bachelor degrees conferred in the two periods and the number of Ph.D. degrees conferred in the same periods (Table 5).

As new students have been attracted to anthropology in increasing numbers, we may ask, has this had any impact on the growth of the number of professionals, here defined as the number of advanced degree holders? Figure 5 shows that in fact there has been an increase. Anthropology has been able to attract an ever increasing number of students into professional level training. This would seem to indicate an increased productivity on the part of anthropology departments. However, productivity should be measured in terms of the ratio between the number of students enrolled in graduate programs and the number of Ph.D.'s produced.
Figure 4. Percentage changes for degrees by year.
Table 5. Percentage increase in Bachelor's and Ph.D. degrees conferred: 1950-60, 1960-70.

<table>
<thead>
<tr>
<th>Periods of Comparison</th>
<th>Percentage Increase by Degree</th>
<th>E.A.</th>
<th>Ph.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950 to 1960</td>
<td></td>
<td>+27</td>
<td>+150</td>
</tr>
<tr>
<td>1960 to 1970</td>
<td></td>
<td>+591</td>
<td>+154</td>
</tr>
</tbody>
</table>

Based on Table 4.
Figure 5. Log of total B.A., M.A. and Ph.D. degrees conferred: 1948-1975. -- See Table 4.
The Office of Education provides data on the number of students enrolling in graduate programs each year and the number of continuing students for the period 1968 to 1974. Using these data we can estimate the rate of productivity. The data are presented in Table 6.

The number of new graduate students has increased by 73%, while the number of continuing students has increased by 65%. The increased enrollment indicates that more students are being recruited to begin professional training. By comparing the number of first year graduate students with the number of B.A. degrees awarded at the end of the previous academic year, we can estimate the percentage of undergraduates recruited to begin professional training. These data are presented below in Table 7.

Although the absolute number of new graduate students is increasing, relative to the pool of potential recruits, there has been a decline. If the productivity of undergraduate programs is evaluated in terms of the percentage of undergraduate program graduates entering advanced degree programs in the profession, then the productivity is declining.

The second indicator of productivity is the percentage of students enrolled at the beginning of an academic year who graduate at the end of the year. These data are presented in Table 8.

Both the total number of Ph.D.'s produced and the percentage of graduate students completing their Ph.D.'s has increased. Although the number of M.A. graduates has increased, the percentage graduating has remained relatively constant. Based on the criteria established above
Table 6. Enrollment for advanced degrees in anthropology: Fall 1968 to Fall 1975.

<table>
<thead>
<tr>
<th>Year</th>
<th>Type of Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>First Year</td>
</tr>
<tr>
<td>1968</td>
<td>1602</td>
</tr>
<tr>
<td>1969</td>
<td>1845</td>
</tr>
<tr>
<td>1970</td>
<td>2414</td>
</tr>
<tr>
<td>1971</td>
<td>(no data available for this year)</td>
</tr>
<tr>
<td>1972</td>
<td>2603</td>
</tr>
<tr>
<td>1973</td>
<td>2578</td>
</tr>
<tr>
<td>1974</td>
<td>2625</td>
</tr>
<tr>
<td>1975</td>
<td>2786</td>
</tr>
</tbody>
</table>

Table 7. Number of B.A.'s in anthropology by year of award, with number of first year graduate students by year of entry and estimate of percentage B.A.'s entering graduate training per year: 1968-1974.

<table>
<thead>
<tr>
<th>Year</th>
<th>B.A.'s in Anthropology</th>
<th>First Year Graduate Students</th>
<th>Estimate of Percentage of B.A.'s Entering Graduate Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968</td>
<td>1887</td>
<td>1602</td>
<td>84.9</td>
</tr>
<tr>
<td>1969</td>
<td>2339</td>
<td>1842</td>
<td>78.8</td>
</tr>
<tr>
<td>1970</td>
<td>3103</td>
<td>2414</td>
<td>77.8</td>
</tr>
<tr>
<td>1971</td>
<td>3810</td>
<td>(no data)</td>
<td></td>
</tr>
<tr>
<td>1972</td>
<td>4594</td>
<td>2603</td>
<td>56.7</td>
</tr>
<tr>
<td>1973</td>
<td>5625</td>
<td>2778</td>
<td>49.4</td>
</tr>
<tr>
<td>1974</td>
<td>6002</td>
<td>2625</td>
<td>43.7</td>
</tr>
</tbody>
</table>

Source: ¹see Table 4 ²see Table 6

Table 8. Number and percentage of M.A. and Ph.D. degrees awarded in relation to the total enrollment for academic years: 1968-69 to 1973-74.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Enrollment¹ No.</th>
<th>M.A. Degrees² No. %</th>
<th>Ph.D. Degrees² No. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968-69</td>
<td>3678</td>
<td>523 14.2</td>
<td>150 4.1</td>
</tr>
<tr>
<td>1969-70</td>
<td>3719</td>
<td>553 14.1</td>
<td>195 5.0</td>
</tr>
<tr>
<td>1970-71</td>
<td>4691</td>
<td>712 15.2</td>
<td>224 4.8</td>
</tr>
<tr>
<td>1971-72</td>
<td>(no data)</td>
<td>814</td>
<td>250</td>
</tr>
<tr>
<td>1972-73</td>
<td>5406</td>
<td>807 14.9</td>
<td>361 6.7</td>
</tr>
<tr>
<td>1973-74</td>
<td>5735</td>
<td>885 15.4</td>
<td>376 6.6</td>
</tr>
</tbody>
</table>

Source: ¹see Table 6 ²see Table 4
for evaluating graduate programs, the productivity of the graduate programs may be judged to be increasing.

Discussion

Based on the analysis just presented, several conclusions can be drawn. Measured by several different indicators, the population of anthropology has shown a continual increase as anthropology has developed. The population growth has taken different forms over time. The initial growth rate was slow during the first two periods (1888-1917 and 1918-1940) which roughly corresponds to the formative and pre-professional periods defined in the last chapter. This is understandable since the number of professionally employed anthropologists and the number of professional training programs remained fairly small. In Period III (1941-1950), corresponding to the transition from the Pre-professional Period to the Professional Period, there was a rapid growth in the number of professional training programs. In Period IV (1951-1968), corresponding to the Professional Period, we can observe an initial gradual increase in the number of professional anthropologists employed in these training programs (1950 to 1960) followed by a very rapid increase in growth (1960 to 1970). This has been made possible by an increased productivity of these training programs. But the sharp increase in B.A. degrees awarded in anthropology suggests that the primary role of many of these training programs may not be the training of new professionals but rather simply providing for the general college or university training of students. In recent years approximately 80% of their output has been in production of Bachelor's
level training in anthropology and a decreasing proportion of these are going on to graduate training in anthropology (Table 7). Thus, as the population has increased, the primary role of many of the academically based anthropologists appears to have changed from research scientist to college teacher. Population, however, is only one of the variables in the social mass equation. We need to look at the growth and changes in the status structure in order to examine this proposition.

The Status Structure. As the number of anthropologists, or rather persons who claim to be anthropologists, has increased there has evolved an elaborate status structure. This is a natural part of the professionalization process, what Wilensky (1964) terms the evolution of a pecking order. At first, the core of anthropologists was made up of amateurs, but by the beginning of the Formative Period a distinction could be drawn between those who were employed as anthropologists, or in anthropological activity, and those whose anthropological interests were secondary to their occupational or career interests. Toward the end of this period a new element entered the status system, the distinction between those with formal education in anthropology and those without such a background. These differences appear to have had only a minimal effect on the formation of the AAA, and the early years of its development. During this period the AAA leadership called upon all its members to recruit new members, and the membership remained open to anyone interested enough in anthropology to pay dues to the AAA.

Yet, even at this time the beginnings of a distinction began to develop within the ranks between those who saw themselves as
A conservative estimate of the number of anthropologists who can lay claim to a fairly symmetrical training, and who contribute to the advance of anthropology, would hardly exceed thirty. At the same time the number of young men who devote themselves to this science is constantly increasing (Boas 1902:809).

This distinction continued throughout the Pre-professional Period as witnessed by Linton's comment about this period (Tax 1960:512).

Sorenson (1964) documents that during the Pre-professional Period other elements began to emerge as status factors. These include: the level of professional training as indicated by the academic degree the leaders held, the school affiliation of the leaders, the branch of anthropology leaders were drawn from, and age. For the most part, these elements have been retained into the present, as shown by Hurbert (1976). While many of these elements have operated informally, the level of professional training became a major factor in the status structure, because it was an important element in the anthropologists' ability to establish themselves in the nation's colleges and universities.

As anthropologists and anthropology have become intimately associated with the university milieu, the profession's status structure has taken on many of the elements of the university structure. A fusion has taken place between the scientist status and the university status structures, and as in the case of other sciences, anthropologists have evolved a status structure that combines the elements of the academic and scientific systems. This has added new statuses to
the professional social mass. These statuses include: teacher as well as researcher, academic administrator as well as field worker. The museum setting, often associated with a university, provides a similar structure. By fusing with the academic status structure, the anthropological status structure acquired a complex set of statuses which allows for a more elaborate set of interrelationships between individual anthropologists. The effect is an increased social mass. But the neither sheer numbers nor complexities in the statuses alone, nor together, explain the role of social mass in the evolutionary changes within the profession. Rather, it is the product of the interactions between the two, the number and complexity, that produces the third element in the social mass equation — prestige.

**Prestige Structure.** It is difficult to write about status without making reference to the relative rank, or prestige, one position holds over another. Yet, conceptually, there is a distinction. Where the status structure provides an outline of the social structure, the prestige structure provides the detail of that structure. The prestige structure in anthropology began to emerge with the status structure. At first, prestige was based largely upon one's personal prestige among his colleagues. When the number of professional, i.e., vocationally engaged, anthropologists reached a critical level toward the end of the 19th century, professional training emerged as a major element in the prestige structure. The comments by Boas and Linton cited above are indicative of this element. Not only was a new status -- the scientifically trained anthropologist -- added to the status
structure, but somehow these anthropologists were viewed as being better than the amateurs. This elitest position, however, had not gained sufficient support to win the day as the AAA was being formed. As the proportion of professionally trained anthropologists increased in relation to the amateurs, the elitest view came to the forefront, culminating in the 1946 change in the AAA Constitution. Even as the scientist status gained in prestige, however, a differentiation developed within it. The specific school where one trained and/or was later employed became a basis for prestige allocation within the group, as shown by Sorenson (1964) and Hurbert (1976).

The fusion of the anthropological and academic status systems has brought with it the prestige structure of the university. Affiliation with universities sponsoring departments of anthropology is more prestigious than being the lone anthropologist in a combined department; a department offering a graduate program is more prestigious than one only offering an undergraduate major; and a graduate program offering a Ph.D. in anthropology is more prestigious than one offering only a Master's Degree. On the individual level, the academic ranking system affords another way of allocating prestige. Full professors rank higher than associate professors who rank higher than assistant professors who rank higher than Instructors or Lecturers, while appointment to an endowed chair ranks the highest. A tenured versus untenured position is another prestige element, as is the academic appointment versus the research or administrative appointment. All of these elements entered the anthropological prestige structure during the Pre-professional Period and became crystallized in the Professional Period.
Discussion. As the population of anthropologists has grown, the profession's status and prestige structures have grown becoming more elaborate and complex. The result has been an increasing social mass. In the process, the amateur anthropologist has been displaced by the professional anthropologist who shares many of the values of the academic profession. By gaining control over both the professional organizations and the professional training facilities the academic anthropologists, as a group, gained the power to manage the growth of the profession's social mass.

Their control over the profession is exercised in a number of ways: (1) by setting the standards by which new recruits are admitted to training programs, and determining who, and who will not, be "certified," i.e., awarded the advanced degree that confers professional status; (2) by controlling who will be hired for an academic position and once hired who will advance through the academic ranks; (3) by controlling who will be afforded professional status in the professional associations and thereby gain access to the prestigeful statuses of the association; (4) by controlling the production of professional products, i.e., articles, monographs and books, through the peer review system thereby controlling who will gain professional recognition from peers; and (5) also through the peer review system, by controlling the granting of research funds which helps to determine one's professional productivity. Not all of these controls are absolute -- especially the last two -- but the professional anthropologist who has succeeded in gaining status and prestige through these structures exerts a strong influence on the decisions that will be made.
As long as the anthropologist population has grown at a rate that the status and prestige structures have been able to absorb that growth, the profession has also been able to grow. The profession has also been able to change because the growth in the status and prestige structures has kept pace with the population growth until recent years. Today this is not the case and we will explore this shortly.

**Growth in the Institutional Structure**

With the growth of the social mass, there comes a concomitant growth in the institutional structure of the profession. This structure is composed of two factors: the profession's traditions and structural inertia. These factors tend to channel development and growth in social mass into pre-established directions. In this capacity they serve to retard and control the effects of social mass growth. The following analysis examines these factors as they have influenced the development of American anthropology.

**Tradition**

Tradition is "... the handing down of statements, beliefs, legends, customs, etc., from generation to generation, especially by word of mouth or by practice..." (Stein 1973:1502). The concept is a key element in many of our definitions of culture (Kroeber and Kluckhohn 1963).

Anthropological traditions began to evolve during the 19th century even before the beginning of formal training programs. Among these early traditions were: the wedding of the humanistic and scientific perspectives, a concern for culture as the focal point of study,
a focus on non-literate societies, the evolution of a holistic perspective, and a reliance on the comparative method. Occupational opportunities in the museum and university setting created another tradition -- a tradition of employment. As the first full-time teacher of anthropology, Franz Boas had a profound impact on the further development of traditions in American anthropology.

**Boas as Founding Father.** Harris (1968:250) observes,

During the first half of the twentieth century, anthropology in the United States was characterized by a programmatic avoidance of theoretical synthesis. The basic research strategy for this period was formulated by Franz Boas, . . . who was guided by a distinctive sense of inductive purity, which he transmitted to a generation of his followers.

Boas trained his students in the view that their task as one of developing the facts and avoiding the seduction of simplistic theoretical schemes. Mead (1959:29) states,

... Boas saw the scientific task as one of progressive probing into a problem now of language, now of physical type, now of art style — each a deep, sudden, intensive stab at some strategic point into an enormous untapped and unknown mass of information which we would someday master. No probe must go too far lest it lead to premature generalization -- a development which he feared like the plague and against which he continually warned us.

His mission, according to Harris (1968:250),". . . had been to rid anthropology of its amateurs and armchair specialists by making ethnographic research in the field, the central experience and minimum attribute of professional status." To accomplish this, "Boas and his first generation of students were obliged to build professional, university-based anthropology from the ground up"(Harris 1968:251).

From the ranks of his students there rose many of the famous and influential members of the Pre-professional Period, including:

**Boas as Tradition Maker.** Under Boas' influence American anthropology developed a theme which Harris labels "historical particularism" which elevated rigorous field work to a plane equal to or higher than the speculative theory building which dominate the intellectual development of anthropology at that time. In so doing, he firmly established the tradition of the field work experience as part of the student's training and the participant-observer role as the anthropologist's *modus operandi*.

Boas also stimulated a period of extensive salvage anthropology. Mead (1959:30) states,

... he had cast himself in the role of one of the responsible leaders of a giant rescue operation to preserve the vanishing fragments of language and culture.

This perceived need to save what was left of "primitive" culture gave an urgency to his field work and that of his students. He transferred his concern to his students by creating in them a feeling of moral responsibility.

This sense of moral responsibility made us feel that we were caught in an obligation to do more and better work, or we would "betray Dr. Boas." A mandate as vague as this carried with it its own heavy sense of responsibility (Mead 1959: 30-31).
American anthropology has a tradition of problem-oriented research and has escaped a tradition of methodological orthodoxy. Mead (1959:31) describes Boas' influence in establishing this tradition.

The form that these very preoccupations took when he taught us was a curious amalgam, with consequences which have outlived him. He never talked about science or scientific method as such. . . . When it came to the study of culture, there was no discussion of the law of parsimony or of controls or of sampling, no invocations of models, none of the paraphernalia of the natural sciences with which students of human behavior who were more interested in being "scientists" than in understanding human behavior were beginning to surround themselves. We did not doubt that we were doing scientific work, that we had to live up to scientific standards and use all the methods, qualitative or quantitative, that were or would become available. But we did not talk about methods, instead, we talked about problems, the problems that should be tackled next.

. . . when we went into the field, we made such methodological innovations as seemed called for by the problem and the local setting.

The use of anthropology and its findings is also a concern that is reflected in the tradition established by Boas. Again, according to Mead (1959:30),

. . . he thought of himself as morally responsible for the uses made of anthropology, for provision of research materials relevant to human freedom, and also for keeping the subject itself open-ended. . . . This very reason he stood in opposition to all prophets, to all exclusive and final solutions of any problem.

The responsibility Boas felt toward the development of an objective, scientific anthropology carried over to other spheres of his professional life. In a letter to The Nation (Boas 1919:797) he condemned the actions of scientists, and especially anthropologists, who used their skills to work as spies during World War I. This position earned him the condemnation of his colleagues in the Association (American Anthropologist 1920:93-94). Yet, in this and other actions
(Boas 1928) he established a moral and ethical tradition in American anthropology that continues to this day.

One more very important contribution he made was the four field approach to the study of cultural phenomena. During his own career, Boas contributed to the development of ethnography, linguistics, physical anthropology and archaeology. Through his contributions and his training of students, a four field approach to anthropology became a tradition both in the ideational organization and the social organization of the profession which has been handed down to us to this day.

Boas is not alone in the development of the traditions of American anthropology. To claim so would be a disservice to all the others who have practiced the profession and especially to his students who have built on the foundations he layed. However, Boas occupies a unique position in the history of American anthropology and his contributions and the impact of his personality go beyond that of those who followed. It is for this reason I chose to emphasize his role in this discussion.

Recapitulation. The traditions of American anthropology are:

1. A combination of humanistic and scientific values.
2. A focus on the concept of culture.
3. An emphasis on non-literate small scale sociocultural systems as the subject of study.
4. A holistic perspective in the study of sociocultural phenomena.
5. A reliance on the comparative method of analysis.
6. A tradition of employment in a research setting associated with a museum or university.
7. An orientation toward historical particularism, i.e., understanding the role and function of sociocultural phenomena in context.

8. The tradition of participant-observation in a personal field work experience.

9. The ideal of the scientist role as a standard for judging professional status.

10. An objective and relativistic moral and ethical position.

11. A four field approach in the basic training of recruits to the profession and in the organization of the profession.

Structural Inertia

As groups organize, the interrelations between members start to take on a structure that insures that the tasks to be performed by the individual members to further the collective interests of the group can and will be carried out. In time this leads to the institutionalization of roles. Once institutionalized, the various roles played by the group's actors take on the characteristics of statuses in the evolving organizational structure. These, in turn, become factors that determine the way the group allocates status and prestige to the membership. The effect is a structural inertia.

In American anthropology, the key roles for anthropologists have evolved in the university and museum settings. When anthropology became wed to the university and museum system, the professional members took on many of the values of that system which provided a status and prestige structure that met many of the anthropologists' professional needs. Although there are some differences between the two
settings, the university and the museum, the following discussion, in its broad outline, applies to each.

The profession's first need was to recruit and train future professionals and thereby insure the continuation of the profession. Through the departmental and program structure of the university and the museum, anthropology has gained a public visibility which has been used to attract recruits and gain support for the profession. Mandelbaum (1963:2) observes,

... the main sphere for the transmission of anthropological culture is the college classroom, where day by day many thousands of students come to know what anthropology has to teach about human life, and thus about themselves.

This has been especially important in the development of the profession since, until recently, the discipline of anthropology has not been well known to the public.

In addition, the university provides a general format for the training of potential recruits which insures anthropology's competitiveness with other disciplines. The semi-autonomous nature of the faculty and the department within the university structure allows the profession the right to determine the specific content and standards to be applied in evaluation of student performance. The resources of the department can be used to reward those students who display promise of becoming professionals. These resources may be used to help the student gain admission to a graduate school, or, an apprenticeship in teaching and/or research and may be used to help to support the promising student. Such support may take the form of a grant, fellowship, assistantship, or a low level technical job assignment. Since these
apprenticeships are primarily awarded for educational purposes, evaluation of job performance is made in terms of the education goals determined by the professional rather than the pragmatic goals of an outside employer or sponsor.

Second, these settings allow the professional anthropologist to satisfy the need to perform in the role of the scientist. Although the university setting places a heavy burden on the anthropologist as a teacher,

... anthropologists are trained to be research workers, not teachers. Anthropological meetings are given over to discussion of problems of anthropology, rarely of teaching. ... (Mandelbaum 1963:1).

The university provides a unique environment where both the teaching and research responsibilities can be carried out. While the teaching role has been an especially important component of the professional role set, the university also provides both an opportunity to pursue the research role and a reward system that recognizes achievement in this role. This is done in several ways.

First, the academic calendar provides a two to three month block of time in the summer that allows the anthropologist time to either conduct field work or otherwise engage in research activity, e.g., data analysis, library research, writing, etc. Second, the work schedule during the academic year allows time for faculty members to carry on research activity. Third, the university practice of granting sabbatical leave to tenured faculty allows the university-based anthropologist an opportunity to take periodic extended leaves of absence to pursue his research interests. Fourth, the university provides an
institutional base that can be used to attract financial support for the individual anthropologist's project. Fifth, the university has a reward system which serves as an incentive to the anthropologist to pursue his professional responsibilities. Promotion and tenure within the university can be contingent on the research and publication record of the faculty member. Sixth is the support the university and the department offer the anthropologist in his professional activities vis-a-vis his professional organizations. Given these factors, it is not surprising that the early association between professional anthropologists and the academy should develop and continue. Add to these, the job security of tenure and the university provides an ideal milieu for both personal and professional growth and development.

The university's academic influence can be seen in the organizations and services provided by the professional association. The timing and formats of the annual meetings of the association reflect the academic calendar and interests of the anthropologist. Publications of these associations reflect the needs of the academic anthropologist in several ways. The journals focus on scholarly presentations of research material. Little attention has been paid to the pedagogy of anthropology (Mandelbaum 1963:1-2), for example. With the exception of the early decades of Human Organization, the organ of the Society for Applied Anthropology, there have been few articles that focus on the application of research findings, or on the technical aspects of applied procedures. The book format has also tended to emphasize either the scientific/scholarly monograph format or the
textbook format. Only recently, for example, has a series on anthropological methodology been developed by Holt, Rinehart and Winston publishers.

As a result of the long and close association of anthropologists with the academic milieu there has developed a structural inertia where professional status and prestige have become intimately tied to the academy. This structural inertia has been beneficial in two ways. First, it has insured that new recruits will be properly trained and the best of these have gone on to professional positions insuring the continuation of the profession. Second, it has allowed for the rapid development of a body of anthropological data and theory which is, as Parsons (1959) observes, a key element distinguishing a profession from other forms of vocational and occupational activity.

While tradition has helped to shape the ideals and values of the profession, structural inertia continues to act as a force in the allocation of the profession's social mass. However, today we see that the organizational structure which these factors have helped to shape and maintain is undergoing stress. The growth in social mass is placing considerable strain on the elements of the institutional structure at the same time that the professional environment is also undergoing rapid change. The result is a unevenness of scale which we will now examine.

**Unevenness of Scale**

While tradition and structural inertia constrain and channel the growth in social mass, unevenness of scale is the factor which
breaks these constraints and causes the social mass to flow into new regions of the sociocultural environment. From the historical analysis of the anthropological profession, presented in the last chapter, we can see that each major period has been marked by a period of unevenness of scale. The rise of the full time anthropologist marked the change from Pre-formative to Formative periods. The rise of scientific anthropology marked the beginning of the Pre-professional Period and the ascendency of the professionally trained scientific anthropologist marked the beginning of the Professional Period. In each period, it was the disproportionate growth in one or more dimensions of the social mass that has led to a redefinition of the discipline (or profession) and a restructuring of its organization. Today, we are facing another period of unevenness of scale that portends another restructuring of the profession. In this section I will concentrate on this period.

In Table 3, in this chapter, we saw that in 1970 a significant proportion of the departmental faculties is made up of non-Ph.D. anthropologists who hold the rank of assistant professor or instructor. At the same time we saw that the number of senior faculty, full and associate professor ranks, increased significantly in the period from 1960 to 1970. In addition, the number of new Ph.D.'s being produced has increased and many are beginning to enter the job market (Table 8). These factors in combination with the traditional professional institutional structure indicate a major crisis is about to hit the profession. (At this writing, we are already beginning to see the crisis in employment of professional anthropologists.)
Since the traditional role of the professional anthropologist is the academic/scientist role, the availability of academic positions is crucial to the professional advancement of individual anthropologists. With many of the higher ranking academic positions having been only recently filled, we may assume that turnover in these ranks, due to natural attrition, will be slow in the foreseeable future. This will present a problem for those entering the field since the natural process of advancement through the academic ranks will be slowed.

D'Andrade et al. (1975:762-764) observe,

The final parameter ... concerns the number of yearly retirements, deaths, and loss through change of occupation ... (an) estimate of the age structure of the Fellows of the AAA based on Association figures for 1974 ... indicate that, due to the rapid expansion of anthropology, a considerable proportion of Fellows are in the younger age brackets. Only twenty-five percent of Fellows are between fifty-one and sixty-five, while fifty-one percent are between thirty-six and fifty. Thus, the retirement rate will be very low until the Ph.D.'s from the 1960's and 1970's pass completely through their academic careers.

This estimate was based on the assumption of mandatory retirement at age 65. Recent changes in the mandatory retirement age makes it possible for this age group to continue their academic careers much longer. If more liberal early retirement programs are developed, these may counteract the effect of later retirement. But the situation is unclear at this writing. However, one fact does stand out, the population density in the academic environment is bringing about changes in the traditional career pattern. The non-Ph.D. faculty can be expected to decrease. Three forces are bringing this about: first, advancement in the academic status structure is essentially closed off to them by the nature of the institutional structure. Second, as
student enrollments stabilize due to changes in the size of the college age population, we may expect that openings created as a result of natural attrition will be filled by Ph.D.'s. Third, where enrollments drop and this leads to a reduction in force, the untenured faculty will bear the heaviest burden.

We are beginning to see the change already in the announcement of positions available in the AAA newsletter. Many more one year position openings are appearing, accompanied by such phrases as "non-tenured track," "contingent on the availability of funds," etc. Thus, the current crisis is creating a class of individuals within the profession who have some years of experience in the traditional career role but who may be expected to have their careers interrupted.

Many of the new Ph.D.'s are faced with the problems similar to the non-Ph.D.'s. But where the latter have experience lacking only the certificate, this new group lacks experience in academic employment and are beginning to feel the effects of such requirements as "student evaluations" of teaching competence. The problem of finding the first job is thus made more complex. D'Andrade et al. (1975) project that by the end of the 1970's, the growth in the number of the profession's production facilities will level off at 96 Ph.D. granting departments, and by 1984 the number of faculty in these programs will level off at around 1550 (D'Andrade et al. 1975:765, Table 8). Despite this, the output of these programs will continue to increase, although at a much slower rate, until the end of the century. This will continue to add to the unevenness of scale.
A number of proposals have been put forth by anthropologists as solutions to the employment crisis. These include: a zero population growth in the number of new Ph.D.'s produced; expanding the number of anthropologists teaching at the junior college level; begin anthropology in the high schools; split existing teaching positions so that two anthropologists are hired for each full time position; and creating new roles for anthropologists in the non-academic market place. Each of these implies a radical departure from the traditional structure of the profession. The zero population concept is self-defeating since it would lead to decreased enrollments and thus a further decline in the job market. Teaching at the junior college and high school level while practical implies a change in the traditional definition of the anthropologist from a scientist to that of teacher. Also it requires additional training and certification as a teacher. Splitting existing positions is impractical, except in the case of family members, since it effectively lowers the value of the Ph.D. in the market place, in addition to the fact that it may create administrative problems for the anthropology department that chooses to take such a course of action. The most promising avenue is the development of non-traditional employment in the non-academic world. Today we are seeing steps being taken in this direction by both the AAA and the SFAA. But even this strategy means a change in the way anthropologists are to be trained and the way status and prestige are to be awarded to professionals.

Summary

Growth in a sociocultural system's social mass generates a set of problems for the system. Uncontrolled growth can quickly tear the
system apart. Institutional structure must be introduced at some point in order to channel the energy generated by the social mass. Two factors operate to insure the controlled growth of the system. These are tradition and structural inertia which act to bring about changes in the mass that insure the continuation of the system. They act separately, and in concert, as a conservative force. When anthropology entered the professionalization process, this force developed and has subsequently acted as a restraining factor on the evolving social mass. The effect has been to give direction to the evolution and development of the profession.

When these factors are unable to control the social mass, stresses and strains develop in the system. The pressures generated lead to the development of an unevenness of scale, which in turn leads to major changes in the sociocultural system. These changes appear to take place in the status and prestige structures. In time, the changes will become part of a new institutional structure that re-establishes the system's equilibrium.

Today, American anthropology is undergoing a crisis in its traditional organization and structure. The effect of this crisis is to force anthropologists to look to non-traditional means of resolving the crisis. The scientifically trained anthropologist, unable to find employment in the traditional academic setting, is faced with the problem of adapting his skills and training to the non-academic market place. In effect, this means the development of a professional role for the anthropologist as a social engineer. The question we now need
to ask is: why has it taken a crisis in the profession for anthropologists to begin to explore this role? I will address this question in the next chapter.
Despite an ostensible commitment to make anthropology serve the interests of human welfare, concern for applied anthropology has remained quite secondary (Voget 1975:772).

Applied anthropology has long been viewed as the bastard child in the family of American anthropology. Despite the fact that anthropologists have from time to time sought to apply the skills and knowledge of their profession to the solution of practical problems, such activity has not been held in very high esteem within the profession. The professional rewards one receives for applied work are much less than what one receives for more traditional academic and scientific activity. Yet, when anthropologists engage in such applied work, they are generally performing in the role of the social engineer. Thus, the case of applied anthropology, its development and place within the anthropological profession can give us an understanding of the problems facing the development of a scientific social engineering role in American social science. In the last chapter we saw how the factors affecting the development of professional anthropology have tended to control the types of roles professional anthropologists perform. In this chapter, we will examine the effect of these factors on the development of the applied anthropologist role. From this analysis, we will be able to identify those factors which may contribute to the
development of a scientific social engineering role within professional anthropology, and by extension, within professional social science.

**Applied Anthropology Defined**

Although the term, applied anthropology, frequently appears in the literature, definitions of applied anthropology are hard to find. Even when we find such definitions, we find they reflect many different perspectives of what constitutes "applied anthropology." Such diversity led Conrad Arensberg (1950:4), as editor of *Human Organization*, to observe,

> The "applied" in the term "applied anthropology" is something of a misnomer if a comparison is made with the physical sciences. It might be inferred by one knowing a little about anthropology, that the applied anthropologist, like the engineer, is adapting generally accepted laws to specific practical situations. ... In fact, at the present time, the applied anthropologist is interested primarily in understanding the process of change in human relations.

When definitions are found, we find that anthropologists are very reticent to identify applied anthropology with engineering. For example, Laura Thompson has tried to distinguish between an engineering type of applied anthropology and a clinical type. She defines these as follows:

> ... the role of the engineering anthropologist ... involves formulating specific recommendations for his clients regarding the implementation of specific policy objectives, or even regarding policy and other objectives as such. ... a clinical anthropologist ... interprets his role in relation to that of his client, whether administrator or a citizen group, as one of scrupulously refraining from the decision-making function and leaving that function to the client (Thompson 1965:276) (emphasis mine).

The distinction Thompson draws is very similar to the distinction I have drawn in Chapter 2 between the social engineer and the
social technician. The clinical anthropologist performs a routine function while the engineering anthropologist performs an innovative function. Foster (1969:53) does not recognize these functional distinctions when he defines applied work as follows:

... an anthropologist is best thought of as doing applied work when he has some kind of formal tie with an innovating organization oriented toward social, economic, and technological goals involving rather specific kinds of change in human behavior. ... It is this functional association with a non-academic organization with goals of the type described, and the role modification that the association requires, that makes an applied anthropologist.

A common element appearing in most definitions is the identification of applied anthropology as a role played by anthropologists. But the point of reference most authors take is the role in relation to the traditional anthropologist's role, and not the broader context of the role of social science, or for that matter, anthropology, in American society. As a result, the distinction between the traditional anthropologist's role and the applied role is seen in the role each plays in a particular situation and the ends to which his work is applied. The traditional anthropologist is working to expand the limits of the discipline, while the applied anthropologist is working to meet the specific needs of the client. Yet it is in this difference between these two roles as they relate to the general society that the distinction must be drawn. The applied anthropologist is a distinct role on the same level as the academic anthropologist, and not a subset of that role.
The Role of Applied Anthropology in the Development of the Profession

In his detailed, *History of Ethnology*, Fred W. Voget (1975: 772) states,

Despite an ostensible commitment to make anthropology serve the interests of human welfare, concern for applied anthropology has remained quite secondary. The image of science projected for anthropology directed investigators to a choice of problems that increased the store of knowledge through objective observation and impartial analysis. Application of scientific knowledge was left to the administrator enlightened enough to grasp the insights which anthropological evidence and research methods brought to special problems.

Until World War II, anthropologists assumed the applied role on an ad hoc basis. Alice Fletcher attempted to aid the Omaha tribe at their request in the 1880's. Holmes assumed the chairmanship of the Committee on Anthropology of the National Research Council in 1917 and initiated a program that helped to establish the normal physical standards for the nation. Anthropologists working with Roethlisberger and Dickson were instrumental in the discovery of the Hawthorne effect and improving the management practices at the Western Electric Company in 1928. All of these cases represent isolated individual efforts rather than an organized effort sponsored by the profession. There was no underlying theory unifying these efforts. In method and approach they represent the specific theoretical orientation of the individual anthropologist.

Pre-professional Period

The lack of a common theoretical focus hampered the development of applied anthropology. Since applied anthropology, in the engineering sense, deals with the innovation of sociocultural systems to
achieve socially desirable ends, the lack of a theory of culture change made it all but impossible for anthropologists to design new systems. Up until the 1930's, culture change theory was more or less synonymous with culture history. Studies were undertaken to reconstruct pre-contact social and cultural systems, or when contemporary groups were studied, anthropologists tended to disregard the contact between their "primitive isolates" and western societies that administered their territories. A major breakthrough in anthropological theory came in 1935 when the Social Science Research Council appointed a committee:

... to analyze the work on the problem (of acculturation), to study the implications of the term "acculturation," and to explore new leads for further investigation (Redfield, Linton and Herskovits 1936:149).

The Committee, in a memorandum published in 1936, defines acculturation as:

... those phenomena which result when groups of individuals having different cultures come into continuous firsthand contact, with subsequent changes in the original cultural patterns of either or both groups (Redfield et al. 1936:149).

The definition provides a sharp conceptual distinction between changes which result from contact between peoples and the more general concept of cultural change. In addition to a definition, the memorandum lays out a detailed schedule for the analysis of acculturation. The memorandum had the impact of stimulating research into the acculturation phenomenon. For archaeologists, the concept provided a useful tool immediately applicable to the types of problems and data they worked with. Since the traditional ethnographic studies, and the then popular structural-functional studies, did not provide the data required in the analysis of acculturational phenomena, cultural and
social anthropologists interested in exploring this concept were stimulated to initiate new research to gather the types of data required for acculturational analysis. When these anthropologists entered the field, their relationships with colonial administrators changed when the latter, representatives of western culture, became part of the research universe. At the same time, the administrator began to view the anthropologists as a potential resource. Malinowski (1929) observes that a symbionic relationship developed between the two. This provided a context in which an applied role could develop.

With the outbreak of World War II, a number of anthropologists were brought to Washington to work on the war effort. Many of these were deeply interested in the study of acculturation. In 1941, they formed the Society for Applied Anthropology (SFAA), and began publishing a journal, *Applied Anthropology* (later renamed *Human Organization*) which carried articles on specific techniques used in acculturation research and analytical studies of acculturative situations. Many of these related to the tasks faced by anthropologists engaged in the war effort. The SFAA provided a specific focus for those interested in acculturation studies. The membership of the SFAA, however, tended to create a unique focus as well. While the theoretical concept of acculturation is applicable to problems in all four sub-disciplines of anthropology, the SFAA was dominated by cultural and social anthropologists. Thus, both the Society and its publication projected an image of applied anthropology as a branch of cultural anthropology. This is an image it retains today.
Throughout the 1940's, the Society and its members led the discipline in the exploration and refinement of the acculturation concept. By these efforts, they helped to establish a dynamic concept of culture in anthropology. At the same time, through their "applied" role they helped to promote the profession beyond the academy. Anthropologists took on roles in a number of major programs designed to carry out governmental policy under the BIA (Thompson 1973; Officer 1973), the War Relocation Authority (Spicer 1973; Graninger 1973), and Policy Research into Food Habits (Metraux 1973; Nelson 1973), among others. A number of new roles for anthropologists were also created including: policy analyst, policy researcher, consultant, administrator trainer, and cross-cultural interpreter, among others. In many of these situations anthropologists were teamed with members of other disciplines in multi-disciplinary research projects. As a result, they brought back to anthropology new concepts and techniques that became incorporated into the discipline. Under the influence of Boas and his students, anthropologists were being trained to be problem-oriented rather than methodology oriented; thus the discipline was receptive to new methodological ideas that could be applied to other basic anthropological research problems. Throughout this period, Applied Anthropology (qua Human Organization) carried a section on techniques and methods used by applied anthropologists in different situations.

The Professional Period

After the War, new applied roles were developed. In the Indian Claims Commission land settlement cases, for example, a number of
anthropologists were hired by both the claimants and the government and took on the role of expert witness (Giteck 1973). Cornell University developed a special training program in applied anthropology and became involved in a number of studies of planned cultural change. The best known of these is the Vicos project where for applied anthropologists were employed in a number of roles (Dobyns 1973; Bainton 1973). Among these were trainer, evaluator, advisor, administrator, planner, and social engineer. The last of these roles related to a new research approach, experimental anthropology, or, as Holmberg (1958) terms it, "the research and development approach."

Sol Tax introduced a somewhat different applied approach in the Fox Project (Gearing 1973; Spence 1973). Rather than occupying a position of power in the system undergoing acculturation, the "action anthropologists" of the Fox Project placed themselves in a role of cross-cultural interpreter between the Fox community and rural Iowan White communities.

Under the impetus of the Point Four Program, anthropologists, along with other social scientists, helped to establish the community developer role. Applied anthropologists took several different roles. Some became community developers while others took roles as trainers of community developers or preparers of material for trainers (Spicer 1952; Paul 1955; Goodenough 1966). Still others became official or unofficial evaluators of community development projects (Dobyns 1970).

The result of these efforts was to broaden the range of anthropological interest and concern. The new sub-disciplines of legal anthropology, medical anthropology, urban anthropology, educational
anthropology, etc., can be traced in part to the efforts of applied anthropologists. Further, the research of applied anthropologists contributed to the rapid development of acculturation theory. By 1960, applied anthropology had established its presence in the profession and the basic features of acculturation theory had been worked out and anthropologists were ready to move on to new theoretical pastures. In its 1963 report to the Executive Board of the AAA, the Educational Resources on Anthropology (ERA) project of the Department of Anthropology, University of California at Berkeley, included a whole section on teaching applied anthropology, an indication of its acceptance by the profession.

In the 1960's and 1970's, the Society for Applied Anthropology changed its focus. As academic anthropologists expanded their interests, many found traditional academic positions in colleges of education, business and medicine. Recent journal articles reflect this change. The social turmoil of the 1960's also generated political concern for the problems of minority groups. Applied anthropologists, caught up in the turmoil, began taking on the role of social advocate for these groups. As a result the profession's political awareness has been raised. More recently, the employment crisis in anthropology has stimulated SFAA members to look into the problems of preparing anthropologists for alternative careers (Leacock, Gonzalez and Kushner 1974), and to question the assumptions of applied anthropology as presently constituted (Angrosino 1976).
Fred W. Voget (1975:772) observes,

... in the two centuries of its unfolding, the anthropological purpose was clued primarily to the pursuit of knowledge, humanistic expression of concern for the fate of subjugated peoples were not lacking. However, participation in organized efforts to alleviate the conditions of subject peoples was largely casual and private.

The profession's institutional structure has constrained the development of applied anthropologist role. As a result, applied anthropology is still today viewed as a sub-role of the anthropologist role set. The origins of this belief are to be found in the professionalization of anthropology as a social science.

The Profession's Assumption

In the Formative Period, as Mead observes, Boas expressed a skepticism towards and was highly critical of, broad theories which attempted to explain cultural phenomena without a firm foundation in observable fact (Mead 1959). He instilled his students with this skepticism. As a result, an assumption developed in the profession that,

... a science such as anthropology has to develop and mature for a sufficiently long period for general principles or theories to be formulated and tested before these theories can be usefully applied in some concrete situation so as to bring about a practical result (Clifton 1970:viii).

Clifton (1970:viii) continues,

If this assumption were valid, then of course, applied anthropology would necessarily have to come after the growth of a pure science of anthropology.

American anthropologists shared this assumption with their colleagues in Great Britain. For example, Radcliffe-Brown (1931:276) observed,
Applied anthropology, must, of course, be based on pure anthropology. What is therefore necessary in the first place is the development of the pure science by the discovery or formulation of the fundamental principles of social integration.

This assumption fit well with the Boasian position, for the problem facing the discipline during the Pre-professional Period was developing a scientific anthropology. Thus, when individuals attempted to apply anthropology, they did so on their own as individuals. Or when they did this as professionals, it was during periods of extreme national crisis such as World War II, e.g., the War Relocation Authority.

The Exception to the Rule

Extreme crises, such as war, generate needs that transcend professional interests and these proved to be a stimulus for the development of applied anthropology. It has been during periods of major national crises where the national interest has been clearly defined that the professional interests have been suspended by anthropologists. For example, when Boas criticized scientists, and especially anthropologists, for serving as spies in World War I, he was arguing for the legitimate interests of the profession. Yet the AAA voted to censure him since his views conflicted with the higher and more urgent national interests. On the other hand, the lack of a clear national consensus regarding the Viet Nam war led the AAA to take no action against either the anthropologists involved in the Thai affair or their critics. With the exception of such cases of extreme national crisis, applied anthropologists have been subjected to the pressures
of the profession and its underlying assumption of the priority of pure science over applied.

The Great Depression, followed by World War II, was such a period of extreme national crisis which brought about a hiatus in the professionalization of anthropology. Many anthropologists were recruited to help in the war effort, drawing off many who might otherwise have been engaged in traditional professional activity. A wide range of new, applied roles were created at this time. For some, the war-time situation merely provided an opportunity to do "pure" anthropology in a different context; but, for others, it created an opportunity to pursue new career paths that utilized their professional training and skills. These anthropologists represent the first generation of applied anthropologists.

Not all anthropologists participated directly in the war effort. Some were left behind in the academy where they continued to uphold the profession's traditions. The war affected the enrollment in anthropology as well as other college subjects thus slowing the growth in the professional social mass. At the same time, the rapid radiation of applied roles tended to diffuse the small social mass of applied anthropologists. The colleges were unable to fill the void and as a result the first explosion of applied interests was soon dissipated.

Once the war ended, the traditional interests of the profession began to be reasserted. These interests took two forms. First was the need to re-staff the departments to cope with the post-war college enrollment increases made possible by the G.I. Bill. Second, was the need to re-establish the unity of the profession which had fallen in
disarray during the hiatus. To accomplish the first task, the status and prestige structures were changed to encourage anthropologists to return to the academy. The second task was accomplished by the reorganization of the AAA. The effect of these changes was to greatly alter the development of American applied anthropology and the applied anthropologist's role in the profession.

The Post-War Environment

The reorganization of the AAA not only established the scientist anthropologist as the leader of the profession, it also established the academic anthropologist as the leader. These two roles had evolved in tandem during the Pre-professional Period as we have seen. As war time anthropologists returned to the campus to take up academic positions, they added to the academic social mass within the profession, and at the same time decreased the mass of the applied anthropologists. This gave the traditional academic faction control over the profession's status and prestige system.

The AAA reorganization also established the formal anthropological training program as the means for obtaining professional status. Thus, the enculturation of future professionals was now firmly in the hands of the academic anthropologist. While some of those returning to academic positions continued their interest in applied anthropology, they had very limited success in establishing applied-oriented training programs. Most of these efforts to establish applied anthropology succeeded only in establishing a single course in applied anthropology. Only one university program in applied anthropology was
established in the immediate post-war period, the program at Cornell University. Throughout the late 1940's and the 1950's, Cornell was the center for applied anthropological training. The death of Allan Holmberg and the end of the Cornell-Peru Project in the early 1960's left the Cornell program in disarray. Some members of the Cornell staff, such as Henry Dobyns, moved to the University of Kentucky where an applied anthropology Ph. D. program was instituted in 1963. Today, Kentucky remains the only professional training program awarding a Ph.D. in applied anthropology.

Tradition and structural inertia also contributed to the declining interest in applied anthropology during the professional period. Since applied work has been viewed traditionally as a form of "public service" it ranks lowest within the academic prestige system. Those who had already achieved status and prestige in research and teaching, and thereby a degree of professional standing, were free to continue their applied work and develop their applied interests. However, for younger members of the profession, such activity did little to advance them within either the profession or the university. University tenure, for example, is primarily based on one's teaching and research record and much less on one's public service record. For those who wish to publish the results of their applied work few professional outlets exist. Human Organization is the only major anthropological journal that has focused primarily on applied work. For many years it was the only journal to publish articles dealing with technical and procedural topics associated with the application of anthropology. During the 1960's Human Organization changed editorial philosophy and
stopped publishing this type of article. Case studies of applied projects, as long as the case has been phrased in scientific and scholarly terms, have found a wider set of outlets. Such case studies have generally been offered as examples of some theoretical point in acculturation theory. As a result, applied anthropology has tended to be viewed by many as a branch of acculturation theory and a sub-discipline within cultural anthropology.

Many of the war time applied anthropologists chose to remain in their applied roles and did not return to the academic environment. In the process, they were lost to the profession. Within the profession the only applied role to gain professional acceptance was the role of consultant. Engineering roles, especially that of administrator, have generally failed to gain acceptance as legitimate professional roles for anthropologists. There has been considerable debate within the profession about the relationship between anthropology and administration (Cochrane 1971; Foster 1969; Barnett 1956). Even such activist roles as Holmberg's in the Vicos project have been questioned on the grounds that the Cornell project staff took over the administrative functions of the hacienda which went beyond the appropriate anthropological role of outside observer (Holmberg 1954, 1958). Because of this pressure from their academic colleagues, many applied anthropologists have been forced to make the hard decision to chose between their profession or their careers. As Goode (1960) observes, members of a profession strongly identify with the profession and tend to view the profession as a terminal occupation. Thus the decision to stay with one's career is one made at great psychological cost to the
professionally trained anthropologist. Yet it is a choice made necessary by the context in which applied anthropology has developed in the post-war period.

As recently as 1969, George Foster, whose name is closely associated with American applied anthropology, has stated, "... applied anthropologist is a role rather than an occupation..." (Foster 1969:45). Such support for applied anthropology within the profession has tended to retard its development. The influence of tradition and structural inertia have retarded the growth of the applied anthropologists' social mass. Rogge (1976), in a recent study of the growth of the professional societies in anthropology, shows that applied anthropology measured in terms of the membership of the Society for Applied Anthropology (SFAA) has grown at a much slower rate than the other major specialized anthropological organizations. Using the doubling of membership rate as a measurement of growth, Rogge concludes that the SFAA is growing at half the rate of the rest of the profession. Thus, in relative terms, applied anthropology has been decreasing in social mass ever since the war.

**Applied Anthropology in the Curriculum**

The failure of applied anthropology to grow within the profession can also be traced to the failure of applied anthropologists to establish applied training programs. As described above, in the post-war period only two major applied programs were established, i.e., at Cornell and Kentucky. Anthropologists have developed the view that applied courses directed toward preparing students for an applied
career have little or no place in the anthropological curriculum. Instead, such courses should serve the purpose of supporting the general curriculum, especially at the undergraduate level. These views are now undergoing serious re-evaluation (Angrosino and Kushner 1978). However, throughout the professional period, applied anthropology has taken a back seat in the development of anthropological curriculum.

The Educational Resources in Anthropology Project (Mandelbaum, Lasker and Albert 1963a, 1963b) provides a clue to how academic anthropologists have viewed the role of applied anthropology in the curriculum. Rapoport (1963) observes that applied anthropology courses tend to be small in size and mainly attract students who are interested in professional courses in fields that might be expected to apply anthropology. These are students who do not plan to go on in anthropology, but rather plan to pursue graduate work in a professional school, i.e., law, administration, etc. In this context, the applied course is a service course in an undergraduate curriculum. Thompson (1963:359-360) shares this view of an undergraduate course specializing in applied anthropology. However, she optimistically states,

If applied anthropology is indeed the key to discipline, some believe it to be, this specialization will continue to attract students — even quite superior ones — interested in the subject itself, the way of life it necessitates, and the creative challenge it affords. As its practitioners gradually develop and formulate their theoretical approaches, methods, and findings, and demonstrate their predictive skills, applied anthropology cannot help but gain in stature in the profession, as well as outside it.

Little (1963:365) takes a somewhat different position when he states,

... the moral for teaching of applied anthropology is clear; it is not to confuse anthropological aims with those of other
vocations and occupations. It may be useful and relevant, for the anthropological students proposing subsequently to work in the field of public health, town planning or community development to gain what knowledge he can of such matters during his courses. However, it is not part of a department of anthropology's responsibility to supply this information or to teach social welfare. On the whole, since the student's time is limited, it will be more profitably spent in learning to become a good anthropologist.

Adams (1963) feels applied material should be used liberally in undergraduate courses but that specific undergraduate courses in the application of anthropology "... are positively undesirable" (Adams 1963:393).

The emphasis in all of these papers is on the value of applied anthropology in undergraduate training. They do not address the issue of graduate preparation for an applied career. Assuming these reports are representative of the profession's orientation toward training in applied anthropology, it is not surprising that students preparing for a career in anthropology reject or at least do not consider an applied career. Laura Thompson (1965:278), recalling a conversation with Clyde Kluckhohn, writes,

Shortly before his death, Clyde Kluckhohn told me that he found it virtually impossible to interest his best students in a career in applied anthropology. They simply did not regard this sub-division of the discipline as one worthy of their attention. Several very good government jobs went begging, he said, because these students could not be persuaded to accept them.

The Academic Applied Anthropologists

During the post-war period a new type of applied anthropologist developed within the profession -- the academic applied anthropologist. As the career-oriented applied anthropologists drifted away
from the profession, their position within the profession was filled by this new breed. The academic applied anthropologist combines the role of the applied anthropologist with that of the traditional academic role. These applied anthropologists teach courses with anthropological content to students preparing for other professional careers, e.g., law, medicine, education, etc. At the same time they conduct research into problems related to these areas. By the mid-1960's this group had assembled sufficient strength to take control of the SFAA. In the process, the SFAA changed its focus and has taken on many of the characteristics of an academic organization (Spicer 1976). This change has had two effects. On the positive side, it has brought a new credibility to the SFAA as a representative of the profession and has led to the full recognition of applied anthropology as a major branch of professional anthropology. This was marked by the assignment of two seats on the AAA Executive Board to representatives of applied anthropology. On the negative side, this has tended to further isolate the active non-academic applied anthropologists.

The SFAA has not organized itself in a way that fosters non-academic participation in association affairs. For example, the annual meetings are scheduled in a manner that favors academic anthropologists and does not take into account the special needs of non-academic anthropologists. Also the journal no longer reflects the special needs of the non-academic anthropologist for information about techniques and procedures of application. It appears today that the professional anthropologist who claims to be an applied anthropologist is indistinguishable from the traditional anthropologist.
In the drive to achieve recognition within the anthropological profession, academic applied anthropologists have effectively surrendered their identity as anthropological engineers. When the employment crisis in anthropology hit in the early 1970's, the SFAA was initially unprepared to deal with it. Instead, leadership for finding solutions to the problem had to be assumed by the AAA. It has only been in the last few years that the SFAA has begun to work out a program to deal with the many issues the crisis poses for the profession.

**Summary**

Applied anthropology has represented a bastardized role for the professional anthropologist who sees his professional role as one of the academic scientist. Kroeber (1959:291) reflects this view when he states,

> I consider the development of fundamental science, whether human relations, or of anything else, a different matter from the solution of pragmatic problems. The practical problems can no doubt be solved more wisely if there exists genuine science to draw on. But the science will not develop better or faster for having its pursuit mixed with problems of application.

The development of applied anthropology in the United States has been made possible by the development of acculturation theory within traditional anthropology and the extreme situation the profession and the nation faced in World War II. Yet, once the nation returned to a peace time situation, the profession returned to the pursuit of its traditional interests and failed to recognize the development of applied anthropology as a qualitative expansion of the professional role. By qualitative, I mean that the profession had expanded its interests into a new domain of activity that had the potential of furthering the
growth of the profession. The applied dimension provides room for
growth in social mass by creating new statuses and new avenues of pres­
tige development within the profession. The pressures of the post-war
situation to meet the traditional needs of the profession, however,
appear to have blinded the professional anthropologists to this oppor­
tunity. In the process of adjusting to the post-war situation the
momentum for the applied role's development was lost. In addition, the
concept of applied anthropology has undergone change to where today it
is considered a sub-discipline of traditional anthropology and is rep­
resented as such in the professional organization, the AAA.

What professional anthropologists have failed to see is that
applied anthropology is not a sub-discipline; it represents an elabo­
ration of the role anthropologists can play in the world. This is the
role of the scientific social engineer. This is the role to be played
by anthropologists from all four major sub-disciplines, i.e., cultural,
linguistic, physical and archaeological anthropology. Applied anthro­
pology is a branch of anthropology just as scientific/academic anthro­
pology is a branch of the profession. Each serves a different social
function in relationship to the profession and to the community. The
function of applied anthropology within the profession is not to con­
tribute to the development of anthropological theory, but to validate
existing theory by showing that such theory does describe and predict
general principles of sociocultural behavior. Applied anthropology
contributes to the community at large by demonstrating that the anthro­
pological perspective has a positive social value and has a unique
approach to societal problems that could not be obtained without
traditional anthropological research and training. If this branch of anthropology is to be developed to its full potential it must develop within the anthropological profession. But to do so the anthropological profession will have to undergo changes in its present structure. The changes must take into account the special needs faced by anthropologists in the non-academic environment. This is the issue I will be addressing in the next two chapters.
CHAPTER 7

THE CONTEXT OF THE SOCIAL ENGINEER:
THE PROGRAM EVALUATION CASE

Evaluative research is usually regarded as a distinct specialty within social programming. In the customary organizational format, there is a clear division of labor between those concerned with the substance of programs and the researchers asked to investigate the effects of programs. The evaluative role, typically, is not simply specialized but subordinate (Caro 1974:352).

One role anthropologists, and other social scientists, are often called upon to play as social engineers is program evaluator. The context of program evaluation is qualitatively different from the context of academic research. The role requirements for performing effectively in this context are different. In order to understand the problems facing the applied anthropologist, and the applied social scientist in general, it is necessary to understand the nature of the applied context. From this analysis, we will see the pressures facing the scientific social engineer as he tries to accommodate the values of his scientific profession with the values of his employer or client.

The sociocultural context of program evaluation can be described in terms of five dimensions. Where the evaluator finds himself on each of these, will determine the role he can expect to play in bringing about sociocultural change. These dimensions are: (1) the political context of the program and evaluation activity, i.e., the environment; (2) the relationship between the evaluator, patron of the program and the program operator, i.e., the spatial dimension; (3) the
degree of substantive knowledge he requires versus the level of technical skill he requires in the particular social action area, i.e., the substantive dimension; (4) the point in the program developmental process when evaluative activity should be initiated, i.e., the temporal dimension; and (5) the appropriate and ideal methods for conducting the evaluation research and how these are to be determined, i.e., the methodological dimension. In the model that follows, I will discuss each of these domains.

The Environment

Social programs are the products of the modern bureaucratic welfare state. The program, and therefore the program evaluator, operate in a bureaucratic environment. First defined by Max Weber (1947), Pfiffner and Presteus (1967:44-46) define bureaucracy as being composed of the following elements:

1. **Search for Rationality** . . . the systematic organization of tasks and individuals into a pattern which can effectively attain the ends of the group effort.

2. **Hierarchy** . . . the public bureaucracy is commonly defined as a closed hierarchial system in which, presumably each person has a superior who directs his own efforts.

3. **Technical Specialization** . . . entry and advancement are based upon technical preparation and experience in a certain type of work.

4. **Framework of Law** . . . the "rule of law" requires that administration actions affecting individual rights reflect precedent and legal sanction rather than arbitrary personal discretion . . . the official must be able to justify every action by law or by administrative rules and order created under statute law.

5. **A Value System** . . . Administrators are conditioned . . . by cultural values and the dominant opinions of their colleagues . . . which include "loyalty" . . . "security" . . . "assured income" . . . "co-optation" . . . "the office."
Social structures organized on the bureaucratic principle may be described in terms of three basic structural features: sources of power, policy making bodies and policy instruments. Bureaucracies are structural forms that serve to regulate the flow of power within both the organization and society. The primary source of power in a society is the sovereign power of the group or the nation. This power is delegated to the many sub-units of the group or the nation by the group's or nation's principal policy makers. These policy makers have the right to delegate and rescind their powers to these smaller segments of the society. The powers are defined in a policy instrument, e.g., a constitution or charter. The instrument formally defines the powers of the group, the scope of these powers, and the procedures for executing these powers. When a policy making body delegates its power, it does so through a policy instrument which creates the power for a lesser policy making body. The instrument becomes the lesser body's charter and the source of its power. In return for the power delegated to it, the lesser body must account to the superordinate body for its stewardship of that power. The delegation process may continue down the organizational structure from the highest national or organizational level to the lowest functional level. The advantage of the bureaucratic principle is that power may be rationally delegated and accounted for through the policy instruments which bind the elements of the system together. The process is outlined schematically in Figure 6. The program evaluator helps to perform the accountability function in this system.
Figure 6. The bureaucratic process.
The Spatial Dimension

A social program is a sociocultural system made up of three principal actors: the patron, the operator and the client. The patron is the program's funding source and constitutes the program's primary policy making body. The patron sets the conditions under which funds are awarded to program operators. Usually this is done through a grant or contract which is the program's policy instrument. The operator as the recipient of the grant or contract is primarily responsible for the delivery of the program's services. The operator is generally a social or human services agency, a corporate body, which provides direct or indirect services to the client. The client is the ultimate beneficiary of the program.

The client occupies a unique position in the program system. The client plays three roles in the system: consumer, product, and constituent. As consumer, the client is the recipient of program activity. As product, the client is a symbol of the success of the program's technique. As constituent, the client represents a source of political support for both the operator and the patron.

The evaluator is also a member of the system; but, unlike the other members whose positions in the system are determined by their specific functional relationship to one another, he may enter the system at any point, as shown in Figure 7.

In the figure, the A and O symbols represent the evaluator's position relative to the type of relationship he has with his employer. The numbers (1, 2, or 3) represent the level in the system where he enters. Since evaluative research is a method for measuring program
Figure 7. The evaluator in the program system.
performance and a means for insuring accountability, normally it is
done by a superordinate body charged with oversight of a subordinate
body.

The evaluator who actually performs the technical aspects of
the evaluative research may be an employee of any one of the system
elements or contracted by that body to perform evaluative services.
As an employee, he may occupy positions A1, A2, or A3 in the system.
As an outsider, under contract, he may occupy positions O1, O2, or
O3 relative to the system. As an employee he is linked to the system
by an employee contract and performs a technical staff role similar to
that of the business manager or internal auditor. As an outsider, he
is linked to the system through a service contract and performs a con­
sulting role similar to that of an attorney or external auditor.

The evaluator is primarily responsible to the body that has
contracted for his services. Thus, he is limited in his ability to
question program activity by the level that that body occupies in the
program system. That is, he can only effectively evaluate those ac­
tivities over which the employer has control. At the highest levels,
in positions A1 or O1, he may question the basic operational premises
of the program, while in positions A3 or O3 he may only question the
effectiveness of specific procedures. As an insider, (A), he must also
balance his objectivity as a social engineer with his subjectivity as
one with a vested interest in the welfare of the organization. As an
outsider (O), he is somewhat freer to be objective about his employer's
performance. Yet, in either position, there are strong pressures to
take an advocate position in the interests of the employer if the
evaluator is asked to defend his findings in the employer's interest when these are presented to a higher authority.

The spatial dimension is a critical factor in the evaluation context which the evaluator must be aware of if he is to be effective. It sets limits on his freedom of action which are not found in the traditional academic research environment. For the social scientist/evaluator the spatial dimension of evaluation may be perplexing and a major source of role conflict.

The Substantive Dimension

While the spatial dimension relates to the evaluator's position in the program system, the substantive dimension directly relates the evaluator to the program's effort. This dimension is the one most often cited in the evaluation literature. By substantive dimension, I am referring here to the organizational aspect of the program to be evaluated and the substantive program knowledge the evaluator requires to effectively evaluate it. This dimension can also be conceptualized as a hierarchy. Like the spatial dimension, it has an organizational aspect, e.g., the program level, treatment level; but unlike the spatial dimension, this aspect determines the level of specialized knowledge the evaluator must have about the specific program area that the social action program is designed to attack. The degree of specialized knowledge required varies inversely with the organizational level within the program. Figure 8 is a schematic outline of this structure. As one moves from the program level down to the treatment level, the evaluator must have a greater sophistication about the theoretical, methodological and technical alternatives available to the program to
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<tr>
<th>LEVEL</th>
<th>PURPOSE</th>
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<tr>
<td>PROGRAM</td>
<td>A set of organized projects designed to achieve a goal and set of objectives.</td>
<td>An organization (e.g., alcohol treatment agency, and educational institution).</td>
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<tr>
<td>PROJECT</td>
<td>A set of activities designed to achieve a program objective.</td>
<td>An organizational component (e.g., out-patient program, a department of anthropology).</td>
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<tr>
<td>TREATMENT OR</td>
<td>An activity designed to achieve movement toward a program objective.</td>
<td>Practitioner or team of practitioners (e.g., an alcohol counselor, the teaching faculty).</td>
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<tr>
<td>PROCEDURE</td>
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Figure 8. Program levels.
accomplish its objectives on that level. This requirement places a premium on substantive knowledge and the evaluator's training in the substantive field of social action.

The substantive dimension is also the factor that contributes to the wide diversity one finds in the backgrounds of professional evaluators. On the program level, where goals and objective are broad and general the evaluator's training as a social scientist is most often found. The problems of designing a research approach that can measure these are similar to the problems the academic researcher faces in testing a theory. As the Hyman et al. (1962) study demonstrated, considerable skill is required to be able to operationalize these goals and objectives. On the other hand, at the treatment level, one frequently finds an evaluator with a clinical background. Here the goals and objectives are generally well defined and the knowledge the evaluator needs to effectively evaluate performance is based on the skills required to carry out a treatment procedure and knowledge of the alternatives available in different clinical situations. The substantive dimension is the area which tends to divide evaluators, and which acts to retard the development of their common professional interests.

As I will show below, this division is also based on the preferred methodologies of both the evaluator and the sponsor of the evaluation. Because of the differences in type and amount of substantive knowledge required in different evaluation contexts, evaluators tend to be drawn more to their colleagues in their respective academic or clinical disciplines than to their colleagues in the evaluative
field. This is shown in the organizational development, described earlier, that has taken place in the evaluative profession today.

The Temporal Dimension

"The basic purpose of evaluation of any government program is to permit policy makers to make better decisions" (Barth 1972:3). Evaluation, as stated earlier, is a part of the policy making process. The product of an evaluative study should be designed for use by policy makers and to assist them in determining the relative costs and benefits of future actions, monitor on-going activity, or measure the outcome or impact of past decisions. Because both the policy making process and the program are dynamic phenomena, there is continual need for up-to-date information to aid in decision making. In the evaluation context this need is represented by the temporal dimension. This dimension can be further divided, for analytical purposes, into two sub-dimensions: the program temporal dimension and the policy making temporal dimension.

The program temporal dimension is based on the phase of the program's development. Tripodi et al. (1971) point out that this is an important dimension that must be taken into account when planning an evaluational study. Others (Hatry et al. 1973; Cain and Hollister 1969; Weiss 1972a) have also noted the different phases in program development. No clear agreement has been reached by the various authors on the terminology to be applied to these phases. Therefore, I am proposing the following terminology for these phases in the natural history of a program: the pre-program phase, the program operational phase, and the post-program phase.
The policy making temporal dimension is based on the degree of commitment policy makers have to a course of action. These may be termed: the pre-commitment phase, the commitment phase, and the follow-up commitment phase. The particular phase of policy making will determine the type of information the policy makers seek from an evaluative study. This, in turn, determines what is to be expected of the evaluator in the way of a research product and recommendations. The temporal dimension is outlined in Figure 9.

The different evaluation phases are shown in the figure to be related to the phasing of both the program and the policy making process. These are: assessment evaluations, performance or monitoring evaluations, and impact or outcomes evaluations. The processes are described below.

The pre-program phase is the period before the program is put into operation and when policy makers are seeking information about the relative costs and benefits of committing the organization to a particular course of action. Evaluational studies carried out during this period have as their goal an objective appraisal of the relative value of a particular course of action and the alternative ways of carrying out that action. Such studies may be termed assessment evaluations. Typical examples of assessment type studies are prevalence surveys, environmental impact statements, and reliability tests of a treatment procedure. In some cases, it may involve a study of an existing program's past history to see if organizational support for that program would assist the organization in achieving its goals. Such evaluative studies are most appropriately conducted as part of the planning
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<td>Pre-program Phase (Planning, Program</td>
<td>Assessment Evaluation</td>
<td>Decision to commit to action</td>
</tr>
<tr>
<td>development Phase)</td>
<td></td>
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<td></td>
<td>Performance or Monitoring Evaluations</td>
<td>Decision to continue commitment</td>
</tr>
<tr>
<td>Program Operational Phase (Progress</td>
<td></td>
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<tr>
<td>Reporting, Program Management Phase)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-program Phase (Post-audit, Account-</td>
<td>Impact, Outcome, Follow-up Evaluations</td>
<td>Decision to follow-up the</td>
</tr>
<tr>
<td>ability for Program Stewardship)</td>
<td></td>
<td>commitment</td>
</tr>
</tbody>
</table>

Figure 9. The temporal dimension of program evaluation.
process and prior to the decision to commit organizational resources to action.

Performance evaluations are studies carried out while the program is in operation. The goal of these studies is to document or to monitor the program's performance on a periodic basis to insure that the program objectives are being met. Performance evaluations provide those charged with the responsibility for carrying out a policy with the information they require to adjust resources and/or activities to meet program objectives, and to judge whether they will continue their commitment to the program. These studies attempt to measure the effort being expended and the effect being derived. Financial statements, organizational analyses, progress reports, etc., are typical products of this type of evaluation study. Evaluations of this type are most appropriately linked with the overall management of the program and contribute to the policy maker's tactical planning and decision making.

Impact evaluations are studies carried out after the program has run its course, or after it has been in operation for some time. Impact evaluations provide policy makers with measurements of the effectiveness of the policy on the policy target, e.g., the number of new jobs created, accidents prevented, or alcoholics treated, etc., and to decide whether to follow-up on the commitment or to change policy. Impact studies may be very specific, e.g., documenting the validity of a treatment technique, or they may be very general, e.g., measuring how many people were treated. The Post-program Phase may be some arbitrary point in time after the program begins operation, e.g., an annual review, or the period after which the program has ceased.
operation, e.g., a follow-up study. In the Post-program Phase, the policy makers require information that will allow them to determine what impact their decision has had on the problem that the program was created to treat and to decide on any following commitments they will make in this area of activity.

Phasing may also be applied at the project level, e.g., Pre-project Phase, Project Operational Phase, and Post-project Phase, and at the treatment level, e.g., the Pre-treatment Phase (or the diagnostic phase), the Treatment Phase, and the Post-treatment Phase (or the follow-up phase). Each substantive level operates on its own timeline so that a program may be in the Operational Phase while the project may be in the Pre-project Phase and the treatment in a diagnostic phase. The evaluator must take these temporal factors into consideration when planning his research strategy. The temporal dimension also has an influence on the next dimension in the evaluative context, the methodological dimension. Just as the program and policy making processes are dynamic, so, too, is the evaluation process. Different types of information are required for each phase and the method the evaluator chooses to study the problem will affect the type of results he can present to policy makers. I will discuss this issue in the next section, but first there is one other element in the temporal dimension that deserves attention.

In addition to phasing the evaluation study within the policy making and program processes, is the question of the timeliness of the evaluation. Often decisions are locked into a larger decision making process. The process of rational decision making requires that
decisions at each level of the bureaucratic system be made in a timely fashion. Thus, policy makers may be forced to make decisions on the basis of very little knowledge of the potential impact of that decision. This is commonly called the "science of muddling through" (Braybrooke and Lindbloom 1970). For the evaluator to be effective, he must also be able to produce results before the policy maker makes his decision, otherwise the evaluator's effort is useless. Unlike the traditional academic research environment where the social scientist has a greater control over the timing of his work output, the evaluation context limits the time the social engineer may have to complete his assignment. This is another source of value conflict where the professional values of the social scientists to do a scientifically competent job are in conflict with the organization's need to have the job done by a specific deadline.

The Methodological Dimension -- A Matter of Strategy

The fifth dimension of the analytical framework being proposed here is the methodological dimension. There is considerable debate and discussion in the evaluation literature centering on methodological issues. The debate focuses on the question: which methodological approaches are most appropriate for doing programs evaluations (Hatry et al. 1973; Glaser and Backer 1973; Nutting, Shorr and Berg 1973; Weiss 1972a; Houston 1972; Zurcher 1970; Weiss, R. and Rein 1969; Hyman et al. 1962; among others). The differences in methodological preference are another source of division among evaluators. An analysis of the literature suggests that the methodological approaches used
by evaluators may be classified in terms of the evaluation goal and the form the research question takes. This classification can be used as a basis for developing a methodology typology. Figure 10 is a schematic outline of this typology. The domains of this typology are: (1) the goal or purpose of the evaluation; (2) the fundamental administrative question confronting the policy maker; and (3) the methodological focus appropriate to answering the question.

The professional evaluator must balance the conflicting demands generated by his/her desire as a scientist for theoretical and methodological purity, and his/her practitioner's recognition of the need for pragmatic and timely action. The typology proposed here is designed to assist the professional evaluator in his/her decision to arrive at an acceptable balance between these conflicting demands. Basic to any methodological decision, and the reliability of the evaluation results, is the existing state of knowledge about the phenomena being evaluated. The professional experience of evaluators can aid the policy maker by advising him of the relative state of the art in the policy area to be evaluated. Such advice can serve as the basis for negotiating the evaluation contract between the policy maker and the evaluator.

In the typology, the needs of the policy maker are seen in terms of the policy goal (Column #1). The state of knowledge (and evaluation art) in the area to be evaluated is seen as the policy question the evaluator must ask to accommodate the policy maker's need (Column #2). The policy question determines the method that is most appropriate (Column #3). Much of the methodological debate among evaluators takes place in this third domain.
<table>
<thead>
<tr>
<th>EVALUATION GOAL</th>
<th>POLICY QUESTION</th>
<th>METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To document the structural and behavioral units that affect the development of program</td>
<td>Has (is, will) the program achieved its organizational objectives?</td>
<td>Process or natural history approach</td>
</tr>
<tr>
<td>2. To document the magnitude of the program's impact on the problem</td>
<td>Has (is, will) the program achieved its stated quantitative objectives?</td>
<td>Socio-statistical approach</td>
</tr>
<tr>
<td>3. To document the causal relationship between treatment and outcome</td>
<td>Has (is, will) the program brought about the effect intended?</td>
<td>Experimental approach</td>
</tr>
<tr>
<td>4. To document the efficiency of the treatment process</td>
<td>Has (is, will) the program brought about the effect in an efficient manner?</td>
<td>Cost-benefit approach</td>
</tr>
</tbody>
</table>

Figure 10. Methodological process and typology.
The typological levels represent the levels of knowledge one has about the program. Level #1 focuses on the questions of the structure, function, and process of the program. Knowledge is directed toward answering such questions as: what does the program look like? What does it do? and, how does it do it? The results of the evaluative effort is a description of the program and its operation and a comparison of this description with either similar programs or established standards to determine the appropriateness of the structure, function and/or process as these relate to the policy objective.

Level #2 focuses on the question of the target group, the magnitude of the policy issues and the quality and quantity of change that the program is designed to affect or effect. Knowledge generated at this level is focused on answering the following kinds of questions. Who is the target group? How big is the problem? How much change has the program made in the size of the problem? What changes has the program made in the target group? The product of such evaluative studies is a description of target populations and the impact of the program on the problem evaluated against past, or baseline, measures that established standards or levels of acceptable dysfunction, and/or a comparison of the relative magnitudes of different policy priorities. Both Level #1 and #2 are concerned primarily with the evaluation of program effort.

Level #3 focuses on the question of effectiveness. Knowledge generated at this level is designed to answer such questions as: what is the causal relationship between the program's activity and the subject's change? Can the observed change be accounted for by the program's efforts? The product of such evaluative studies is a
measurement of the significance of a treatment procedure or organizational structure in bringing about a change in the undesired quality, and is evaluated against an untreated population, an established standard, and/or the proven effectiveness of other procedures.

Level #4 focuses on the generation of knowledge about the efficiency of the program. It is directed to answering the questions of the following type. What is the relative cost to benefit ratio of the program? How do the costs of this program compare with other program types? The product of such evaluative studies is a measurement of the significance of a given course of action compared with the choice of no action or some other alternative and is evaluated against a baseline, an established standard and/or the cost to benefit ratio of alternative programs.

The Evaluation Context as a Social Action System

The program evaluator whether trained as a social scientist, clinician or as an administrator, must adapt himself to the constraints these five dimensions of the evaluation context impose upon him if he is to be effective. Each places a different constraint on his freedom of action as a professional. And, because the professional identity of the evaluator is still in the process of formation, these dimensions also affect the way the professional identity is developing. Since my concern here is with the social scientist/engineer in particular, I will be describing these constraints from that perspective only.

The bureaucratic dimension presents the social engineer with a number of adjustment problems. First, the social structure of the
bureaucracy is quite different from the academic scientist's social structure. While there are similarities, the status structure of the bureaucracy makes a fairly sharp distinction between two types of positions: line and staff positions. The line position is in the direct line of the delegation of power. An individual occupying a line position is directly responsible to a higher authority for the execution of policy and is responsible for making decisions that will further that policy. The staff position is assigned to a line officer and the staff member is responsible for providing advice to the line officer. For the most part, the evaluator is in a staff position rather than in a line position in the organization. The relationship between line and staff may take different forms (Golembiewski 1967) ranging from the colleagueal form found in the academy and to very authoritarian forms. The social scientist's training tends to prepare him for the former but not for the latter. In the evaluation context, however, he must be prepared to work under any one of these forms. Conflicts, or personal dissatisfaction, can arise when he is unprepared for these other bureaucratic forms.

The spatial dimension is related to the bureaucratic dimension in that the evaluator's position in the structure is determined by the bureaucratic position of the organization and the program. The social scientist is trained to be an objective observer of human and social activity. During this training, he is taught to take one or more different research roles (Junker 1960). These are: the complete participant, participant as observer, observer as participant, and complete observer (Junker 1960:35-38). The ideal research role is complete
observer where the scientist is outside the system being studied and has the power to isolate and manipulate the variables under investigation. Social scientists, for the most part, do not conduct research that allows them to assume this role. Instead they attempt to occupy the roles of observer as participant or, failing that, participant as observer. The role least often assumed is the full participant role. Yet, this is precisely the role the evaluator assumes when he becomes an employee of the program, whereas as a consultant he may take a participant as observer role. Regardless of which role he assumes, his performance will be judged as if he were in a full participant role by those who have a vested interest in the program. It is assumed that he also has a vested interest in the program, and that his interests are the same as his sponsor's. Thus, if his sponsor is the client, his interests are assumed to be those of the client; if his sponsor is the operator, then his interests are assumed to be those of the operator; and if his sponsor is the patron, then his interests are assumed to be those of the patron. These are the realities of the bureaucratic structure and the political environment of programs. Regardless of his objectivity as a scientist, his performance will be judged in part by his spatial position in the program. If the evaluator is to establish his credibility as an objective observer, he requires the support of other evaluators who can testify to his objectivity and the validity of the methods and approaches he uses. It is this need for collegiate support that is now being recognized among evaluators and helping them to create a sense of professional identity.
The substantive dimension can have the effect of modifying the influence of the spatial dimension since the evaluator can claim and prove his objectivity by his expertise in the substantive areas of the program. As a trained social scientist, for example, he can point to his research record in the area of alcohol abuse, poverty, interracial affairs, etc. Further, he can call upon his social science peers to testify to his expertise. So too, can clinicians and administrators who take up the evaluator role. Since support is more easily forthcoming from colleagues on this dimension, it is not surprising then that one of the centers of evaluator organizational activity is in the program associations. In this context, the evaluator's expertise in the substantive matters of the program area can be identified and verified. Yet, it is also an area where his commitment to the program's goals and objectives may also be questioned. If the social scientist/engineer comes across too much like a scientist, that is, too skeptical and critical of the underlying assumptions of the program, his motives will be questioned. Yet, as a scientist and an expert in the substantive area, he may have every reason to be skeptical and critical. Evaluators have frequently found it necessary to organize their own supportive groups within the program association in order to counteract the pressures to conform totally to the association's and program's value system.

The temporal dimension poses other problems. The social sciences are not yet predictive sciences. The social scientist uses stochastic models rather than predictive models of human behavior. In his training he is taught to recognize the limitation of these models
and to present his findings in qualified terms, i.e., 'assuming ceteris paribus, "A" will follow "B" but we know that there is only an "x" probability of it occurring.' This makes assessment evaluation an uncertain exercise for the social scientist who is an evaluator. His colleagues in the social sciences are likely to look on such predictive studies as poor science, and yet, his non-scientist employer may accept the conclusions as scientific fact. This opens the evaluator up to the criticism of both groups when his predictions fall short of their expectations. Performance evaluations are more in line with accepted social science practice since they are generally descriptive studies of an ongoing process. But, here again, the evaluation context presents a set of circumstances different from the academic research setting. The performance study may be required six months into a program cycle so that the results can be used in the next year's planning, and yet the evaluator may be given only a month or two to produce his report. He is faced with a problem of projecting the program's annual performance on only a few months of program effort and he is faced with designing a research study that will produce results in a very short time. This opens him to criticism by his scientist colleagues of doing poor science, or "quick and dirty" science. Impact studies pose additional problems. These are done at the end of a project. If the project or program is disbanded, the key personnel who could provide important insight into the program's history may not be available. The program's record keeping may not be adequate to the task at hand. And finally, the evaluator may be asked to draw cause and effect relationships which the data can not substantiate. Longitudinal studies
are the most common method used to show possible causal links in social phenomena. Yet unless the evaluation program has been designed with this goal in mind, it may not be possible to reconstruct the history of the program, or even the history of a client in the program. As Hyman et al. (1962) observed such an evaluation has to be done over time, yet to do so means that a percentage of the program funds must be diverted from direct client service to the evaluative effort. This can be a source of political conflict within the program that the social scientist must be prepared to deal with as an evaluator.

The methodological dimension is a source of both strength and conflict. As a social scientist, or for that matter a clinician or administrator, the evaluator has been enculturated into the sub-culture of his academic, qua professional, discipline. This sub-culture has its own language, values, practices and world view. It is not surprising then that evaluators have also sought to organize within the professional associations of their disciplines. For the reasons cited above, they seek support from one another against the criticism of their more traditional colleagues. At the same time, the discipline's professional association provides an environment in which they are free to discuss in their own language, the problems and advances in their specialized field as social engineers.

The conflict comes from other evaluators and program sponsors. Since there is as yet no evaluator sub-culture, each discipline must compete with all the other disciplines represented in the evaluation context. Evaluators tend to view each evaluation question from their own disciplinary perspective. The results are that studies are
produced that, while on the surface one might expect them to be comparable, are not. Evaluators argue among themselves about the appropriate method for evaluation (Bernstein and Freeman 1975; Campbell 1969; Campbell and Stanley 1963; among others). This presents the program officials with a set of conflicting and sometimes contradictory claims and counter-claims about what evaluation is and is not. As a result a number of books have appeared recently which are designed to help the program official to decide between methods (Weiss 1972a; Tripodi et al. 1971; among others).

In addition, planners and administrators are also social engineers who obtained their academic training from various disciplines, in some cases in various social sciences. They tend to share the sub-culture of that discipline and feel more comfortable with evaluation proposals, designs, and reports that are written in the sub-cultural language of their disciplines. Thus, evaluators from different disciplinary backgrounds may be at a disadvantage if they are working with someone who does not share their background.

**Summary**

From this analysis, it can be concluded that the development of the program evaluator role and the creation of an evaluator profession is influenced by its unique context and social action field. The forces that have and are now shaping the role have yet to run their course. There appears to be an emergence of a professional identity among evaluators, especially those training in the social sciences, that will eventually lead to a new profession — that of the program evaluator.
The question remains, how will this role develop and how are the social science professions going to adjust to the need to prepare students for these roles? I will examine these questions in the next chapter and draw some conclusions as to how these changes will affect the future of American anthropology.
Our assumption that change will automatically take place if somebody points out a problem or a need is not tenable. ... telling somebody that there's a problem is not enough. A solution should be recommended along with it (Davis 1974:2,9).

I began this study with the thesis statement: the development of the scientific social engineer role is the logical outgrowth of the processes of professionalization and role elaboration taking place in the social sciences in 20th century American society. In the analysis that has just been presented I have shown how social engineering represents a general social role in which some human beings are charged with the responsibility for guiding the affairs of others of their species in a sociocultural context. The introduction of scientific methods and techniques into the way social engineers carry out their duties has been shown to be a fairly recent phenomenon which has been dependent upon the development of the social sciences in the last century. The development of the scientific social engineer role in recent years has been shown to be a logical development in both the professionalization of the social sciences and the elaboration in the role of the social sciences in American society.

In this chapter, I will show that the arguments presented for the American anthropologist's role in this development is shared with other social science disciplines. Then I will make a number of
suggestions of the ways the anthropological profession can adjust its professional organization, i.e., institutional structure, to accommodate to the elaboration of the anthropologist's role from scientist to teacher and social engineer.

The Social Sciences and the Social Engineer

Social engineering is as old as civilization. Throughout the history of social engineering, philosophical and pragmatic principles have served as the basis of decision making. Tradition, precedent and logic have been and continue to be guiding principles in the training of social engineers. Today, we are seeing the merger of social science with social engineering. Just as physical engineering benefited from its merger with the physical sciences in the last century, and biological engineering, i.e., plant and animal breeding, medicine, etc., has benefited from its merger with the biological and chemical sciences, social engineering is benefiting from its merger with the social sciences. In the chapter reviewing the development of program evaluation, I showed how the social sciences have expanded the range of social situation that can be managed and evaluated using the tools of the social sciences.

Applications for the tools of psychology and economics were discovered early in the 20th century. The Freudian and similar movements in psychology brought a change in the concept of mental illness. The psycho-analytic schools brought about a major revolution in the counseling field. The scientific principles of psychology have brought about a new way of conceptualizing and treating the various
forms of mental illness that were formerly the domain of religious preachers. The application of psychological principles has since been extended to the management of a broad range of normal human situations. Educational psychology, for example, has developed methods and techniques for assessing intelligence and aptitude that are applied to the problems facing the educator. Psychologists serve as consultants to educators, work on the staff of educational institutions where they design instruments for testing students or as technicians administering standardized diagnostic tests, and they train educators in the psychological theories, methods and techniques that can be used, or called upon, by the educators to help in the classroom. In industry, the psychologist or person with intensive psychology training experience occupy key roles in personnel departments. The rapid expansion of psychology into these and other fields, e.g., criminal justice, social work, advertising, and marketing, etc., has led to a growth in both academic and non-academic psychology. In 1976, Paul J. Woods reported that psychology is facing a crisis similar to that facing anthropology when he states,

We on the Education and Training Board of the American Psychological Association became aware of a startling fact: there are now more people in graduate school studying to become psychologists than there are psychologists in the APA! (Woods 1976:1).

J. Russell Nazzaro (1976:Foreword), Educational Affairs Officer for the American Psychological Association (APA) observes:

American graduate schools are currently producing about 3,000 doctorates and 5,000 Master's in psychology each year.
The APA initiated a study to explore the employment market for these future professionals (Woods 1976). The study is revealing in two ways. It shows that the psychological professions recognize a broad range of non-academic roles for the professional psychologist. Second, it shows how extensively the psychological sciences have diffused into the social engineering field. The effectiveness of this diffusion has implications for anthropology. Proposals for expanding non-academic anthropology include most of the areas already colonized by psychologists.

The effect of this diffusion on the psychological profession has been to increase the attractiveness of the discipline to students because it provides a wide range of career options. It has stimulated research and developed a constituency to sponsor such research in a wide variety of problem areas. Pure research has benefited from this. A research and development role has been created to design, test and evaluate new methods and instrumentation unifying theory and practice. It has led to the formation of many sub-disciplinary organizations within the profession thereby expanding the status and prestige structures making it possible for the profession to absorb a larger population. The professional social mass has undergone rapid and diverse growth and yet the APA has adjusted to incorporate this mass and retain the basic unity of the field. In other areas, the APA has had a strong influence on other related disciplines (see APA: 1974 for a list of journals representative of this phenomenon).

Economics has had a similar growth. When American business demonstrated that it could not resolve the problems of the great
depression, economists gained esteem. Although they could not solve the problems, they at least demonstrated that their science could explain some of the reasons why the problems arose. As government's role in the economy has grown, the fortunes of economists have increased. Economists took roles in government as statisticians and began research to develop methods to measure and monitor the economy. In the chapter on the history of program evaluation, I showed how these efforts led to the GNP concept, and other indicators. As government has become more dependent on economic analysis and projections in its policy making, private industry has begun to look to economists to interpret these analyses and projections. As a result, the traditional schools for social engineers have increased the number of economists on the faculty and the amount of training in economics required of their students. The formation of the President's Council of Economic Advisors has elevated the role of this branch of the social sciences to the highest policy-making levels. Today, the economists ranks with the lawyer as the most influential social engineer.

Sociology has developed an engineering role at a slower pace. Social psychologists have been the most applied oriented sub-discipline. Riding the wake of psychologists, social psychologists have entered a number of the same fields. Opinion research surveys have proven to be a major market for these skills. Businesses and politicians have become major consumers of these services. The sampling techniques, questionnaire designs, and validity/reliability studies that this applied dimension has fostered, has had a profound impact on the profession. Pure research has been improved by the development of standardized
instruments that can be incorporated into more complex research designs. These techniques have been incorporated in such government data gathering as the Decennial Census, Health Surveys, etc. As a result a body of standardized scientifically collected data has been made available to both the social engineer and the pure scientist. The common data base facilitates the exchange between the pure scientist and the engineer. Data collected for engineering purposes can become a basis for theory testing. Theories developed from these data can be used to design and test programs. The impact can be seen in such studies as the Coleman (1966) report which resulted in a major change in federal education policy.

Each of these social sciences is contributing to the development of a scientific social engineering. In addition to the roles that social scientists play in social policy formation, they are increasing their influence on the content of the training that traditional social engineers receive. Public and business administration programs, guidance and counseling programs, medical and law schools are requiring increasing amounts of social science training either as a prerequisite for admission to their graduate programs or as an integral part of that training. These changes have come about because the social sciences have professionalized, and in the process they have undergone professional elaboration. In the process of elaboration there has evolved an applied role which transfers their scientific knowledge to the community. The improved quality in social engineering practices that this transfer makes possible, has increased the demand for more scientific input into policy making. The result is the
development of a social technology. The role of social scientist is expanding to meet the demands for more technology. Today, the social scientist may pursue his traditional academic scientist role or he may fill a number of roles in the process of converting the findings of his science into a product that can be used by the community at large. American anthropology is today undergoing this elaboration process and faces the problems caused by it.

The Anthropological Profession and the Social Engineer

The way the anthropological profession responds to the development of the new roles society makes available to professionally trained anthropologists will radically influence the future of the profession and its role in American society. In this section I will discuss the issues facing the profession at this critical period in its development. I will discuss these issues in terms of the major variables outlined at the beginning of this study: Social Mass, Institutional Structure, and Unevenness of Scale.

Social Mass

The professional social mass, as defined, is made up of the population, the status and prestige structures. In order to manage this variable, the profession as a whole, and its leadership in particular, will have to develop a strategy that will effectively balance the effects of each of these elements as they contribute to the definition of the social mass.
Population. The current employment crisis is perceived by some as a problem of finding career openings for the new Ph.D. anthropologist. Applied careers are proposed as a solution. To exploit this possibility anthropologists will have to compete with others for the available positions. At this point, academic anthropologists will find themselves in competition with another type of anthropologist who has appeared since World War II. This is the career applied anthropologist described earlier in Chapter 6.

The growth of applied anthropology has been retarded by the absence of a base in the academy to recruit and train new practitioners. As a result it appears that students with an applied interest drop out of graduate school to pursue their careers outside the profession. There is circumstantial evidence to support this hypothesis. First, the growth curve for M.A. degrees in anthropology (Fig. 5, p. 113) follows the growth curve of the B.A. degrees more closely than it does the Ph.D. curve. Second, the number of M.A. degrees awarded has been increasing at a faster rate than the Ph.D.'s.

Within the profession, the M.A. degree holds an ambiguous position in the status and prestige structures. It signifies only partial movement toward full professional status and, except in times of crisis such as the 1960's, the M.A. level anthropologist is granted only para-professional status. M.A. archaeologists, on the other hand, have been the most successful in carving a niche for themselves within the traditional professional structure where they serve as field archaeologists. Their M.A. training prepares them to conduct area reconnaissance, site surveys, and direct the day-to-day operations of a dig.
This frees the Ph.D. archaeologist to plan the strategy of a project, conduct the analysis and interpret the results. The effect is that a scientist-technician division of labor has evolved in archaeology which is not found in the other anthropological sub-disciplines.

Outside the profession the M.A. degree is frequently recognized as a professional degree. The M.A. anthropologist shares this perception by potential employers. The professional status accorded by the M.A. in an applied career appears to be a strong incentive for those who drop out of the traditional training program. Disincentives for continuing graduate school are the prolonged years of deferred earnings, the lower salary scales of the academy, and relative difficulty of finding a position upon completion of professional training. For the student not highly motivated towards an academic career, the advantages of dropping out at the M.A. level outweigh the rewards of the Ph.D. A number of SOPA members have commented on the fact that the idea of an academic career figured very little in their educational planning. Their reasons for pursuing the M.A. were based on their love for the discipline and the feeling that the additional training would somehow prepare them to pursue the careers they had chosen for themselves.

A pattern appears to be developing where applied oriented anthropologists seek a double M.A. degree rather than continuing on for the Ph.D. Margaret Knight (personal communication 1976) argues that the M.A. in anthropology, combined with the Master of Business Administration, is a very cost/effective strategy. The total time spent in graduate training is generally shorter than that spent
gaining the Ph.D. in anthropology. The starting salaries in government and business are higher for such persons and the potential salary levels after a few years exceed what the Ph.D. anthropologist might expect at the height of his career.

Gilbert Kushner and Robert Wulff (personal communication 1977) report a similar situation with the students at the University of South Florida's applied anthropology program. The students are able to demonstrate their abilities to potential employers while working on their internship program, and this frequently leads to permanent employment. As a result, the students are not completing the M.A. degree because they find little value in writing an academic Master's thesis. A similar argument might be made for the "all but dissertation" Ph.D., the (ABD) graduate student. The ABD phenomenon was common in the 1960's when traditional employment opportunities were readily available. Today, the changing employment market forces anthropologists to seek non-academic employment and encourages the ABD strategy. To an employer, the Ph.D. is often seen as a more expensive and overqualified employee where the M.A. is not. Thus, the Ph.D. is not an advantage. Without a work record, he is at a greater disadvantage. The ABD can, however, legitimately present himself as an M.A., thereby gaining the entry level position and the experience it affords. Once one settles into a non-academic position with career potential, one becomes isolated from the stimulation of the anthropology department and the profession. It becomes very difficult to sustain the motivation to complete the dissertation, for both psychological and logistical reasons.
The M.A. and ABD applied anthropologists constitute a sizable population in the non-academic market. For years a significant number of potential professional anthropologists have dropped out of their graduate studies and taken positions beyond the academy. It is reasonable to assume that the positions they have taken are the same types that the current group of Ph.D. anthropologists might be qualified for and seeking. Based on Stebbens' (1972) study and my experience with SOFA, it may be assumed that many in this group still feel a strong allegiance to their discipline. At the same time some harbor a resentment against the profession which does not recognize them as legitimate members. The problem facing the profession then is how to deal with this group, many of whom, after years in this environment, are in a position to influence the decisions of employers. Do we invite them into the profession, or attempt to coopt their territory and drive them further away?

The positions available for anthropologists are also positions sociologists, political scientists, psychologists, and other social scientists are qualified to hold. As a group, anthropologists represent a small proportion of the social scientist population. If anthropologists are to compete effectively with those of other disciplines, they need to increase the anthropologist population. One way to do this is to recognize the career of applied anthropologist in the definition of professional anthropologist. This is the fastest way to increase the population -- simply coopt this group. At the same time it establishes the anthropologist's claim on certain types of applied occupations.
Status Structure. Related to the above, is the way the professional status system is currently structured. Since the 1946 reorganization, the non-academic anthropologist has held very little status in the profession. Also, the M.A. academic anthropologist has been a low status position. The M.A. non-academic has virtually no status within the profession. In order to incorporate these people into the population, the status system will require changes. The voting member status change in the AAA provides one avenue for doing this. But in order to attract this group, a major outreach effort is needed.

A decision is also needed on the question of who will be encouraged to join the profession. Figure 11 is a schematic description of the population of anthropologically trained groups. By engineer in the figure I mean one who applies the theories of anthropology to design solutions to practical problems. The scientist is the one who seeks new knowledge. The technician is one who uses the techniques of the discipline to extract and refine information required by others. The teacher is the one who is responsible for passing on the profession's knowledge and skills to the next generation and the beliefs of the discipline to the public.

The B.A. degree and M.A. degree must be considered in the decision-making process. The production of B.A. anthropologists represents 80% of the total degree production of anthropology departments. Some of these go on in anthropology, while others go on to train for other professions. Some remain in the field in technical roles that can contribute to the profession. The M.A.'s constitute approximately
Figure 11. Professional roles and levels of anthropological training.
15% of the production and are even more likely to take technical roles and, in some cases, engineering roles. Also, if more applied M.A. training programs are established and professional status is afforded their graduates, it will be difficult to justify excluding from the profession those who are doing the same job but have attained their positions without the profession's help.

The Prestige Structure. Currently the prestige structure is tied to the academic structure. Non-academic based anthropologists are essentially excluded from this structure. A parallel prestige structure is needed that awards prestige on the basis of accomplishment in the applied domain. A first step, already taken in this direction, is the creation of two positions on the AAA Executive Board for applied anthropologists. While this is an important first step, it simply repeats the errors of the past. The assumption is that applied anthropology is a sub-discipline. The point is that the applied role is a distinct variation on the anthropologist role. There are applied archaeologists, applied linguists and applied physical anthropologists, as well as applied cultural/social anthropologists. A more appropriate allocation of prestige would be to establish one academic and one applied position for each of the disciplines and then use the two seats now assigned to applied anthropology for one academic and one applied at large positions. This would be a more equitable representation of interests. The present structure puts the applied interest at a distinct disadvantage.

Archaeologists have recognized the distinction between the two interests. The Society for American Archaeology has helped to form
the Society of Professional Archaeologists. SOPArch, made up of applied archaeologists, provides a forum and organizational presence to deal with the issues of contract archaeology and frees the SAA from this responsibility.

These are the issues the profession must address in order to manage the social mass. The decisions that are made will have a profound effect on the future structure of the profession. Yet the key to solving the crisis of the 1970's is defining the social mass. In terms of the professionalization model this is the next step in the process -- gaining legal sanction to police the membership of the profession. At the moment the anthropological profession has little control over its members as the ethics cases described earlier demonstrate.

Institutional Structure

The profession's institutions are strongly tied to the academic status and prestige structure. These have served anthropology well. Yet today some of these institutions inhibit the growth of the profession.

Traditions. One tradition in particular -- the focus on the scientist's role to the exclusion of all other roles as the primary role of the anthropologist -- is detrimental to the profession's interests. Adherence to this role is currently required for advancement in the profession and it is toward this role that all professional training is directed. During the pre-professional and professional periods this was a crucial factor in the development of the profession. Training directed toward producing a scientist was also important when
anthropologists were expected to go out into the field alone to gather data, analyze and interpret it themselves. But today these conditions no longer pertain to the professional situation. This is not to say that anthropologists need no longer be scientists, but rather the scientist role no longer needs to be the only role they need to train for.

Based on the analysis of the student population, 80% of all degrees awarded are B.A.'s. D'Andrade et al. (1975) project that the number of graduate programs awarding Ph.D.'s will level off at 95 programs. Today there are approximately 253 college level anthropology departments. Thus, 33% of the departments are producing 100% of the Ph.D. professionals. The remaining 66% are responsible for producing the majority of B.A.'s and M.A.'s in anthropology. The faculties of these schools are primarily responsible for teaching anthropology. Not included in these figures are the hundreds of anthropologists now teaching in the nation's junior college systems. At this level, the teaching loads are heavier than those at the college and university level. There is less time available for research. In addition, research plays a much less important role in earning status and prestige in the junior college. Finally, the junior college is not a strong institutional base from which to seek basic research support. Generally such institutions do not have the research support facilities to make them competitive with colleges and universities.

As an increasing proportion of the Ph.D. anthropologists spend more of their time in the teaching role, it will become increasingly necessary to build a component into professional training that
addresses the issue of preparing good teachers. Recent court rulings that have extended the student's right to sue for grades, place the college and university professor in a new kind of professional jeopardy. Within higher education, student evaluations of faculty performance are gaining greater importance in promotion and tenure decisions. A glance at the "Positions Available" section of the AAA Newsletter, for example, reveals that these evaluations are also becoming important in hiring decisions. At the same time the career patterns for university and college faculties are undergoing radical change. Tenure is not awarded as easily as in the 1960's. Most professional academic anthropologists can anticipate changing their institutional affiliation a number of times in their careers before they are awarded tenure. In this type of employment market, teaching records will become a more important factor in determining one's success in changing jobs. Training in effective teaching techniques appears to be a needed addition to the professional training curriculum for anthropologists. The academic anthropologist, today, is more a teacher than he is a scientist.

The scientist role has undergone substantial change since the days of Boas. Research problems have become more complex; the anthropologist is frequently part of a multi-disciplinary research team; and the federal government has replaced the private foundation as the major sponsor of research. In the past, the anthropologist went into the field alone to gather data for a project he designed and would later analyze and publish. The anthropologist was an anthropological generalist. As a generalist, he was expected to perform all aspects of the scientist role from theory construction to data recording. As
long as there were major areas of the world still poorly documented and the general theoretical framework was underdeveloped, this role was important for the development of the discipline. Today this situation has changed radically because of the success of past generations in carrying out their charge.

The body of knowledge we have about human diversity and the complexities of the elements that make up this diversity have led to increasing specialization. This is reflected in changes in the graduate programs. The traditional graduate programs are designed to train the graduate student in the four fields of anthropology. That is, the goal is to train the student in the unity of the discipline. Today, this tradition is giving way to programs that require specialization early in the student's program of study. In these programs the responsibility for presenting the unity of the discipline falls to the undergraduate program. Such an approach attempts to balance the demands for training the student in the traditions of the profession, and the need to give the student an intensive experience in the specialty he has chosen as a career interest. The result is a specialist.

While this does not negate the scientist role, it has an impact on the role the anthropologist plays in research.

The problems anthropologists study are more complex today. These require more elaborate research designs, frequently requiring a team effort. For example, archaeologists no longer dig the entire site (unless to salvage it from impending destruction). The problems they are addressing do not require such strategies, and today it is recognized that archaeological sites constitute a non-renewal resource
that must be managed. The archaeologist's field crew and laboratory crew are a multi-disciplinary team including such specialists as paleontologists, geologists, cartographers, etc. In this context, the archaeologist may play two roles. First, he may be a technical specialist in some aspect of the archaeological phase of the project. Second, he may oversee and manage the research project. In the former role, it is his technical skill that is most important to the success of the project. In the latter role, it is his administrative skill that is most important to the success of the project. Professional training curricula that emphasize the traditional scientist role fail to recognize the division of labor that has evolved in anthropological research. There is a need to recognize the change and alter training programs accordingly.

Anthropologists frequently find themselves working as part of multi-disciplinary teams in both pure and applied projects. The goal of such projects is to provide answers to questions generated by other disciplines. The anthropologist is expected to contribute to these disciplines. This requires increased specialization where the anthropologist actually wears two hats, e.g., legal anthropology, medical anthropology, nutritional anthropology, etc. The anthropologist who engages in this type of research must learn the basic principles of these other disciplines. This may require acquiring different scientific techniques.

Federal sponsorship of research has replaced the private foundation as the major source of research funds. With federal support, has come a greater demand for management skills. Private foundations,
in the past, have generally been liberal in the requirements they place on the principal investigator. Federal support requires compliance to a wide range of rules and regulations that have no direct bearing on the scientific nature of the study, but do have legal significance. The principal investigator must be aware of these restrictions on his freedom of action. This has brought about other changes as well. Most research support is now granted to institutions instead of to individual researchers. Thus, in addition to federal requirements, the anthropologist must conform to other institutional policies as well. Anyone who has conducted research in a university setting will recognize the administrative problems institutional rules can create for the scientific phase of the project. The principal investigator, i.e., the scientist, must also become an expert in administrative procedures.

Changing patterns in federal funding introduce another complexity for the scientist. Where in the past the scientist might be expected to pursue a particular line of investigation throughout his lifetime, today he must be sensitive to the sponsoring agencies' shifting interests. This requires the development of grantmanship skills. Thus, the scientist role, alone, has become more complex. Training should reflect this.

As the program evaluator case presented in this study shows, the applied or engineering role is complex. Special training is required to prepare a student for this career. Unlike the scientist role, which is only one element of the social engineer role, the social or anthropological engineer requires training as a generalist. The skills he requires are the ability to diagnose situations, design
solutions to practical problems, to implement programs, and to evaluate
the effectiveness of the solutions.

First, the anthropological engineer requires training in social
science theory. Theory is required to develop the diagnostic skills.
Theory provides the basis for evaluating the situation. While he must
keep up with most theoretical developments in the field, theory which
has stood up to scientific evaluation is the most valuable.

Second, the engineer must be knowledgeable in the anthropologi­
cal literature. Anthropology is unique among the social sciences in
that anthropologists have assembled the largest body of documentary
material of human experience under different environmental conditions.
The ethnographic record, including the archaeological record, repre­
sents a vast source of data about natural experiments. This record is
analogous to the resources of the law library which permit the attorney
to prepare the best case for his client from the case material stored
there. The engineer's theoretical training helps him to define the
client's problem, the record provides a basis for finding analogous
problems and solutions to these problems.

Finally, the engineer must have at his disposal a wide range of
techniques that can be applied to the problem. He must be a methodo­
logical generalist. The applied situation places time and resource
constraints on the engineer that are qualitatively different from those
faced by the basic scientist. He is more apt to work under a contract
rather than a grant and therefore, he is more restricted in his freedom
of action once the contract has been awarded. Professional training of
the anthropological engineer must take these factors into consideration.
The tradition that has served to elevate anthropology to its status as a social science, today is acting to retard the further growth of the profession. New roles, in addition to the scientist role, are needed and traditions developed for these. Two of these roles are the social engineer role and the teacher role. Responsibility for developing these roles rests with the anthropological profession.

**Structural Inertia.** The professionalization of anthropology is closely linked with the development of American higher education. The university has long provided the anthropologist with a base from which to develop his discipline and profession. The professional organizations that serve to further and protect the profession's status have developed through their symbiotic relationships with the academy. However, this has also created an inertia that is retarding the profession's growth.

In the analysis at the beginning of this study, I showed how the profession developed both in response to internal pressures and in response to environmental pressures. The effect of World War II was to create a hiatus in the development of scientific anthropology. The hiatus created an environment favorable to the formation of an engineering role for anthropologists. After the war, traditional interests regained control. The need to supply departments with professional anthropologists encouraged a set of processes which restricted the development of the engineering sector. In time this caused the profession to lose many potential recruits. In addition, it has cut the profession off from the very resources it now finds are needed to help solve the crisis of the 1970's.
The effects of structural inertia are seen in Kluckhohn's statement cited earlier (p. 140). Goodenough (1962) observed the growing demand for behavioral scientists in government. He concluded that the implications of this for the profession were positive. He states,

Rather than being diverted from the paths of "pure" science, we will be stimulated to take the next necessary steps toward formalizing our methods, broadening the scope of what we know, and building toward an empirically based general theory of socially learned, human behavior (Goodenough 1962:176).

Yet these roles have largely gone unfilled by professional anthropologists. As a result the profession has failed to build the constituency in government that might have been called upon today to help resolve the crisis. Instead, we find the AAA today trying to build the linkages that once were available.

Structural inertia has affected the Society for Applied Anthropology, which might have been expected to represent the interests of the anthropological engineer. Begun by a group of social and cultural anthropologists, the SFAA did not aggressively attempt to recruit archaeological, physical, or linguistic anthropologists. By the 1960's, the academic applied anthropologists had seized control of the organizational apparatus. As a result the Society and its journal took on an academic character. Meanwhile, the Society was also falling behind the other associations in recruiting new members. When signs of the impending crisis began to appear, the Society was slow to respond. After the AAA began to address the problem, the SFAA became involved.
The SFAA has begun to respond to the crisis by undertaking the following actions: (1) conducting a survey of its membership to assess the skills and training required or found to be helpful in non-academic jobs; (2) sponsoring two new sections in *Human Organization* oriented toward the non-academic professional; (3) formed a special committee to look into accrediting applied anthropologists; and (4) sponsoring the creation of a new journal, *Practicing Anthropology*. Yet to date, the SFAA has failed to rally the non-academic anthropologist. Structural inertia is an important factor in this failure.

Recently, the SFAA began a policy of holding some of its annual meetings overseas, i.e., Holland and Mexico. The purpose of these meetings is to improve contact between American and foreign anthropologists. These meetings, however, essentially prohibit the non-academic applied anthropologists from participation. The applied anthropologists employed in state and local agencies is limited in terms of the types of travel and conferences they can go to. Travel is generally restricted to statewide conferences, and national meetings are often considered a special and major event. International conference travel is expensive and often prohibited under the provisions of the grants and contracts such employers administer. Thus, the cost of such travel falls to the individual. Conferences which cannot be justified in terms of staff improvement and/or public relations for the agency are not generally supported by the agency. Thus, the applied anthropologist must take time off without pay, or use vacation time to attend such events. Unlike his academic colleague, the applied anthropologist works in an environment with more restrictive vacation policies.
Vacations are limited from two weeks to one month a year. This adds further to costs he must incur to attend such meetings, e.g., choosing between professional or family responsibilities. Finally, skill improvement is more important than reading a professional paper, yet the academic format of SFAA tends to ignore this professional need.

The AAA has begun to respond to the non-academic's needs. Recent changes in the format of the annual meetings include scheduling of special events. At the 1977 annual meeting in Houston, for example, there were special sessions on the technical aspects of publishing a book and a session on the new copyright law and its potential impact on authors and teachers. Sessions such as these address the immediate practical needs of those in attendance. The AAA has also sought to encourage the development of the non-academic professional through sponsorship of the Anthropological Research Institute and the moral support given to such groups as SOPA, SOPArch, and the Washington Association of Professional Anthropologists. Support of local level organizations and specialized organizations is an important step in meeting the needs of the applied anthropologist. Many of the issues that concern the practicing applied anthropologist are local issues; or, if they are national issues, they are fairly specific such as evaluation standards, planning legislation or national environmental policy. The purpose of such groups is to enhance and protect the practitioners' status in more highly specific environments. These special interests are diluted in the current national organizations. There is a further need for more special interest groups of applied organizations within anthropology at the national level.
At the local level, state or community, these organizations would help to reestablish the ties between applied anthropology and academic anthropology in the community. Applied anthropologists will benefit from such contact by having organizational support on issues of professional concern and from the added status they would gain from association with the academic anthropologist. Academic anthropologists would gain from the access to research situations and internship opportunities for students such contact would afford, as well as the use of applied anthropologists as resource persons in the classroom.

Both the AAA and SFAA have developed statements of professional ethics. These reflect, more than any other element, the structural inertia of the profession. First, the codes do not address the problems of the applied anthropologist. In fact they tend to place the applied role in question vis-à-vis the profession. There has been a failure to recognize the importance such a code can have to the practicing anthropologist. There are times when one's responsibilities to the employer come into conflict with one's professional responsibilities. If the AAA or SFAA had a Code of Ethics that reflected the realistic expectations of applied professional responsibility, the individual applied professional would have greater leverage in representing professional concerns to an employer. As it stands now, one must bluff when it comes to standing up for professional concerns. Rather than a code of ethics that represents only the academic anthropologist, the code should reflect applied concerns as well.

Second, the associations have no way of enforcing their codes. Given the values of academic freedom and scientific freedom of inquiry,
it is very unlikely that an anthropologist with an earned Ph.D. will be expelled from the profession. Thus, the development of specialized applied organizations bound by a professional Code of Ethics is needed. Such organizations would have the power to expel members for unprofessional conduct. If these organizations are constituted under the AAA or SFAA umbrella, the parent organization could act as an appeal body in such cases.

The history of American anthropology is closely tied to the academy. The structural inertia that has developed from this association, as I have shown, impedes the development of a professional applied anthropologist. If the social mass of non-academic anthropology increases, the profession's current organization will undergo stresses such as those just described.

Unevenness of Scale

All of the issues raised so far in this chapter represent sources of unevenness of scale. Two other issues create unevenness or disequilibrium. These are the conflicts between the profession of training and the profession of occupation, and the parameters of the profession. Resolution of the first will have a strong effect on the resolution of the latter.

Many students have been trained in anthropology, and not gone on to traditional careers. The effect of the anthropological training experience is to develop a strong loyalty toward the discipline. As described earlier this is a natural product of professional training. Many applied anthropologists describe this feeling of loyalty in almost
The second source of disequilibrium is the definition of professional parameters. The professional status structure recognizes the Ph.D. anthropologist as the certified professional. As long as anthropologists only worked in the academic environment this definition has served the needs of the profession. Anthropologists have been able to control who will be accorded professional status. Those who left the academy, either because they lacked the degree or because they could not or would not accept an academic appointment have been essentially excluded from the profession. As more Ph.D. anthropologists are forced to seek employment beyond the academy, and the
profession becomes more active in promoting anthropologists for such roles, disequilibrium will arise when these anthropologists come into competition with or seek the aid of those previously excluded. There will arise a need to define professional parameters that can accommodate these two groups. This is the issue discussed earlier relating to the status and prestige structure, but it goes beyond the immediate needs of individuals.

Anthropologists are represented by their professional organizations in a number of national scientific and scholarly organizations, e.g., Social Science Research Council, American Association for the Advancement of Science, American Council of Learned Societies, etc. These groups represent scientific and academic interests. Similar representation on national councils representing applied interests, e.g., Alcohol and Drug Problems Association of North America, Committee on Economic Development, etc., would insure that the interests of the applied anthropologist are represented. In order to achieve this goal, specialized sub-disciplinary applied associations under the AAA or SFAA umbrella should be encouraged. These groups, recognized by the profession, would be free to determine their own membership requirements. The Council on Anthropology and Education (CAE) and the SFAA already occupy this position vis-à-vis the AAA. An issue that has arisen between the CAE and AAA is the question of registration fees for CAE members who are not AAA members who want to participate in CAE activities scheduled in conjunction with the Annual AAA meetings. Some form of reciprocity agreement may be required to prevent factionalism between anthropologists and non-anthropologists in such
hybrid organizations. Otherwise this may become a critical issue in the organization's decision to affiliate with anthropology or some other discipline. For example, at this writing, a group of anthropologists interested in aging has formed and are seeking to affiliate with a major society. They are considering the AAA, SFAA, and the Gerontological Society. The way the profession and its organizations respond to the question of professional parameters will radically affect the future of the anthropological professions.

Conclusion

In this last section I have attempted to demonstrate that the crisis facing the anthropological profession in the 1970's is part of a natural process of professionalization and elaboration of the anthropologist's role. At the beginning of the study I postulated that social engineering is undergoing a change similar to the one physical engineering underwent in the 19th century. I would like to end by predicting that the recognition of the scientific social engineering role as an elaboration of the social scientist's role will lead to a period of rapid and profound development in the social sciences. The social scientist can only benefit from the acid test that the social engineer will be applying to social science theory, and the social engineer can only benefit from the advances such theory will make possible in the area of social technologies.

I began this study with a quote from Ben Bagdikian (1960:v) which is worth repeating here.
Man seldom pauses to reflect as he passes from one era to another. Indeed, usually he does not know he made the passage until he looks back.

I hope I have helped to show the passage we are now making.
LIST OF REFERENCES

ABERT, JAMES G.


ABT, CLARK C.


ADAMS, RICHARD


AMERICAN ANTHROPOLOGICAL ASSOCIATION


AMERICAN ANTHROPOLOGICAL ASSOCIATION


AMERICAN ANTHROPOLOGIST


AMERICAN PSYCHOLOGICAL ASSOCIATION


ANDERSON, BEVERLY


ANGROSINO, MICHAEL V.


ANGROSINO, MICHAEL V. and GILBERT KUSHNER


ARENSBERG, CONRAD


BAGDIKIAN, BEN H.


BAINTON, BARRY R.

BAINTON, BARRY R.


BARNETT, HOMER


BARTH, PETER S.


BASALLE, GEORGE, WILLIAM COLEMAN and ROBERT H. KARGON (Eds.)


BATES, RALPH SAMUEL


BATTALA, GUILLERMO BONFIL


BEALS, RALPH and EXECUTIVE BOARD


BERNSTEIN, ILINA N. and HOWARD E. FREEMAN


BOAS, FRANZ


1919 Correspondence: Scientists as Spies. The Nation, Vol. 109, pp. 797.
BOAS, FRANZ


BOGGS, STEPHAN


BOHANNAN, PAUL


BRADY, RODNEY M.


BRAYBROOKE, DAVID and CHARLES E. LINDEBLOOM


CAIN, GLEN and ROBINSON G. HOLLISTER


CAMPELL, DONALD T.


CAMPELL, DONALD T. and JULIAN C. STANLEY

CAPLOW, THEODORE


CARO, FRANCIS G.


CARR-SAUNDERS, A. M.


CLIFTON, JAMES A. (Ed.)


COCHRANE, GLYNN


COLEMAN, JOHN S. (Ed.)


D'ANDRADE, R. G., E. A. HAMMEL, D. L. ADHAM and C. K. Mc DANIEL


DAVIS, HOWARD


DOBYNS, HENRY


DRUCKER, PETER


EMMERSON, GEORGE S.


FOSTER, GEORGE M.


GARWICK, GEOFFREY and JOAN BRINTNALL


GEARING, FREDRICK


GITECK, RONALD


GLASER, EDWARD M. and THOMAS E. BACKER


GOLEMBIEWSKI, ROBERT T.


GOODE, WILLIAM J.


GOODENOUGH, WARD HUNT

GOODENOUGH, WARD HUNT


GRANINGER, ROBERT


GREENWOOD, ERNEST


GUTTENTAG, MARCIA and ELMER L. STRUENING


HALL, RICHARD


HARRIS, MARVIN


HATRY, HARRY, RICHARD E. WINNIE and DONALD M. FISK


HAUSER, PHILIP M.


HERSKOVITS, MELVILLE


HOLMBERG, ALLAN R.

HOLMBERG, ALLAN R.


HOLMES, W. H.


HOOVER COMMISSION


HOUSTON, TOM R., Jr.


HOVLAND, CARL, ARTHUR A. LUMSDAINE and FRED D. SHEFFIELD


HURBERT, BEVERLY McELLIGOLT


HYMAN, HERBERT H., CHARLES R. WRIGHT and TERRENCE K. HOPKINS


INSTITUTION OF MECHANICAL ENGINEERS


JUDD, NEIL M.

JUNKER, BUFORD H.


KAKAR, SUDHIR


KENNEDY, ROBERT F.


KERRI, JAMES NWANNUKWA


KNIGHT, MARGARET

1976 Personal Communication. Coordinator of the San Juan Basin Regional Uranium Study, Albuquerque, N. M.

KROEBER, ALFRED LOUIS


KROEBER, ALFRED LOUIS and CLYDE KLUCKHORN


KUSHNER, GILBERT and ROBERT WULFF

1977 Personal Communication. Department of Anthropology, University of South Florida, Tampa, Florida.

LAMB, DANIEL S.


LASKER, GABRIEL W.

LEACOCK, ELEANOR, NANCIE L. GONZALEZ and GILBERT KUSHNER (Eds.)


LEIGHTON, ALEXANDER


LINTON, RALPH


LITTLE, KENNETH


LOWIE, ROBERT


LURIE, NANCY OESTREICH


MALINOWSKI, B.


MANDELBAUM, DAVID G.

MANDELBAUM, DAVID G., GABRIEL W. LASKER and ETHEL M. ALBERT (Eds.)


MARKSON, ELIZABETH WARREN and DAVID FRANKLIN ALLEN


McGEE, W. J.


MEAD, MARGARET


METRAUX, RHODA


MEYER, H. J. and E. F. BORGATTA


MITRA, PANCHANAN


NAZZARO, J. RUSSELL


NELSON, HAROLD

NUTTING, PAUL A., GREGORY I. SHORR and LAURENCE E. BERG


O'DONNELL, MAURICE E.


OFFICE OF EDUCATION


OFFICE OF MANAGEMENT AND BUDGET (OMB)


OFFICER, JAMES


OPLER, MORRIS E.


PARSONS, TALCOTT


PAUL, BENJAMIN D. (Ed.)


PENNIMAN, T. K.

1965 One Hundred Years of Anthropology. Duckworth, London.

PFIFFNER, JOHN M. and ROBERT PRESTEUS


RADCLIFFE-BROWN, A. R.

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title and Details</th>
</tr>
</thead>
</table>
SERVICE, ELMAN R.


SMITH, ADAM


SOCIETY FOR APPLIED ANTHROPOLOGY


SORENSEN, JOHN L.


SPENCE, ALYX


SPICER, EDWARD H.


STAATS, ELMER B.

STEIBENS, MICHAEL WM.


STEIN, JESS (Ed.)


STERN, GWEN and PAUL BOHANNAN


STOCKING, GEORGE W., Jr.


STOUFTER, SAMUEL A., EDWARD A. SUCHMAN, LEAND L. DeVINNEY, SHIRLEY A. STAR, and ROBIN M. WILLIAMS, Jr.


TAX, SOL


THOMPSON, LAURA


TRIPIDI, TONI, PHILLIP FELLIN and IRWIN EPSTEIN

VICKERS, GEOFFREY


VOEGELIN, ERMINIE


VOGET, FRED


VOLLMER, HOWARD M. and DONALD L. MILLS (Eds.)


WEBER, MAX


WEISS, CAROL


WEISS, ROBERT S. and MARTIN REIN


WILENSKY, HAROLD L.


WILSON, GEOFFREY and MONICA WILSON


WILSON, WOODROW

WOODS, PAUL J. (Ed.)


YAFFEE, RICHARD and DAVID ZALKLAND


ZURCHER, LOUIS A., Jr.