1977


Billy Markley Turner

Louisiana State University and Agricultural & Mechanical College

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A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of Sociology

by

Billy Markley Turner
B.A., The University of Texas, Austin, 1971
M.A., North Texas State University, 1973
December, 1977
DEDICATION:

To My Mother And
My Father's Spirit
ACKNOWLEDGEMENTS

This work has been made possible through the encouragement of a number of persons. In addition, a number of unanticipated occurrences and circumstances led the author into the field of sociology. The author's interest in sociology was nurtured at the University of Texas and later at North Texas State University. This interest has remained with the author despite times and conditions of uncertainty.

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In conclusion, the author extends his deepest and most sincere gratitude to his mother and select friends, without whose understanding and support, the education process would probably never have begun. The author considers himself fortunate to know such persons.
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ABSTRACT

The objective of the research reported in this dissertation was to formulate and to elaborate a theoretical support for agricultural development from a sociological perspective. In the implementation of this objective, the assumption was made that strengthening social organization should be a primary element in all models of development. The perspective taken is that schemes of development which do not emphasize social organization are potentially self-defeating. In addition, they will fail to deal effectively with the major problems encountered by nations undergoing a development process.

A theoretical rather than an empirical approach was selected because the author believed this method was best suited to the objectives of the study. In fact, however, considerable data is presented to support theoretical positions. The bulk of the study, however, emphasizes a critical theoretical method of inquiry. In Chapters 1 and 2 introductory information is presented and methodological procedures described. Chapter 3 is devoted to the issues which compound the complexity of development study.

Chapters 4 and 5 include a review and critique of current and popular models of development. The general characteristics of each model are elaborated in terms of goals and assumptions.
A case is made in Chapters 6, 7, and 8 for models which stress the merits of agricultural development. It is suggested that this approach to development has special application for some developing nations. A Theoretical argument is formulated to demonstrate that agricultural development offers an efficient means to achieve reinforcement of social organization and at the same time increase material progress.

Chapter 9 is devoted to the author's conclusions and predictions for the future. It is suggested that on a world scale a dual approach to development, that is industrial and agricultural development, has the greatest potential for world peace. In sum, the study done by the writer leads to the conclusion that agricultural development in some nations can increase peaceful exchange through mutual interdependence between these nations and those choosing an industrial development goal. The nations choosing agricultural development complement the needs of industrial nations. In this way, the question: How do we feed a growing population? receives attention. Specifically, the world's needs, both industrial and agricultural, are dealt with without causing too much social disorganization.
Chapter 1.
Introduction

1. Embarkation

The true nature of man and his relationship to society has long been a point of conjecture among social thinkers. From early recorded history to the present, considerable debate has focused upon the nature of man's relationship to his world, with emphasis on which is primary, man or the social group.

Social thought has, in many instances, undergone a transformation into ideology, particularly economic and political ideology. In some quarters theory has come to be viewed as fact or truth. What is interesting about this development is that facts and reality tend to be willfully constructed or manipulated to support theory. This, it would seem, is in violation of the historical purpose or intent of theory. And, this phenomenon is found in all of the political ideologies dominant in the world today.

One thing that is agreed upon by philosophers and theorists is that man must face the basic survival imperatives common to the past. Such imperatives as food, shelter, reproduction, and social organization are ubiquitous characteristics of the human group. This has been commented upon by a number of social thinkers (Bertrand, 1972; Sorokin, 1947; Parsons, 1951).
It is an acknowledged fact that life, as we know it, is far more complex than in the past. Technological advancements and the inter-dependence of technological advancements and the inter-dependence of technological and non-technological nations for resource and political purposes mandate this fact. It is the writer's view that we are no longer able to remain unaware or ambivalent about this general situation. This is an especial imperative for less highly industrial nations under less favorable conditions and circumstances, particularly those characterized by starvation, acute poverty, and near oblivion.

The inter-dependence of nations today and the striking differences they offer in opportunity, social organization, and distribution of desirable goods and services have raised certain questions that relate to global issues. Such questions address such issues as world peace, mutually productive inter-dependence of nations, and man's inhumanity to man. The focus of studies dedicated to these issues generally falls under the rubric of developmental studies. As men become more aware of the ecological nature of the world they also become more aware of the inter-dependence of nations. It has become all too apparent that while some are enjoying a great many of the blessings life has to offer, others are enjoying few if any of these blessings.
In fact, many persons producing the materials and agricultural products which go to improve life for others are without the basic essentials necessary for a healthy and productive existence. The world issue of development may thus be seen in a relative sense. Some people are enjoying progress in their material existence while others are enjoying far greater amounts of those same goods and services. This may be why material progress seems to precede political revolution or drastic change in some countries. This latter phenomenon is hard to explain otherwise as it appears to contradict the notion of progress as measured by accepted indicators of development.

At another conceptual level relatively little attention has been paid to the cost which development exacts upon social organization, including values and motives. The more traditional indicators of development such as GNP, import/export balances and energy use are monitored, but changes in social organization are ignored. It is this study with which sociology is particularly well suited to deal, in addition to its applicability to the issues and problems encountered and experienced at a more local level. The sociology of development, or developmental sociology, if you will, is concerned not only with the progress of people in a material and
technological sense, but also in a social sense. At this point, it is appropriate to note the sociology of development has had some serendipitious effects upon sociology as a science. This probably accounts for the surprising rate of growth of this subdiscipline of sociology. The scope of development study is so broad that virtually every specialization in sociology has application to it.

A final thought is appropriate to this introduction. Much of sociological study and attitude is an outgrowth of the Industrial Revolution and its consequences upon society. However, the people and food dilemma has shifted this emphasis and fostered a growing concern, sociologically speaking, with rural populations and the destiny of agriculture.

The sociology of development entails study of all of the above noted issues and more. This dissertation is a theoretical inquiry into the fundamental decisions which must accompany the application of a sociology of development to the developing parts of the world in which we all must live. Ultimately, men everywhere must interact with their fellow men.

2. Statement of the Problem

The problem to which this study is addressed is approached from three perspectives. First, popular
models of development are critically examined with the intention of illuminating weaknesses inherent in the models themselves. Particular attention is directed toward the assumptions upon which the selected models are predicated. Special attention is also given the developmental models in terms of their focus upon social organization, that is the measurement of both expected and unanticipated consequences in human behavior. In this light it is argued that most developmental models are oriented toward changing social organization rather than working within existing patterns of social organization. The focus of attention will be on the availability of resources, technology, the distribution of goods and services, and the roles each of these share in development model applications.

In the second study perspective it is proposed that many development models are self-defeating in the long term. This is true because of considerations and conditions that are unfavorable to development in the traditional mode. In this regard, it will be suggested that many of the development models presently being applied give too little consideration to sociological variables that have a potential for resulting in sub-optimal progress, both materially and socially. Special focus, in this presentation, will be oriented toward the agricultural sector and national populations.
The third perspective of this study directs attention to agricultural development as a viable alternative to industrial/technological development in countries presently deemed underdeveloped. An attempt is made to theoretically demonstrate that agricultural development can be oriented toward long term progress which ultimately may be progressive—economically, materially, and socially. Also, it will be suggested that development in some countries may augment the non-agricultural development patterns of other countries. The major emphasis of this part of the study is designed to offer evidence in support of the notions that simultaneous agricultural and non-agricultural development can be mutually satisfying and supportive in a world sense.

In sum, this study attempts to integrate existing thought on development and problems of development by suggesting an agricultural alternative to present development models. It is also hoped that a sociological contribution toward world peace and elimination of unnecessary misery is made.

3. Significance of the Study

The observation that some countries and peoples enjoy better life conditions than others is at least as old as recorded history and the works of Herodotus.
However, the post World War Two period has witnessed the greatest growth of interest and concern among social scientists and other leaders regarding social and material stratification among nations to the present time. The fervor of this interest and concern has intensified in recent years. As noted, the sociology of development is the rubric under which such interest and study falls in the realm of sociology.

Almost all the social and physical sciences include development as an area of specialization, or at least an acceptable area of concentration. Economics has probably led other disciplines in the output of theories, position statements, and methods for studying development. Political science and sociology have lagged behind economics in such endeavors, however, the gap is becoming less salient.

Most disciplines are very tenacious in their reluctance to abandon traditional perspectives. Nevertheless, it has become clear that developmental studies are so complex, often bordering on mysticism, that interdisciplinary exchanges of information and perspectives afford the only realistic approach to explanation and prediction of development. This is somewhat the position that the sociology of development finds itself in within the broad field of developmental study.
Generally speaking, it was believed by sociologists that economic improvements would affect improvements or changes in social organization, motives, values, and other sociological variables. Said another way, it was thought that application of a developmental model in the traditional pattern would result in the necessary changes or alterations of social organization. However, in their approach to development many programs met with less than desired success. It is the thesis of this study that some of the applied models were unrealistic because too little attention was given to social organizational considerations.

The first significance of this study, then, is found in the attempt to clarify the reasons why many models of development are inadequate, and at times self-defeating. An attempt will be made to demonstrate that models of development must take into consideration the sociological characteristics of the populations to whom they will be applied.

A second hoped for contribution of this study is a demonstration that a model of development having merit for one population may be unrealistic or inadequate when applied to another population with different economic and social characteristics. In the long term it may be desirable that nations develop along different
patterns so that they may be mutually supportive.

A third potential significance of this study is inherent in the call for more sociological input into models of development. Without such input development patterns and models will remain relatively inflexible and unrealistic for certain populations. Success in the latter endeavor will help development planners better understand and predict the outcomes of development processes.

In essence, the significance of this study is found in the fact that sociology has a useful contribution to offer the field of development study and planning. As development takes on a more truly inter-disciplinary perspective and approach, sociology as well as other disciplines is obligated to demonstrate its usefulness and viability to the problems associated with the improvement of the quality of life in communities and societies.

4. Definitions of Concepts and Terms

Prior to delving into any study, it is necessary to outline and define the scope of the study area and orientation of the researchers or authors. The study of development is so vast in scope that virtually an unlimited number of topics could appear legitimately under such a title. For this reason the theoretical perspective
followed and the concepts and definitions used are clarified.

The sociology of development has been defined elsewhere as:

... a sub-field of sociology which is devoted to a study of the theory, design, and implementation of action programs which are proposed for the purpose of deliberately and fundamentally altering social structures in the interest of achieving more efficient forms of social organization, as judged on the basis of values and goals considered worthy (Bertrand, 1972:239).

This definition is generally acceptable with some minor modifications. In the opinion of this writer the purpose of developmental programs is to improve the economic and material conditions of peoples to whom such programs are directed. The stated purpose of most developmental programs has traditionally not been promotion of more efficient social organization. Nevertheless, this consequence, in the writer's view, is highly desirable if not necessary. For this reason it is suggested that developmental sociology should focus upon strategies to deliberately and fundamentally alter social structures in the interest of making them more compatible with economic planning. This should result in mutual reinforcement of these aspects of societies on the basis of values and goals considered worthy.

This latter interpretation may imply to some that the sociology of development is broader in scope than
social organization. However, all alterations in behavior whatever their nature are social organizational in nature. What the definition does is stress the importance of sociology in an inter-disciplinary approach to the study of development. In addition, it stresses that sociology may be applicable to developmental study at all levels of social organization. In this sense sociology demonstrates its flexibility and utility within theory, design, and implementation of action programs deemed developmental in nature.

The elaboration of the interpretation of development sociology suggested by Bertrand will perhaps allow sociologists to more easily demonstrate that they have a useful and necessary product to offer development researchers in other sub-disciplines and specialties. It will invite sociologists in sub-disciplines to apply their skills and knowledge to the study of development. This slight elaboration in definition will also allow for some to develop a broader view of development. And last, the various sociological perspectives typical of the sub-disciplines within sociology will be allowed greater opportunity to converge at higher conceptual levels, which will hopefully result in greater unity within the field of sociology.

There is such an abundance of definitions for development concepts that it is difficult to find a
definition which is most acceptable. For this writer, definitions of terms should be in such a manner that it is easy to understand their meaning. Such definitions are necessary for inter-disciplinary convergence and represent at least an initial step in communication with persons from other disciplines.

It seems to the writer that development terms should not only be easily understood but be as free as possible of jargon or words not well known to most educated persons. With the above thought in mind the several key terms used frequently throughout this study are defined. Since definitions of these terms tend to be biased by the values, theoretical leanings or by discipline limitations, it was decided to formulate operational definitions that clarify usage for purposes of this study.

A. Development: a process of progress in both a material and social sense as it is viewed by the majority of a population directly involved in the process. This process may originate within populations or from sources outside them, but changes in social patterns and material things is deliberate and purposive.

The above definition recognizes that fundamental decisions must be made regarding which social and material changes are necessary. It is obvious that
complete agreement as to which changes are desirable will be difficult to achieve. It is also possible that some members of the given population will risk loss of desirables in the development process. However, this unfortunate situation must be viewed in light of progress for population aggregates rather than individuals.

The definition of development given also recognizes that societies have elite groups and groups of disproportionate influence. However, development must be seen as an attempt to arrive at more rational alternatives for progress for the majority of a population, given the critical and irreversible conditions facing many societies today.

The definition given takes into consideration possible dilemmas regarding cultural factors. The task of improving the overall lot of a population often directly challenges traditional values such as those related to land tenure, inheritance, production modes, and distribution of goods and services. However, developing countries face situations such as population pressures, lack of resources and capital, and cultural disorganization which demand that traditional ways change.

In keeping with the definition of development presented previously, the deliberate and fundamental altering of social structures on the basis of values
and goals considered worthy should be done under the
dictates of the majority of the affected population.

Given the unequal distribution of wealth, resources
and opportunity on earth it is unlikely that develop­
mental problems will improve if left unattended. It
is equally unrealistic to assume that progress will
occur overnight or without injury and cost to some.
However, the problems are of such magnitude and threat
to eventual peace that they demand attention.

B. Industrial/Economic Development: this process
normally refers to the conversion of agricultural
resources into capital which becomes centralized in
urban areas to support industrial growth. Industrialization
is generally characterized by massive movement of rural
populations into urban/industrial areas with accompanying
changes in social organization, goals, values, and
attitudes. Such trends are typically characterized by
increased agricultural output resulting from improved
technology and improved logistic channels. This concept­
ualization of industrial/economic development is basically
the one utilized in the present study. Its use, however,
does not imply any value judgments regarding population
movements and consequences.

It should be pointed out that it is highly tempting
to simply transplant a favorable Western experience and
method to other areas without regard to local considerations. The latter may include different resource and land availability, a different culture and social organization, climatic differences, terrain differences, and vicinal isolation at times. These considerations are important factors which dissuade simple transplantation of a pattern or models that have proved successful elsewhere.

C. Agricultural Development: is usually defined as an action process which channels a population's productivity into agriculture resulting in the accumulation of agricultural surpluses. Agricultural surplus is designed for exchange purposes. In addition, the process is aimed at improvement of the agricultural sector, that is generating economic and social incentives there. The process is designed to maintain optimal forms of social organization in the rural setting. This is the understanding of agricultural development followed in this dissertation.

The conceptualization of agricultural development does not preclude the adoption of improved agricultural technology. It also acknowledges the necessity for establishing centralized channels of distribution for agricultural surpluses aimed at foreign exchange. It stresses that a population developing in such a manner
Is characterized by agricultural productivity over and above the local capacity of centers of distribution and marketing specialization. In addition, this interpretation is attuned to the generally low status afforded agricultural sectors in the world today, particularly to agricultural sectors within industrialized countries. An agricultural development scheme recognizes the fundamental importance of agricultural productivity as a survival and sustenance imperative.

In sum, this chapter emphasizes that agricultural development should go beyond sustenance needs of a given population. An agricultural surplus is the desired end goal, but in the short term, improvement of food availability is a desired result of agricultural development.

A second emphasis of this dissertation is that any development, agricultural or otherwise, should reinforce social organization. In fact, the two should be designed to accompany each other in a mutual fashion. One without the other can only result in faulty development with inherent problems which can be expected to surface both in the short term and in the long term.

The definitions of development which have been presented and elaborated with be used throughout this study. They set the stage for the conceptualization, ideas, and theses regarding agricultural development which follow.
Chapter 2.
Method and Scope of the Study

1. Theoretical Approach

This study is essentially a critical review in essay form of dominant perspectives and models of development. Such a perspective has been selected for several reasons. First, it is hoped that the sociological essay as a contribution to knowledge is not yet extinct, although few studies today utilize this approach. Second, the majority of sociological studies today employ a more empirical method. Although the advances of statistical techniques and empirical methods are laudable, this writer's opinion is that something fundamental and essential can be presented without utilizing such methods. Too, in some areas, this one included, neither the theoretical sophistication nor the data necessary for such approaches are available.

As a style of social science, abstracted empiricism is not characterized by any substantive propositions or theories. It is not based upon any new conception of the nature of society or of man or upon any particular facts about them. True, it is recognizable by the kinds of problems its practitioners typically select to study, and by the way in which they typically study them. But certainly these studies are no reason for such celebration as this style of social research may enjoy (Mills, 1959:55).

It is the writer's opinion that the political and emotional characteristics of development study often become clouded by raw empiricism. The nature of the
human condition is simply not completely expressable with mathematical logic and symbols, although it is hoped that such precision will be achieved in the future. Mathematical symbolism is exactly that. Symbols are something that suggest something else by reason of association, not because symbols actually exist out in the universe someplace.

Practitioners of almost all styles of work, it should be noted, tend to use similar slogans. Everyone counting outhouses (and this old joke is by no means only a joke) is today very much aware of his conceptual implications; everyone elaborating distinctions (and many are doing just that) is altogether aware of the paradigm of empirical verification. It is commonly recognized that any systematic attempt to understand involves some kind of alternation between (empirical) intake and (theoretical) assimilation, that concepts and ideas ought to guide factual investigation, and that investigations ought to be used to check up on and reshape ideas (Mills, 1959:74).

The critical theoretical essay is one means by which to check and reshape ideas. It has been suggested that many developing nations are experiencing some characteristics of social disorganization. Hard empirical orientations depict statistically what is happening, but they do not examine the nature of causes behind social disorganization, nor do they explain the changes in social organization.

The development and rural sociologist is concerned primarily with social organization, or its inverse, social disorganization. It is not possible then for such
a sociologist to remain apart from social organization structures of which he is a contextual part.

The peculiar notion of a purely objective social science attests more to the intellectual's imagination than good sense, as if the human eye detached from the human heart and hand could see humanly meaningful and useful things. It should be consigned to the realm of temperatureless water, colorless vision, motionless life, and emotionless man (Orlans, 1971:29).

The best that a critical theoretical evaluation of development models can ultimately attain is achieved simply by an awareness of biases and objectives of the study. This essentially suggests that it is likely that there are reasons for conducting studies beyond the desire to understand social actions and the effects of such.

Rural development programs are in contrast to urban development programs, but the two are inherently complementary when contemplated under the umbrella of a total society. It is a matter of interest and ego to me that development programs the world over have been overwhelmingly cast in a rural setting (Bertrand, 1973:240).

A critical focus of this study is to examine current development models and their relationship to rural populations. Not infrequently models of development are aimed at industrialization and growth of urban sectors. However, little theoretical attention has been given to rural populations and effects upon their social organization caused by industrial or economic models of development and following implementation.
The critical method at hand is to suggest by logical argument and examination based upon available accounts of current developmental experience that rural populations have often been overlooked by scientists. Also alternative models and goals of development have not been given sufficient attention. This is particularly true regarding agricultural development as a model. A fact which brings to light moral as well as intellectual issues.

The confusion in the social sciences is moral as well as 'scientific,' political as well as intellectual. Attempts to ignore this fact are among the reasons for the continuing confusion. In order to judge the problems and methods of various schools of social science, we must make up our minds about a great many political values as well as intellectual issues, for we cannot very well state any problem until we know whose problem it is... All of which means that by their work all students of man and society assume and imply moral and political decisions (Mills, 1959:76).

An additional merit of a critical theoretical approach is that this technique is ably suited to depict whose problem the developmental process and its effect is. Then after the nature and ownership of a problem are established, empirical research can be specifically applied to discover overt characteristics of the problem being studied.

The critical sociological essay is particularly flexible and able to communicate development problems and trends. A critical theoretical piece, however, does
not preclude the use of supportive statistics and
data from other sources. With this view in mind, data
and figures will be utilized as frequently as necessary
to support or challenge ideas presented in this study.

2. Empirical Data Presentation

Data presented will generally be in tabular and
historic trend format. It will be interjected through­
out the study to support arguments presented or discussed.

The specific purpose of this is, however, not to
reiterate old arguments or theses, but to search for
other meanings and significance of already gathered
data.

What a great variety of interests. To be
sure, one may perceive a common theme, a unity
of purpose, underlying this multiplicity of
studies. Indeed there is one that can be abstracted:
the study of social groups or categories within
the American population. This is sufficient to
give direction to the search. Yet the problem
of social differentiation is so general, the
theme so grand, that it can be translated into
many specific investigations. If the search were
frustrated in one direction, it could be pursued
in another (Hyman, 1972:80).

The belief of the author is that the various types of
empirical data available for developed and developing
countries possesses a far greater range of information
than is usually presented in current literature. The
usual theories of development or its explanation perhaps
have an equal number of alternative explanations which
do not coincide with those explanations popular today.
Exploration of existing empirical information is the prime focus of this study.

Few well-trodden paths exist for the investigator of social relations to follow; theory is often either too general or too specific to provide clear guidance for empirical research. In these circumstances, exploratory research is necessary to obtain the experience that will be helpful in formulating relevant hypotheses for more definitive investigation (Selltiz, et al., 1959:52).

The inverse of this quotation hopefully will hold true. The author has hopes that theoretical propositions may be formulated as a result of reviewing available empirical information. It is likely that existing data and information on rural populations has not been exhausted from a sociological perspective, and there is an abundance of such information. Beers has written regarding the relationship shared between rural populations and developmental processes as follows.

. . . almost twenty years ago, that there already existed published compendia of results from over 300 polls tabulated by some criterion of rurality. Although no archive yet existed, and his suspicions were well founded for that era "that the representation of farmers in national polls may not be adequate at all strata of rural society" (Beers, 1953:1-11).

Presentation of data in this study is designed to serve two primary purposes. First, data in simple form quickly depicts the degree to which trends are occurring. Second, data serve to support arguments presented as alternatives to existing models of development.
In this sense data serves a secondary purpose. A theoretical statement, although it may not focus upon data, requires support beyond mere supposition. There must be some proof to support the allegations and alternatives presented.

3. Use of Statistics

The statistical techniques used are fundamental in nature and are oriented toward proving that statistically significant relations exist among the data. For most cases non-parametric techniques are employed owing to small and uneven sample sizes. However, in some cases non-parametric techniques are utilized because of being better suited to the sample size and directional changes in the data.

The Kolmogorov-Smirnov test, referred to hereafter as the K-S two sample test, was considered most suitable for the data available for use. This test is easily applied to both small and larger sample sizes and may be used with unequal sample sizes. The power-efficiency of the K-S two sample test is about 96% (Siegel, 1956:136). This test appears to be more powerful in all cases than the $X^2$ test, yet approximates the $X^2$ sampling distribution except in large sample size cases. A sampling distribution formula is available for such cases.

The K-S two sample test is computed in the following manner:
\[ X^2 = 4D^2 \frac{n_1 n_2}{n_1 + n_2} \]

\( D = \text{maximum} \left( \frac{S_{n_1}}{X} - \frac{S_{n_2}}{X} \right) \)

\( n = \text{sample size} \)

The \( X^2 \) sampling distribution with \( df = 2 \) is utilized for rejection of \( H_0 \) purposes. Table C of Siegel shows this distribution (Siegel, 1956:249).

In large sample two tailed tests, the sampling distribution may be computed by formulae given in Table M of Siegel (Siegel, 1956:279). For example: With \( LS = .05 \), we compute \( X^2 \) values in the following manner:

\[ X^2 = 1.36 \sqrt{\frac{n_1 + n_2}{n_1 n_2}} \]

Acceptance or rejection of \( H_0 \) may then be made accordingly.
Chapter 3.
Notes on the Study of Development: Directions and Purposes of Development Progress

1. Critical Issues in Development Study

It may be that the current popularity of development studies is a result of some rather shocking reconsiderations that time and observation have necessitated. A number of nations deemed highly developed are presently attempting to cope with unforeseen problems that resulted from what was considered successful development programs. In fact, the social problems and social disorganization born of development schemes have legitimated the addition of sociology and rural sociology into the inter-disciplinary group of development sciences.

As a result of unexpected consequences of the development process an increasing number of today's scholars are rediscovering the warnings of earlier writers. Long ago, J.S. Mill sounded one warning that is appropriate to current development efforts.

In contemplating any progressive movement, not in its nature unlimited, the mind is not satisfied with merely tracing the laws of the movement, it cannot but ask the further question, to what goal? When the progress ceases, in what condition are we to expect that it will leave mankind (Mill, 1908:334)?

More and more thinkers are beginning to suspect that economic and material progress of mankind is not without
social costs. A finite earth with finite resources cannot have unlimited growth without fundamental social costs. Thus, there must be a goal and objective for progress that gives consideration to social consequences. Mankind is the chief ingredient within all social development models and applications of development models or schemes requires logical foresight as to the consequences of the programs they call for. A growing body of literature echos this concern (Daly, 1973; Botchway, 1970; Anderson, 1976; Vallianatos, 1976; Brown, 1974; Ehrlich, 1974).

A number of underdeveloped countries are either implementing or considering development programs that have proved successful in the West. At the same time the already developed countries are discovering unforeseen consequences and latent functions of social development which has resulted in rapid progress. In this regard, the United States has long been considered by many as representing the pinnacle of the industrial-technological development trend in the Western world. It is thus significant that the U.S. and its citizens are increasingly becoming aware of gross inequalities and the consequent social disorganizational processes which have accompanied economic and living standard gains.
A recent poll found that only 17 percent of U.S. citizens favored the present economic system and that 41 percent wanted major changes (Wall Street Journal, Friday, Aug. 22, 1975, p.1). In light of the fact that the United States has long been considered by many to be the bastion of free trade and the place of unlimited opportunity to those willing to make the effort, this pattern of responses is most enlightening. For some time the United States has been one of the few countries that realistically offered an opportunity for social mobility to immigrants. In this regard it is of importance to note that the population of the United States enjoys one of the highest standards of living of any country in the world.

The question can thus be asked, what recent circumstances and events have lead many to question the future of the "good life" and to become anxious about the future. As one writer put it, "Suffice it to remark here that the optimism of unlimited progress of the early 60's has drastically faded in the mid-70's (Anderson, 1976:3)."

One answer to the above question is found in the fact that many citizens are afraid to venture out at night in U.S. cities. Also, more and more citizens are expressing serious concern over their economic future and solvency.
Labor and management seem to be constantly embroiled in bitter negotiations over wages and salaries. Finally, a surprising number of citizens have become cynical about their form of government and the election process. The point of emphasis is that at the same time that these trends have been occurring, economic and development indicators have been increasing in absolute and relative terms yearly.

Business and governmental leaders have a tendency to point out that economic increases have accompanied American progress. However, they give little regard or attention to social disorganization statistics. It is precisely here where development study must focus so that the problems of development are not exported in model and planning form to underdeveloped countries.

In sum, the study of social disorganization should be equally important to development sociologists as economic progress is to economists. Some examples of social disorganization indicators will suffice to make this point. See Table 1.

The large increases in social disorganization indicators presented in Table 1 cannot be disassociated from the growth process, nor can they remain unexplained.
<table>
<thead>
<tr>
<th>Economic Growth and Social Disorganization</th>
<th>% increase 1960-1965</th>
<th>% increase 1965-1972</th>
</tr>
</thead>
<tbody>
<tr>
<td>per capita income (constant)</td>
<td>13</td>
<td>48</td>
</tr>
<tr>
<td>per capita energy consumption (Btu's)</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>invention patents issued</td>
<td>34</td>
<td>19</td>
</tr>
<tr>
<td>violent crime per 100,000 population</td>
<td>24</td>
<td>101</td>
</tr>
<tr>
<td>homicide per 100,000 population</td>
<td>14</td>
<td>56</td>
</tr>
<tr>
<td>mental illness per 100,000 population</td>
<td>33</td>
<td>44</td>
</tr>
<tr>
<td>divorce per 1,000 women (15 and older)</td>
<td>11</td>
<td>59</td>
</tr>
<tr>
<td>cirrhosis of the liver deaths per 100,000 pop.</td>
<td>13</td>
<td>23</td>
</tr>
<tr>
<td>newly reported narcotic addicts</td>
<td>n.d.</td>
<td>310</td>
</tr>
</tbody>
</table>


It is within the development and growth context that social disorganization has been occurring. Some critics have offered bold opinions regarding economic progress which may have some validity. Commoner has observed:

... that growth reflects ecologically faulty, socially wasteful types of production rather than the actual welfare of individual human beings (Commoner, 1971:295).
The definition of development offered in Chapter 1 emphasizes the complementarity of material and social progress. To continue in elaboration of the theme of growth, continued growth is viewed by many as producing a greater freedom of choice in the material sense and in addition, as an alleviator of social disorganization symptoms. Critical writers, however, have suggested the possibility of a negative relationship between growth and well-being. The possible existence of a relationship of this type cannot go unexplored by development studies and development planners.

That an increase in social welfare - an increase in the range of effective choice - may be brought about by negative economic growth may appear paradoxical, if not infuriating, to some growthmen (Mishan, 1976:116).

Despite the above, the notion of constant growth remains one of the paramount concerns of U.S. political and business communities. In fact, ubiquitous economic growth and production increases is the tenant of most business and management sciences. It is not only the key to decision judgment of financial firms, it is often the prime indicator used to determine a nation's solvency and the direction of international diplomacy. Little wonder, the developing nations reflect an equal concern over economic indicators. A growing list of scholars and a number of previously cited authors have pointed out this general condition and practice among various nations.
These scientists are pointing out that undirected and socially irresponsible growth may have detrimental effects upon social organization and actually work against the populations they intended to have prosper and progress. Such admonishments from scholars cannot go unheeded. Another critical concern is that development planners often remain unaware of the origin of many resources, forms of energy, and sustenance foodstuffs that supply nations already deemed relatively developed. This syndrome has been termed the "Netherlands fallacy" (Ehrlich and Holdren, in Daly, *Op. Cit.*, 1973:82). What is in primary focus is that a large number of countries labelled as developed are actually highly reliant upon underdeveloped nations for resources, energy, and food. The distribution of resources and agricultural produce in the world is such that it is unlikely that there is enough of all to go around for all nations to enjoy the same living conditions. A brief look at some crucial statistics will point out why it is important that development sociologists remain aware of such conditions.

The Netherlands actually require large chunks of the earth's resources and vast areas of land not within its borders to maintain itself. For example, it is the second largest per capita importer of protein in the world, and it imports
sixty-three percent of its cereals, including one hundred percent of its corn and rice. It also imports all of its cotton, seventy-seven percent of its wool, and (All) of its iron ore, antimony, bauxite, chromium, copper, gold, lead, magnesite, mercury, molybdenum, nickel, silver, tin, tungsten, vanadium, zinc, phosphate rock fertilizer, potash fertilizer, potash fertilizer, asbestos, and diamonds. It produces energy equivalent to some twenty million metric tons of coal and consumes the equivalent of over forty seven million metric tons (Ehrlich and Holdren, In Daly, Op. Cit., 1973:82; and U.N. Statistical Yearbook, 1969, Italics Mine).

The Netherlands are not alone and the term "Netherlands Fallacy" could be applied with little adjustment to a number of European nations and some Asian nations such as Japan and Hong Kong. Europe and Japan are generally considered relatively highly developed by traditional indicators of development, yet their crucial dependency upon underdeveloped nations would suggest some error in such a classification.

The concern relative to the issues surrounding development is that models used to explain European and Japanese development are being suggested for the underdeveloped world with no regard to the limited supply of resources, energy and food.

There are several social theories which bring to light inconsistencies that trouble development and rural sociologists. For example, the Social Darwinists argue that some men will succeed and excel beyond others. The idea of some men surpassing other men
is based upon the fact of natural talents and types of ability (Lenski, 1966:13). This view has often been used to legitimize the inequalities found among men. When applied to nations, which are aggregates of men, this theory implies that natural abilities prevail among nations. However, no regard is given to history and the time sequence of natural development.

In *Folkways*, Sumner suggested that social classes represented the social worth or value of a man, but he did recognize that stratification may result due to chance or luck factors (Sumner, 1903). In this context Sumner and others would have found development sociology more than challenging. Some have suggested that socialism is the only possible means by which individual or national stratification may be solved. Mosca, for example, opined that "... human societies can never function without political organization. Political organization necessarily involves inequalities in power" (Mosca, 1939:281-286).

One of the end goals of development theoretically is bringing underdeveloped nations to a status of relative equality. Development and rural sociologists, at least those who adhere to traditional theory, must certainly be made aware that there will always exist inequality among nations in a relative development
sense or pattern. Development and rural sociologists generally adhere to a postulate. This is "the belief that conditions need not be as they are is characteristic of socially and technologically more advanced nations" (Lenski, 1966:3). The suggestion here is that development is intentional and deliberate change as suggested by Bertrand and others. Again we must remain aware of the sociological conditions that are resultant of change that is deliberately induced. In this regard, the next question of importance to this study is what conditions does mankind face after deliberate change has been induced?

As noted, man's status and national status may well fall into categories that have been previously experienced in other societies. The major integrative functions of Ancient Egypt centered around stratification based upon the tenant that royal lineage stood at the highest level. Marriages and appointment were based upon recognition of similar status in equivalent units (Parsons, 1966:58). If national development status is to be recognized by other developed nations, recognition must be based upon relative achievements in both the social and material sense. It must also be recognized that alternative models of development may not be directly compared, yet they may be equally progressive and socially reinforcing.
If development of the underdeveloped world is intended to have nations progress to a relatively equal status, then certain historical trends must be included into the development biography. Development and rural sociologists must enlighten others as to the relative nature of material progress and social organization patterns. It is not reasonable or scientifically sound to assume all social organization must become similar in appearance or form.

Development scientists may casually agree on measures of material or economic productivity, but social organization measures or estimates remain the crux of the matter. This notion has received attention elsewhere.

I would suggest that a sociology of development must make the following conceptualizations clear: (1) that development programs carry no implicit or explicit connotation of under-development. In so far as I can determine there are no societies or areas within societies which can completely escape a designation of needing improvement and all can be judged superior on certain criteria - there are always ways to improve conditions of life, despite a comparative advantage over others (Bertrand, 1972:239).

The very study of development, in the opinion of this writer, recognizes relative levels of achievement in the economic and material sense. However, there exists no one perfect model of development. Social organization must be viewed in this light. Radically different norms, roles, and status-positions may be equally functional
when attended in different cultures and in nations in various stages of development.

2. Toward A Flexible Sociological Attitude

For the Study of Development

There can be little doubt of the effect political ideology has upon the thinking of individuals. In the scientific world, these ideologies often find themselves cemented in adherence to a particular theoretical school of thought. It is not at all peculiar that scientists debate theoretical issues with the same passion that nations with differing ideological perspectives go to war. The development sociologist finds himself squarely centered in such debate. However, some caution may guide the wary individual around this problem.

When one finds, for example, that competent observers advocate strongly divergent points of view, it seems likely on a priori grounds that both have observed something valid about the natural situation and that both represent a part of the truth (Campbell and Stanley, 1966:3).

It may well be that opposing ideologies observe parts of a whole differentially. In this perspective development and rural sociologists must be intimately aware of the tenents of relevant ideologies or theories.

For the reason stated above development scientists must walk a very thin theoretical line or risk the danger
of becoming entrapped by a limited perspective. This
does not mean one should research without a theoretical
perspective, but it does suggest that one must not be
limited by theoretical dogmatism and shortcomings or the
belief that any one theoretical perspective is all
encompassing. In this sense the developmental sociologists
must incorporate creativity, intuition, and intellectual
craftsmanship into their studies while at the same time
remining realistic in their ambition and scope. This
is often a dilemma.

A science which hesitates to forget its
founders is lost. It is characteristic of a
science in its earlier stages to be both ambitiously
profound in its aims and trivial in its handling
of the details. But to come very near to a true
theory, and to grasp its precise application, are
two very different things, as the history of science
teaches us. Everything of importance has been said
before by somebody who did not discover it
(Whitehead, 1967:1).

This view is in essence "that although any man's works
deemed worth reading may be supposed to have had some
intelligence, no one may be supposed to have arrived
at absolute or complete truth about any subject (Russell,
1945:Chapter 3.).

In light of the above the perspective of this study
is that all the theoretical schools of thought have some
merit, but there are weaknesses in all of them. There
are reasons explaining both the strong and weak points of
theoretical perspectives. Familiarity with reasons that
of becoming entrapped by a limited perspective. This does not mean one should research without a theoretical perspective, but it does suggest that one must not be limited by theoretical dogmatism and shortcomings or the belief that any one theoretical perspective is all encompassing. In this sense the developmental sociologists must incorporate creativity, intuition, and intellectual craftsmanship into their studies while at the same time remaining realistic in their ambition and scope. This is often a dilemma.

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In light of the above the perspective of this study is that all the theoretical schools of thought have some merit, but there are weaknesses in all of them. There are reasons explaining both the strong and weak points of theoretical perspectives. Familiarity with reasons that
explain some theoretical weaknesses is mandatory for the development sociologist.

In the social sciences, systems often issue fully formed from the mind of one man. They may be discussed if they attract attention, but progressive adaptive modification as a result of the concentrated efforts of great numbers of men is rare (Henderson, 1941:20).

It is precisely in development and rural sociology that the efforts of numbers of men must converge to formulate effective methods and plans to deal with the challenge of development. However, theoretical convergence in development sociology is difficult partly because of the nature and complexity of variables involved, and partly because of the urgency required by the severity of problems faced today. This does not mean that in time a relatively congruent and precise theory of development cannot arise. It is possible that development sociology may one day approach the precision of the exact sciences.

A new and more flexible attitude toward development study destitute of ideological restraints would seem to be a requisite of successful theory building.

I agree with him (Nagel) that theory means in all empirical sciences the explicit formulation of determinate relations between a set of variables in terms of which a fairly extensive class of empirically ascertainable regularities can be explained. Furthermore, I agree wholeheartedly
with his statement that neither the fact that these regularities have in the social sciences a rather narrowly restricted universality, nor the fact that they permit prediction only to a limited extent, constitutes a basic difference between the social and the natural sciences, since many branches of the latter show the same features (Schutz, 1954:257-273).

The difficulty and vast scope of development sociology does not preclude better and more precise understanding of this phenomenon, but it does make things more difficult. It is this complexity that requires an open and flexible attitude toward the study of development. Such an attitude was necessary to the formulation of an agricultural model of development as will be seen in a later part of this study.

3. Summary

To reiterate the points of focus of the preceding paragraphs, the serious development sociologist must remain alert to several pitfalls which have sometimes plagued development study in the past. (1) The interdisciplinary nature of the subject precludes extremely narrow focus but maintains an intent of theoretical congruity and convergence. (2) Ideological leanings present a threat of failing to see valid points made by opposing theoretical perspectives. (3) There is a potential hazard of forming tautological arguments to support an ideology which may be damaging to an overall understanding of the problems and issues at hand.
Failure to recognize the interrelatedness of all developmental variables and theories obviates the formulation of a successful sociology of development. These highlights are the elements that comprise a flexible sociological attitude for development study.

Although the above suggestions and cautions may seem rather obvious to most, review of development literature suggests that there are some writers who are less than flexible in their views and theoretical applications. In the opinion of this writer, one ultimately arrives at a set of beliefs and a theoretical perspective regarding development, however, this need not imply rigidity and refusal to make necessary alterations in thinking from time to time.

4. Social-Psychological Considerations in Development Study

The concept or notion of development is not something that exists independently and alone in the universe. It is, of course, the minds of men which construct and conceptualize the nature and characteristics of development as a phenomenon. This statement holds true for rural populations as well as for the scientific community. However, the meaning of the development concept may imply something far different to the various groups in a population.
The fact that a large number of persons hold opinions on the meaning of development does not mean that they must have opinions which are similar or even essentially correct. Nor does it mean that their opinions have to be unusually dissimilar or essentially incorrect. It simply demonstrates that men form attitudes, beliefs, and notions about things which are products of experience, environment, and information inputs.

Virtually all theorists agree that an attitude is not a basic, irreducible element within the personality, but represents a cluster or syndrome of two or more interrelated elements (Rokeach, 1972:112).

It can be said that development becomes a syndrome of two or more elements which arise within the context of social organization and within the course and type of events surrounding individuals. It is not accidental that motives are ascribed to developmental schemes or models, or at least interrelate to meanings of development as seen by individuals.

Motive, then is one collective procedure for accomplishing social interaction, and for sorting out the various possibilities for social treatment by linking specific act and social rules in such a way as to generate the constellation of social actions that observers call "persons," "members," and "membership (Blum and McHugh, 1971:98).

Development from a sociological perspective is a constellation of social actions forming what may be called a developmental syndrome. As pointed out earlier
by Bertrand, development is the deliberate changing of social structures which a social-psychologist might deem to be constellations of actions with motivational forces involved. Motives, however, are socially assigned or conceptualized to match events.

Motives are sociologically possible only because some practical observer has methods and procedures - i.e. - rules - for locating them as events in the world, not because that is where they really are (Blum and McHugh, Op. Cit.:103).

Development sociologists must take particular care not to assume a universal consensus upon what development is or about its desirability to all groups. The ascription of development motives to populations may imply unfounded generalizations about how development or its necessity is viewed by persons. It may also convey illusions and images which bear no real truth outside that attributed by involved actors.

An awareness of the potential for illusion formation among persons is of special importance at this time.

... the sociologist's job is to find out by what illusions people live. Without these artifacts, these delicately poised fantasies, most of us would not survive. Society as we know it could not exist. Meaninglessness produces terror. And terror must be dissipated by participating in, and believing in, collective fictions. They constitute society's "noble lie," the lie that there is some sort of inherent significance in the universe. It is the job of sociology to understand how people impute meaning to the various aspects of life (Farberman and Goode, 1974:2).
In the above regard it is necessary to recognize the possible existence of collective fictions among populations for whom development programs are aimed. It is equally necessary to refrain from the creation of collective fictions which may be dysfunctional for social organization. In this respect creation or assumption of motives related to developmental processes may constitute a collective fiction.

The developmental process in the Western world and the motives or attitudes associated with it has been a common subject in sociological literature.

Comte, Marx, Spencer, Tylor, Morgan, without exception, were convinced that the specific line of development which they could see culminating in Western Europe was much more than Western development alone (Nisbet, 1969:53). These same thinkers believed that not only was Western Europe developing, but that Europe was becoming the harbinger of things to come for the entire world. Political ideologies, industrialization, technology and the concept of modernity were destined to sweep the world in the same fashion experienced by Western Europe. It is interesting to note that these men were of radically different social perspectives, yet all agreed upon the course of events in the world of the future.
Correctly or not, most of us have some notion of what development is or should be. It is difficult to extract ourselves from the social organization scheme of which we are a part and objectively view alternative patterns. In our endeavors to formulate developmental plans, we necessarily impart motives and aspirations to those expected courses of events we anticipate to transpire. Thus, when we proclaim objectivity and neutral evaluation to differing forms of social organization we are also likely to make an effort to improve upon the forms of social structures we are evaluating. Recognition of this process negates proclaimed neutrality in the contemplation of social organization patterns. Development plans almost always imply motives of an evangelical nature, oriented toward alterations of social organization in keeping with notions of progress. A noted sociologist viewed one notion of progress as follows:

Its success as a new "gospel" has been enormous. As a result of this, whoever speaks of economic growth in the Third World today is not just engaging in economics, but is rousing a whole array of redemptive aspirations, the ultimate content of which is mythic. It is this content that provides much of the power to sway, mobilize and if frustrated, to enrage (Berger, 1974:20).

Because of different perspectives, caution in development planning is crucial. The concept of development very bluntly recognizes at most, need for improvement, and at least, potential for improvement. It is mandatory then that development planners and development
sociologist be aware of possible negative consequences of even the most humanitarian actions in the interest of induced changes in basic social structures.

All too often the case for development has been rationalized upon non-human indicators. Oblivion to the human condition in the development process is often precisely what has accounted for some of the problems of development encountered today.

. . . the intellectuals who define reality, the power wielders who shape the world to conform to the definitions, and the others who are called upon to suffer in consequence of both enterprises. What stuns and paralyzes the mind is the use of rigorously rational and delirious means, the insensate offering up of lives to a petrified concept. . . (Berger, Op. Cit.: 8).

It is not the economic or material indicators of development that are of greatest concern. Indicators are just that; simply measures of more fundamental and basic processes that are going on. The social organization context in which humans perform, that is produce the economic and material indicators, is the most fundamental datum. The various indicators have no meaning outside the context of social organization for several reasons. First, without human actions there exists no economy. Second, it is human interaction that produces an economy with dynamic characteristics. It is true that economic and material concerns influence human activity and social organization. It is also true, however, that
economies as we know them have arisen relatively recently in recorded history. So, economies as such could not precede human activity and social organization. This basic understanding has evaded many writers.

It is not too uncommon today to discover some highly complex models or paradigms of economic activity and material usage or transformation that completely fail to recognize human interaction and social organization. It appears, in such models, that humans are of secondary importance with little if any input into the behavioral equation. Construction of humanless models is synthetic and basically constitutes the creation of a collective fiction in the opinion of the writer.

Another major social-psychological concern for the development and rural sociologist involves the distinction between development as a process and development as an object. Others have clarified several terms and concepts that will help to simplify this point. They are as follows: (1) objectivation, (2) objectification, (3) alienation, and (4) reification (Berger and Pullberg, 1965:199-200).

Objectivation regarding development refers to man as a world producing being. A common world is produced by objectivation of development as a dynamic concept of
reality available to the individual or group. Development has become an object and is seen as such.

Objectification is that point at which man is able to separate his position from his involvement in development as a subjective reality. Thus, man is in a developing process, but he can stand aside and view what development has done for him or others. This view removes man from the actual process of development.

Alienation is the process by which man realizes his separation from his development and what development has done for him or others. For example, technology derived from the developmental process is seen as that which caused the development. In other words, the improvements resulting from the developmental process come to be seen as the things responsible for development in the first place.

Reification is the conclusion of the alienation process through which development takes on the characteristics of an object or thing and ultimately, becomes "the standard of objective reality" (Berger and Pullberg, Op. Cit.:200). Man appears to forget "that the world he lives in has been produced by himself: (Berger and Pullberg, Op. Cit.:200).

Development is a subject object rather than a real object. It is man that is responsible for development
and it is social organization that is responsible for development and it is social organization that is responsible for man as we know him. In this light it is impossible for development to occur outside the context of social organization, but man has come to view himself as a recipient of the developmental process rather than the force responsible for development as a process.

Any developmental process will produce changes of some sort in social organization structures. Most models of development popular today either imply or assume that necessary positive changes in social organization structures will occur. The increase in social disorganization in already developed countries would suggest that social organization changes assumed by many models of development are less than realistic.

5. Summary of Implications

In retrospect several cautions for development sociologists have been suggested from a social-psychological foundation. They have been highlighted below for clarity and brevity. (1) One must be careful in assuming or transplanting development motives for others. (2) Development cannot logically be viewed as an object or thing. It is a process which is produced by men, and it in turn effects their social organization and concept of reality. (3) Application of development
models to others without regard to social consequences potentially may be reification of a collective fiction. (4) The assumption that application of development models to others will affect necessary changes in their social organization fails to recognize synergistic properties of social systems. It may be that changes in social organization structures result in development tendencies with less social disorganization. In other words, development models must be oriented at strengthening social organization in addition to the more overt material and economic considerations for which they are primarily designed and applied.

Presently, few development models give primary attention to the development of strong social organization structures in addition to economic and material considerations. A major focus of this study is to demonstrate that sociological considerations are a necessary, if not mandatory, ingredient in development models. It will be argued in a later portion of this study that greater attention and concern with cautions mentioned above may result in less social disorganization for those undergoing the developmental process today. The objective here is that economic and material development, in whatever form that process takes, must coincide with fundamental sociological considerations, i.e., the effects upon social organization.
Chapter 4.
Review of Domar, Harrod and Hicks Type
Development and Economic Models

1. Initial Statement
There are so many individual perspectives or models of development that it is virtually impossible to summarize all of them. However, a number of models bear great similarity and may be grouped together for review purposes. The discussion in this chapter is upon models that are typical of a particular group of similar models.

It is usual for development models to be characterized by economic or political emphasis of some type. Economic views and political bias are in fact often inseparable. With this thought in mind, the writer specifically attempted to view both positive and negative aspects of all models without regard to political implication.

The various models will be discussed, including a description of their orientation, a review of their conceptual approach and a critical appraisal.

2. Domar, Harrod and Hicks Type Models
This type model and the assumptions upon which it is based have been stated in concise form by Singer, complete with trend and numerical illustrations (Singer, 1964:381). The discussion which follows on trends,
assumptions, and data closely follows Singer's synopsis of the Domar, Harrod and Hicks type models of economic development. For brevity and simplicity these models will be referred to hereafter as Singer type models.

The Singer model assumes that approximately 70 percent of a population is agricultural and the share of national income from agriculture is approximately 40 percent. In addition the ratio of agriculture per capita income to average per capita income is assumed to be 57 percent. These figures approximate closely the conditions of the United States during the period from 1799 to 1860.

The Singer type models utilize a population size of 1,000 persons. Per capita income is assumed to be $100 annually at current prices. This is approximately the per capita income in most of the underdeveloped world today. The total national income of the model group thus equals $100,000.

The Singer type models than assign a per capita income of $57 to the 700 persons in agriculture and $200 to those in non-agricultural sectors. These statistics agree with the approximate per capita income of rural and urban populations of underdeveloped nations (Ojala, 1952:Table 11).
It may be noted that for our present purposes it is entirely irrelevant whether this structural change is considered as the 'purpose' or 'objective' of economic development, or as its consequence. Whether we start off with industrialization, with agricultural development, or in whatever way, rising income levels will have to be accompanied by a corresponding change in structure: i.e., a relative shrinkage of the agricultural sector. If a 70:30 ratio of agriculture is typical of underdeveloped countries, something like a 20:80 or 15:85 ratio is typical of countries at a high state of economic development, which are assumed to be closed systems (Singer, Op. Cit.: 384).

The movement from a 70:30 ratio of the agricultural to urban sector toward the 20:80 ratio represents an ultimate (steady state) equilibrium at a high level of development.

The Singer type and most other models assume that population increases will occur in absolute numbers in the non-agricultural sectors. A major assumption of the Singer type model is that populations will increase 1.25 percent per annum, as this figure is typical today for much of the developed world. Thus, for the first year we have a population composition structural ratio of 70:30 moving toward 69.1:30.9. The increase in the non-agricultural sector of 12.5 persons may be divided up into 3.75 persons representing the natural increase of population in the non-agricultural sector and of 8.75 persons representing the transfer of the natural increase of population in the agricultural sector from that sector to the non-agricultural sector (Singer, Op. Cit.: 386).
The Singer model is now faced with three major tasks: (1) The 8.75 persons transferred to the non-agricultural sector must become productively absorbed into improving industrialization. (2) Agricultural production must increase with a constant agricultural sector population. (3) The natural increase of the non-agricultural sector must be provided for at prevailing standards of living. Singer type models also assume a cost of $4,000 per worker transferred, or $1,600 per person transferred. For this reason the cost in the Singer type model to the country is $14,000 based upon the assumed 8.75 persons transferred to cities. This cost represents 14 percent of the national income of $100,000.

The Singer model population group is a poor group so it is assumed that a productivity of 17 percent or a capital/income ratio of 6:1 is reasonable. Thus, the investment of $14,000 will yield an annual net income of $2,333 or 2.3 percent of the national income of $100,000 assigned to the model group in the beginning.

The annual population growth rate of 1.25 percent recognizes that agricultural productivity must increase at least an equal amount. Singer points out that a minimum of a 4 percent agricultural productivity increase is more reasonable. This is due to the fact that some
productivity will be lost in transfer to non-agricultural areas and the fact that leakage always occurs in economic models. In other words, an increase in agricultural output of $1,200 must be achieved. It has been estimated that a yield of 25 percent or a capital/income ratio of 4:1 is possible in underdeveloped countries (United Nations, 1951:76). This implies that an increase of $1,200 annually in the agricultural sector occurs at a cost of capital investment equal to $4,800.

The total cost for the Singer model is $21,800. Industrialization costs $14,000, agricultural development costs $4,800 and provisions for the natural increase in population costs $3,000. Benefits from this investment add up to a $4,283 increase in net income per annum (Singer, Op. Cit.: 391). Per capita income increases 3 percent yearly under this type of model.

The total cost of $21,800 is equal to 22 percent of the assumed national income. It was earlier assumed by Singer that net savings for new investment would equal 6 percent. At this assumed rate only $6,000 out of the $21,800 is available. Thus, Singer's group now has a deficit of $15,800. With this unfortunate deficit on hand Singer proposes four ways of dealing with the deficit problem: (1) The cost of development must be reduced by lowering the capital/income ratio or
increasing the yield per unit of capital employed.

(2) An increase in net savings by reduction of consumption is suggested. (3) Reduce the rate of population increase further. (4) Outside resources of the group (both capital and technological) could be introduced. Table 2 depicts more clearly the economic propositions suggested by Singer. Please see Table 2.

Without the four additional approaches suggested by Singer to assist his model to overcome the $15,800 deficit, the model outlined in Table 2 requires 67 years to become self-supporting. This model may be summed up in the following equation (Singer, Op. Cit.:396).

\[ D = sp - \nu \]

D = rate of economic development defined as growth of per capita income.

s = rate of net savings.

p = productivity of new investment per unit of capital.

\( \nu \) = annual increase of population

Singer concludes that developmental potential of this model is optimistic if things go well and outside factors do not interfere within the closed model that is assumed to exist.
### Table 2. Singer Model Scheme

1,000 persons @ $100 each = total national income $100,000

<table>
<thead>
<tr>
<th>AGRICULTURE</th>
<th>NON-AGRICULTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>700 persons @ $57 each</td>
<td>300 persons @ $200 each</td>
</tr>
<tr>
<td>= $40,000</td>
<td>= $60,000</td>
</tr>
</tbody>
</table>

Natural increase each year (12.5 persons = 1.25%)

70% in agriculture
+ 8.75 persons Transfer from Agriculture
= 8.75 persons

30% outside Ag.
- 8.75 persons "Industrialization" = 0 persons + 12.5 persons

#### DEVELOPMENT OUTLINE

**A. Industrialization (transfer)**

Increased annual cost: $4,000 per worker output = $2,333

= $1,600 per worker transfer

(8.75 persons) = $14,000 (yield 17%) Capital/Income 6:1

**B. Agricultural Investment**

Benefit: 3% of ag. production
(Yield: 25%) = $1,200

Capital/Income 4:1

**C. Provision of Additional Capital for 3.75 persons**

Outside Agriculture ($800 per person)

Benefit: $750

Total Cost (A+B+C): Total Benefit: $4,283 per annum

Naturally available of which $3,033 is increase

$6,000 per capita

Deficit = $15,800 (increase at rate of 1.25%)

Development is Self-Supporting in:

<table>
<thead>
<tr>
<th>Per Capita increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Case I (11)</td>
</tr>
<tr>
<td>Case II (27)</td>
</tr>
<tr>
<td>Case III (67)</td>
</tr>
</tbody>
</table>

3. Critical Review of the Domar, Harrod and Hicks Type Models of Economic Development

Scrutiny of the Singer type models shows the high degree of similarity between this and other economic models of development. For this reason the sociological criticisms relevant to the Singer models applies to other economic models.

The Singer type models assume unlimited growth potential and this assumption is made in the context of a closed system environment. The nature of inter-penetrating systems, both economic and social, has been elaborated in great detail by a large number of respected scholars (Daly, 1973; Smelser, 1965; Horowitz, 1975; Parsons, 1971). Given the economic and social interaction characteristic between developing countries and developed nations, it is less than realistic to assume a closed model. Singer type models overlook the differing degrees of influence of powerful nations upon developing nations. This is especially true of developing nations strongly reliant in a military sense upon developed nations. This invalid assumption alone partially discredits the viability of the Singer type models.

Singer type models also assume equal availability of resources and energy at current prices. A number of
works point out that this is a flaw in theory (Daly, Op. Cit.; Ehrlich, 1974; Lenski, 1966; Zimmermann, 1964). The effect of the recent OPEC embargo should suffice as an illustration. There have been recent political involvements in a number of underdeveloped nations which possess quantities of natural resources. Prices of natural resources almost never decrease. The unequal distribution of world resources and energy availability demonstrate the weakness involved in models which assume closed systems.

Singer type models additionally assume relatively cheap labor and only enough technology to augment this labor. No concern is given to inputs of higher technology and the ensuing unemployment situation that may follow. In this regard, concern or attention is not given to the in-migration of cheaper labor from outside the system. This is precisely what has happened in much of the developed world today, i.e., Western Europe, Japan, and certain areas of Asia. This same situation has also happened in the United States and is currently being given attention by the President.

The above models also fail to account for the relativity and time sequences of development. There were no underdeveloped countries in terms of today's definition 100 years ago. There were, however, various new markets and trade sources (Vallianatos, 1976; Theobald, 1972). Today exponential increases in
technology make yesterday's production methods obsolete. It is highly unlikely that developed countries will declare a moratorium upon technological innovations until the underdeveloped nations can catch up. Singer type models assume that technological improvements, primarily in agriculture, will provide for populations migrating to industrial centers. No thought is given to end costs, social or political in nature.

We do not know what the purpose of life is, but if it were happiness, then evolution could just as well have stopped a long time ago, since there is no reason to believe that men are happier than pigs, or than fishes. What distinguishes men from pigs is that men have greater control over their environment; not that they are more happy. And on this test, economic growth is greatly to be desired (Lewis, 1970:85).

The assumption is that economic growth allows a greater range of environmental freedom, but for whom? This question is not addressed by the Singer type models.

A more serious shortcoming of most economic models, especially those discussed by Singer, concerns distribution of wealth. This is of major theoretical interest, yet receives little if any attention.

Theorists have long been aware that membership in stable societies involves costs to the individual (Durkheim, 1933:49-70). "In other words, men's selfish interests compel them to remain members of society
and to share in the division of labor (Lenski, Op. Cit.:44)." Cooperation is necessary for survival and goal attainment.

If these two postulates are correct, then it follows that men will share the product of their labors to the extent required to insure the survival and continued productivity of those others whose actions are necessary or beneficial to themselves (Lenski, 1966:44).

Lenski identified this statement as the first law of distribution. Surplus of goods and services is not dealt with by the first law of distribution and Lenski borrows from Weber at this point.

We define power as the probability of persons or groups carrying out their will even when opposed by others, "then it follows that power will determine the distribution of nearly all of the surplus possessed by a society" (Weber, 1947:152; Lenski, 1966:44).

When Singer type models assume a fixed or increasing rate of net savings ultimately to be reinvested into industrial growth, they violate distribution laws. The balance between net savings of the rich and poor may approximate the model assumptions, however, social and political stability come into focus. Gross inequalities in distribution practices are often what have been a catalyst for revolutionary trends in the past. Revolution never contributes to political or economic stability in the short-term. It is also equally unlikely that
those in power or having great wealth will invest
savings inside an assumed closed system. Switzerland
has built an enviable investment and banking trade
upon the stable potential for future gains outside
of assumed closed systems. This means precisely that
funds needed in the closed system are finding their
way outside or interpenetrating other systems. This
is a characteristic of the modern and developed world.
Based upon common economic knowledge, there is no reason
to suspect that net savings will remain inside the
assumed closed system, especially for the more affluent.
To support this view, inspection of Table 3 will give
some clue as to the differential investment percentages
of American business abroad.

Table 3
Value of U.S. Direct Foreign Investment (millions)

<table>
<thead>
<tr>
<th></th>
<th>1960</th>
<th>1970</th>
<th>1971</th>
</tr>
</thead>
<tbody>
<tr>
<td>all areas</td>
<td>32,778</td>
<td>78,178</td>
<td>86,001</td>
</tr>
<tr>
<td>developed areas</td>
<td>19,328</td>
<td>53,145</td>
<td>58,346</td>
</tr>
<tr>
<td>Canada</td>
<td>11,198</td>
<td>22,790</td>
<td>24,030</td>
</tr>
<tr>
<td>Europe</td>
<td>6,681</td>
<td>24,516</td>
<td>27,621</td>
</tr>
<tr>
<td>Japan</td>
<td>254</td>
<td>1,483</td>
<td>1,818</td>
</tr>
<tr>
<td>Australia, New Zealand and S. Africa</td>
<td>1,195</td>
<td>4,356</td>
<td>4,876</td>
</tr>
</tbody>
</table>

Underdeveloped nations

<table>
<thead>
<tr>
<th></th>
<th>1960</th>
<th>1970</th>
<th>1971</th>
</tr>
</thead>
<tbody>
<tr>
<td>all areas</td>
<td>12,032</td>
<td>21,448</td>
<td>23,337</td>
</tr>
<tr>
<td>Latin Amer.</td>
<td>9,271</td>
<td>14,760</td>
<td>15,763</td>
</tr>
<tr>
<td>Africa</td>
<td>639</td>
<td>2,614</td>
<td>2,869</td>
</tr>
<tr>
<td>Mid. East</td>
<td>1,139</td>
<td>1,617</td>
<td>1,657</td>
</tr>
<tr>
<td>Value of U.S. Direct Foreign Investment (millions)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>all areas</td>
<td>1960</td>
<td>1970</td>
<td>1971</td>
</tr>
<tr>
<td>Asia and Pacific</td>
<td>983</td>
<td>2,457</td>
<td>3,048</td>
</tr>
<tr>
<td>International (unallocated)</td>
<td>1,418</td>
<td>3,586</td>
<td>4,318</td>
</tr>
</tbody>
</table>


The United States receives a much higher percentage of return on investments in underdeveloped countries despite larger investments in developed nations (Weisskopf, 1972:431). An additional concern is that a higher proportion of earnings is often "repatriated to the U.S. rather than reinvested in the host country" (Said and Simmons, Op. Cit.:147). Thus, Singer type models do not allow for large economic leakages that may occur. The closed system model is ill-equipped to deal with leakage, although it should be added that no model anticipates leakage.

An additional complexity in operation of closed system models arises at this point. Large powers do in fact dominate exchanges with underdeveloped nations. The economic effects cannot go unnoticed.
the United States (whatever its economic system can be called) and the Soviet Union (whatever its system can be called) have shown a remarkable propensity to fuse their interests at the economic level and collapse their differences at a diplomatic level for the purpose of forming a new big power coalition that dwarfs the dreams of Metternich for a United Europe in the nineteenth century. Indeed, we now have a situation in which the doctrine of national self-interest has been fused to one of regional and even hemispheric spheres of domination by the two major world superpowers (Weisband and Franck, 1971, in Said and Simmons, 1975:133).

Singer type models do not indicate to what extent outside powers will interfere with or control economic development of lesser nations, either indirectly or directly. When consideration is given to power domination and overseas investment returns to powerful nations, the assumptions of reinvestment and economic productivity of the models under review seem to be highly questionable.

It is also no secret that a large number of developing nations do not manifest trust in their neighbors. Large American based corporations make large sales of military equipment to developing nations. In this respect there is a distinction between multinational corporations and military-industrial corporations (Galloway, 1972:491-510). Developing nations characteristically purchase more complex military technological items from developed nations. This represents sizable outflows of funds assumed by Singer to remain within a closed system. The United States is not alone here.
France has even gone so far as to supply, at great profit, both sides of an armed conflict and maintains a number of military salesmen to encourage sales.

Even if the above economic models did not assume closed system properties (some do not), cash outflows remain the same and the effects remain the same. A number of countries simply assume deficit budgets as the national course of events. Usually this is a result of large loans from the already developed nations, often for the purchase of military hardware and at other times under cover of foreign aid. The credit system is now becoming the natural state of most economies, but as will be pointed out later, these systems and approaches do not feed populations of developing nations. Changing world events may also call these deficit type economies to order at any time.

Another serious concern for the economic models discussed by Singer is agricultural production. All countries are not gifted with highly productive soil, at least in the natural state. Even fewer are gifted with ideal climates for all agricultural production. In addition, there are few nearly unlimited agricultural lands to be exploited as in the past. This concern is of major importance for the future.
From the beginning of agriculture until about 1950, expanding the cultivated area was the major means of increasing the world's food supply. Since that time, raising output on the existing cultivated area has accounted for most of the increase. An estimated four fifths of the annual rise in world food output achieved in the early "senenties" was due to the intensification of cultivation (Brown, 1974:75).

Much of the intensification of cultivation has resulted from development and introduction of high yield strains of grain which require massive doses of fertilizer. Unfortunately most of this fertilizer is made from petrol and phosphates. The prices of these necessary ingredients has risen steeply and quickly in recent years. The resources from which these types of fertilizers are produced are in limited supply which makes the long term situation even worse. Table 4 shows ranking in NPK fertilizer consumption for various countries. See Table 4 for a better understanding of fertilizer use by developed and underdeveloped nations.

Table 4

<table>
<thead>
<tr>
<th>Top Group</th>
<th>Kg./hectare</th>
<th>Kg./per capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>690.0</td>
<td>N. Zealand 161.7</td>
</tr>
<tr>
<td>Belgium</td>
<td>590.0</td>
<td>Ireland 130.8</td>
</tr>
<tr>
<td>Japan</td>
<td>406.3</td>
<td>Finland 98.8</td>
</tr>
<tr>
<td>W. Germany</td>
<td>374.5</td>
<td>Denmark 118.9</td>
</tr>
<tr>
<td>E. Germany</td>
<td>311.6</td>
<td>E. Germany 93.7</td>
</tr>
<tr>
<td>Cuba</td>
<td>234.1</td>
<td>Australia 89.2</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>82.6</td>
<td>U.S.A. 33.5</td>
</tr>
<tr>
<td>U.S.S.R.</td>
<td>34.5</td>
<td>U.S.S.R. 13.2</td>
</tr>
</tbody>
</table>
From Table 4 it is obvious that many of the developed nations need significant inputs of fertilizer just to augment basic produce demand. Additional quantities, usually large, are needed to insure basic agricultural subsistence even though the majority of needed food is imported. Singer type models transfer populations to industrial sectors via the assumption that agricultural production will increase to meet the needs of that population. The unfortunate truth is, however, that most populations and nations import food from a relatively small number of food exporters to meet their demand. The assumptions made by Singer and others that agricultural production will rise to meet demand is perhaps the greatest weakness of his mode. In such models nothing could be more important than feeding populations, nor could anything be more essential to development. Table 5 suggests that more food is needed than is presently

<table>
<thead>
<tr>
<th>Bottom Group</th>
<th>Kg./hectare</th>
<th>Kg./per capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>8.52</td>
<td>1.92</td>
</tr>
<tr>
<td>Pakistan</td>
<td>13.90</td>
<td>2.60</td>
</tr>
<tr>
<td>Indonesia</td>
<td>17.60</td>
<td>3.90</td>
</tr>
<tr>
<td>Brazil</td>
<td>20.20</td>
<td>6.62</td>
</tr>
<tr>
<td>Mexico</td>
<td>22.40</td>
<td>10.90</td>
</tr>
<tr>
<td>China</td>
<td>29.40</td>
<td>22.30</td>
</tr>
</tbody>
</table>

being produced, whether for direct consumption or for feeding livestock to be eaten later. See Table 5 to clarify this point.

Table 5
Wheat Importation, 1968-1969

<table>
<thead>
<tr>
<th>Country</th>
<th>Million Metric Tons</th>
<th>Kg./per capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cuba</td>
<td>1.17</td>
<td>142.8</td>
</tr>
<tr>
<td>Israel</td>
<td>0.367</td>
<td>135.3</td>
</tr>
<tr>
<td>Lebanon</td>
<td>0.280</td>
<td>110.1</td>
</tr>
<tr>
<td>Libya</td>
<td>0.202</td>
<td>107.9</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1.330</td>
<td>104.3</td>
</tr>
<tr>
<td>Martinique</td>
<td>0.032</td>
<td>94.5</td>
</tr>
<tr>
<td>Trinidad</td>
<td>0.097</td>
<td>94.3</td>
</tr>
<tr>
<td>Czechoslovakia</td>
<td>1.310</td>
<td>91.2</td>
</tr>
<tr>
<td>Norway</td>
<td>0.327</td>
<td>85.3</td>
</tr>
<tr>
<td>Britain</td>
<td>4.530</td>
<td>81.7</td>
</tr>
<tr>
<td>Guadeloupe</td>
<td>0.026</td>
<td>79.9</td>
</tr>
<tr>
<td>Belgium</td>
<td>0.810</td>
<td>76.6</td>
</tr>
<tr>
<td>E. Germany</td>
<td>1.190</td>
<td>69.9</td>
</tr>
<tr>
<td>Venezuela</td>
<td>0.030</td>
<td>69.9</td>
</tr>
<tr>
<td>Mauritius</td>
<td>0.057</td>
<td>69.2</td>
</tr>
<tr>
<td>Switzerland</td>
<td>0.391</td>
<td>63.2</td>
</tr>
<tr>
<td>U.A.R. (Egypt)</td>
<td>1.900</td>
<td>59.2</td>
</tr>
<tr>
<td>Algeria</td>
<td>0.562</td>
<td>42.8</td>
</tr>
<tr>
<td>W. Germany</td>
<td>2.150</td>
<td>35.5</td>
</tr>
<tr>
<td>Poland</td>
<td>1.130</td>
<td>34.8</td>
</tr>
<tr>
<td>Portugal</td>
<td>0.294</td>
<td>30.9</td>
</tr>
<tr>
<td>Italy</td>
<td>1.400</td>
<td>26.4</td>
</tr>
</tbody>
</table>


Table 5 would seem to suggest several ideas of importance. First, a number of considerably developed nations must import sizable quantities of grain to meet basic needs.
It must be concluded that a large number of nations must acquire grain from outside their boundaries to meet their basic demands. It is the more developed nations that are in a position to afford such purchases which penalizes developing nations in their quest to acquire the same grain but who are unlikely to be in a position to afford such purchases. It is also the more affluent nations which can afford to purchase the fertilizer necessary to augment their own production of grain. This information suggests that even countries with relatively high economic indices are less than successful in meeting agricultural demand. This is an important point because the Singer type models assume agricultural needs will be met and also increase yearly in an open-ended equation. Worse yet, this assumption is made on a 1.5 percent yearly increase in population which is far from realistic in most developing countries. Both the assumptions and planning of Singer models are simply not very realistic under the best of present circumstances. Singer has used averages rather than specific data for developing countries and herein lies another weakness. Table 6 gives information which demonstrates the weaknesses of the Singer assumptions. See Table 6.
Table 6
Geography of Hunger

<table>
<thead>
<tr>
<th>Country</th>
<th>per capita calories/daily</th>
<th>pop. in mil./year 2000</th>
<th>imports/metric tons 1972</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>3,180</td>
<td>29.4</td>
<td>-18,994</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>3,380</td>
<td>278.9</td>
<td>-51,991</td>
</tr>
<tr>
<td>Mexico</td>
<td>2,580</td>
<td>152.3</td>
<td>653</td>
</tr>
<tr>
<td>Honduras</td>
<td>2,140</td>
<td>8.0</td>
<td>48</td>
</tr>
<tr>
<td>Cuba</td>
<td>2,700</td>
<td>16.2</td>
<td>1,347</td>
</tr>
<tr>
<td>Jamaica</td>
<td>2,360</td>
<td>4.8</td>
<td>355</td>
</tr>
<tr>
<td>Haiti</td>
<td>1,730</td>
<td>11.6</td>
<td>61</td>
</tr>
<tr>
<td>Dominican Rep.</td>
<td>2,120</td>
<td>13.0</td>
<td>160</td>
</tr>
<tr>
<td>Trinidad</td>
<td>2,380</td>
<td>19.2</td>
<td>17.2</td>
</tr>
<tr>
<td>Guyana</td>
<td>2,390</td>
<td>2.0</td>
<td>-30</td>
</tr>
<tr>
<td>Surinam</td>
<td>2,450</td>
<td>1.0</td>
<td>16</td>
</tr>
<tr>
<td>Brazil</td>
<td>2,620</td>
<td>225.6</td>
<td>1,744</td>
</tr>
<tr>
<td>Bolivia</td>
<td>1,900</td>
<td>12.0</td>
<td>181</td>
</tr>
<tr>
<td>Paraguay</td>
<td>2,740</td>
<td>7.3</td>
<td>78</td>
</tr>
<tr>
<td>Peru</td>
<td>2,320</td>
<td>37.7</td>
<td>1,029</td>
</tr>
<tr>
<td>Chile</td>
<td>2,670</td>
<td>18.5</td>
<td>1,322</td>
</tr>
<tr>
<td>Argentina</td>
<td>3,060</td>
<td>34.3</td>
<td>-5,901</td>
</tr>
<tr>
<td>Uruguay</td>
<td>2,880</td>
<td>4.1</td>
<td>81</td>
</tr>
<tr>
<td>Ecuador</td>
<td>2,010</td>
<td>18.3</td>
<td>157</td>
</tr>
<tr>
<td>Colombia</td>
<td>2,200</td>
<td>64.0</td>
<td>428</td>
</tr>
<tr>
<td>Panama</td>
<td>2,580</td>
<td>3.7</td>
<td>85</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>2,610</td>
<td>4.4</td>
<td>118</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>2,450</td>
<td>5.7</td>
<td>46</td>
</tr>
<tr>
<td>El Salvador</td>
<td>1,930</td>
<td>9.6</td>
<td>-23</td>
</tr>
<tr>
<td>Guatemala</td>
<td>2,130</td>
<td>15.7</td>
<td>89</td>
</tr>
<tr>
<td>Iceland</td>
<td>2,900</td>
<td>0.3</td>
<td>29</td>
</tr>
<tr>
<td>W. Europe</td>
<td>3,218</td>
<td>299.8</td>
<td>15,704</td>
</tr>
<tr>
<td>E. Europe</td>
<td>3,222</td>
<td>125.6</td>
<td>7,315</td>
</tr>
<tr>
<td>Yugoslavia</td>
<td>3,190</td>
<td>26.3</td>
<td>1,068</td>
</tr>
<tr>
<td>Greece</td>
<td>3,190</td>
<td>10.8</td>
<td>417</td>
</tr>
<tr>
<td>Turkey</td>
<td>3,250</td>
<td>89.0</td>
<td>78</td>
</tr>
<tr>
<td>Spain</td>
<td>2,600</td>
<td>45.5</td>
<td>2,290</td>
</tr>
<tr>
<td>Portugal</td>
<td>2,900</td>
<td>12.2</td>
<td>1,146</td>
</tr>
<tr>
<td>Egypt</td>
<td>2,500</td>
<td>86.6</td>
<td>1,318</td>
</tr>
<tr>
<td>Libya</td>
<td>2,570</td>
<td>5.4</td>
<td>360</td>
</tr>
<tr>
<td>Mauritania</td>
<td>1,970</td>
<td>2.6</td>
<td>29</td>
</tr>
<tr>
<td>Senegal</td>
<td>2,370</td>
<td>9.2</td>
<td>422</td>
</tr>
<tr>
<td>Mali</td>
<td>2,060</td>
<td>11.5</td>
<td>26</td>
</tr>
<tr>
<td>Niger</td>
<td>2,080</td>
<td>11.1</td>
<td>-46</td>
</tr>
</tbody>
</table>
The vast majority of nations are presently importers of grain. The caloric intake figures in Table 6 indicate that even with importation of grain, daily caloric intake is seriously lacking in many nations. There are thus several logical conclusions regarding Singer type
models. If all things were equal (they are not!) and population growth could instantly be conformed to Singer's assumptions, then the vast majority of nations would still spend years trying to catch up on agricultural production to meet basic demand. Recent news about climatic changes and finite sources of fertilizer cast even gloomier suspicion upon Singer's agricultural assumptions.

Another erroneous assumption made by these types of models is that all nations have similarly suitable lands for agricultural production. This is simply not true. Approximately 70 percent of the earth's dry surface is unsuited for agriculture (Brown, Op. Cit.:77). A rising number of countries have exhausted the supply of new land for agricultural use (Brown, Op. Cit.:77). There is also a limit to how much agricultural production increase results from massive use of modern fertilizers. Although the use of fertilizer is necessary for most of the new high yield grain strains, there is a limit upon how much increase in yield can rationally be expected. This limit is being reached in many areas today. See Table 7 for information on this subject. It cannot be assumed that countries may infinitely increase agricultural production by additional use of new land or fertilizer, even if it is available and these countries
could afford it. This stark fact is not addressed in the Singer type models and the potential economic effects from this could effect the predictability of such models.

Table 7
Corn Yield Gains from Successive Fertilizer Applications

<table>
<thead>
<tr>
<th>Nitrogen Applied/Acre</th>
<th>Average Gain/Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>40 pounds</td>
</tr>
<tr>
<td>Second</td>
<td>40 pounds</td>
</tr>
<tr>
<td>Third</td>
<td>40 pounds</td>
</tr>
<tr>
<td>Fourth</td>
<td>40 pounds</td>
</tr>
<tr>
<td>Fifth</td>
<td>40 pounds</td>
</tr>
<tr>
<td></td>
<td>27 pounds</td>
</tr>
<tr>
<td></td>
<td>14 pounds</td>
</tr>
<tr>
<td></td>
<td>9 pounds</td>
</tr>
<tr>
<td></td>
<td>4 pounds</td>
</tr>
<tr>
<td></td>
<td>1 pound</td>
</tr>
</tbody>
</table>


There is another sidelight that may be worthy of consideration. The more developed countries become, the higher the percentage of daily protein they tend to derive from animal sources. This means that grain is consumed indirectly in the form of meat. People in developing countries eat roughly 400 pounds of grain per capita annually. For each pound of beef consumed by developed nations, nearly 20 pounds of grain is consumed by animals (Time Magazine, Nov. 11, 1974:75).
This suggests less and less grain available for the export market to developing countries.

With the assumption that developing nations are starting from scratch (they are not) and the assumption that present trends will continue, Singer models are on shaky grounds. In other words, it is likely that developed nations will consume more grain indirectly in the future through meat consumption and that the availability of grain to developing nations will decrease. Table 8 suggest this possible relationship. Developed nations indicate a preference for meat protein and there is no reason to suspect a change in this taste pattern as under-developed nations develop. See Table 8.

Table 8
Annual Per Capita Grain Consumption In Selected Nations, 1964 to 1966

<table>
<thead>
<tr>
<th>country</th>
<th>grain consumed directly (lbs.)</th>
<th>grain consumed indirectly (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>202</td>
<td>1,791</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>200</td>
<td>1,441</td>
</tr>
<tr>
<td>U.S.S.R.</td>
<td>344</td>
<td>883</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>169</td>
<td>856</td>
</tr>
<tr>
<td>Argentina</td>
<td>223</td>
<td>625</td>
</tr>
<tr>
<td>W. Germany</td>
<td>160</td>
<td>588</td>
</tr>
<tr>
<td>Mexico</td>
<td>305</td>
<td>242</td>
</tr>
<tr>
<td>Japan</td>
<td>320</td>
<td>211</td>
</tr>
<tr>
<td>China</td>
<td>312</td>
<td>118</td>
</tr>
<tr>
<td>India</td>
<td>288</td>
<td>60</td>
</tr>
</tbody>
</table>

The information just given must be given weight in the construction of development models. Presently, Singer type models and their assumptions seem to indicate a picture which is the reverse of current conditions and trends. Invalid assumptions if they form the base of programs can have considerable negative effects upon the solvency and structure of recipient nations.

The assumed annual growth rate of 1.5 percent used by Singer is unrealistic in light of present growth rates for most underdeveloped nations. Many developing nations have growth rates far in excess of 1.5 percent and they often pursue family planning programs rather vigorously. Such nations are very much aware of the economic and social consequences or costs of uncontrolled population growth. Annual growth rates are important not only for absolute size purposes, but especially as they affect the age of the general labor force. A labor force characterized by a young median age may have powerful effects upon subsequent economic planning and also economic reality. For example, a developing nation typically has a large percentage of young unproductive persons who are dependent upon a smaller labor force for support. To an extent, the reversal of this situation, i.e., a large older population, causes concern among economic and development planners for similar reasons.
A large youthful population requires training to fill the more technical positions that Singer and others hope will become the norm. The Chinese model which appears satisfied with labor intensive planning, at least in the short to medium term, may be an exception.

If the transfer of a great proportion (80:20 to 20:80) of the population from rural to urban sectors occurs, as suggested by Singer type planning, there must be a suitable education or training program. The costs of training may well exceed the figures cited by Singer. While the Chinese model does redistribute populations, those who migrate move into areas with similar educational characteristics to the ones they migrated from. Singer has suggested an approximate cost of $4,000 per each transferred person for retraining. It is not discussed, however, where personnel with skills to retrain these persons will come from and this weakness becomes more aggrevated in a closed system.

The Chinese model allows for some continuity in social structure and agricultural training is inherent in the communal approach. There is thus some merit in the Chinese approach which is lacking in the Singer approach. The Chinese approach will receive more detailed discussion in a later portion of this study. Reference to Table 9 helps illustrate the point of the above discussion.

See Table 9.
### Table 9

Regional Demographic Figures (1976)

<table>
<thead>
<tr>
<th>Region</th>
<th>Pop/Growth Rates</th>
<th>Pop/Under 15 Years of Age</th>
<th>Urban Pop/ %</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>1.8</td>
<td>36</td>
<td>38</td>
</tr>
<tr>
<td>Africa</td>
<td>2.6</td>
<td>44</td>
<td>23</td>
</tr>
<tr>
<td>West Africa</td>
<td>2.6</td>
<td>45</td>
<td>17</td>
</tr>
<tr>
<td>East Africa</td>
<td>2.8</td>
<td>45</td>
<td>12</td>
</tr>
<tr>
<td>Middle Africa</td>
<td>2.4</td>
<td>43</td>
<td>22</td>
</tr>
<tr>
<td>South Africa</td>
<td>2.8</td>
<td>41</td>
<td>41</td>
</tr>
<tr>
<td>Asia</td>
<td>2.0</td>
<td>38</td>
<td>25</td>
</tr>
<tr>
<td>S.W. Asia</td>
<td>2.9</td>
<td>44</td>
<td>41</td>
</tr>
<tr>
<td>Middle S. Asia</td>
<td>2.2</td>
<td>41</td>
<td>20</td>
</tr>
<tr>
<td>S.E. Asia</td>
<td>2.4</td>
<td>43</td>
<td>20</td>
</tr>
<tr>
<td>East Asia</td>
<td>1.7</td>
<td>33</td>
<td>30</td>
</tr>
<tr>
<td>North America</td>
<td>0.8</td>
<td>27</td>
<td>74</td>
</tr>
<tr>
<td>Latin America</td>
<td>2.8</td>
<td>42</td>
<td>59</td>
</tr>
<tr>
<td>Middle America</td>
<td>3.4</td>
<td>46</td>
<td>56</td>
</tr>
<tr>
<td>Caribbean</td>
<td>2.1</td>
<td>41</td>
<td>43</td>
</tr>
<tr>
<td>Trop. S. America</td>
<td>2.9</td>
<td>43</td>
<td>58</td>
</tr>
<tr>
<td>Temp. S. America</td>
<td>1.5</td>
<td>32</td>
<td>80</td>
</tr>
<tr>
<td>North Europe</td>
<td>0.6</td>
<td>24</td>
<td>64</td>
</tr>
<tr>
<td>West Europe</td>
<td>0.5</td>
<td>24</td>
<td>77</td>
</tr>
<tr>
<td>East Europe</td>
<td>0.7</td>
<td>23</td>
<td>55</td>
</tr>
<tr>
<td>South Europe</td>
<td>0.8</td>
<td>26</td>
<td>51</td>
</tr>
<tr>
<td>U.S.S.R.</td>
<td>0.9</td>
<td>28</td>
<td>51</td>
</tr>
<tr>
<td>Oceania</td>
<td>1.8</td>
<td>33</td>
<td>71</td>
</tr>
</tbody>
</table>

The developed world has a significantly lower percentage of persons under 15 years of age. This age-distribution did not, however, come about overnight. The trend toward lower annual population growth rates and a smaller percentage of young, will not develop quickly in developing countries. Various religious and cultural values as well as perceived political consequences account for this prediction. Developing nations are faced with a difficult dilemma. It is mandatory that birth rates be lowered and controlled for progress, yet religious and cultural variables remain extremely powerful and persuasive in counteracting such moves. The Chinese have initiated birth control and family planning, but have not oriented these programs toward displacing persons. They have in fact oriented family planning toward the level of this social group. The Singer models simply assume a given birth rate, but there is no evidence to support this assumption. Models similar to the Singer types must become tailored for the individual country involved. Individual nation differences cannot go unnoticed. Individual nation differences may account for the success or failure of Singer models in an historical perspective. Table 10 depicts individual demographic and economic differences that do not become apparent when viewing group data.
for the underdeveloped world. See Table 10 to clarify the above point.

Table 10

Individual Nation Data Compared With Grouped Data

<table>
<thead>
<tr>
<th>Area/Nation</th>
<th>Pop/Growth Rate Annually</th>
<th>Per Capita GNP (Dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>1.8</td>
<td>1,360</td>
</tr>
<tr>
<td>Africa</td>
<td>2.6</td>
<td>340</td>
</tr>
<tr>
<td>N. Africa</td>
<td>2.6</td>
<td>440</td>
</tr>
<tr>
<td>Libya</td>
<td>3.7</td>
<td>3,360</td>
</tr>
<tr>
<td>Sudan</td>
<td>2.5</td>
<td>150</td>
</tr>
<tr>
<td>West Africa</td>
<td>2.6</td>
<td>230</td>
</tr>
<tr>
<td>Mali</td>
<td>2.4</td>
<td>70</td>
</tr>
<tr>
<td>Togo</td>
<td>2.7</td>
<td>210</td>
</tr>
<tr>
<td>East Africa</td>
<td>2.8</td>
<td>200</td>
</tr>
<tr>
<td>Reunion</td>
<td>2.1</td>
<td>1,210</td>
</tr>
<tr>
<td>Rwanda</td>
<td>2.8</td>
<td>80</td>
</tr>
<tr>
<td>Asia</td>
<td>2.0</td>
<td>450</td>
</tr>
<tr>
<td>S.W. Asia</td>
<td>2.9</td>
<td>1,050</td>
</tr>
<tr>
<td>Kuwait</td>
<td>5.9</td>
<td>11,640</td>
</tr>
<tr>
<td>Syria</td>
<td>3.0</td>
<td>490</td>
</tr>
<tr>
<td>East Asia</td>
<td>1.7</td>
<td>710</td>
</tr>
<tr>
<td>Japan</td>
<td>1.2</td>
<td>3,880</td>
</tr>
<tr>
<td>Korea (North)</td>
<td>2.7</td>
<td>390</td>
</tr>
<tr>
<td>Middle S. Asia</td>
<td>2.2</td>
<td>160</td>
</tr>
<tr>
<td>Iran</td>
<td>3.0</td>
<td>1,060</td>
</tr>
<tr>
<td>Sikkim</td>
<td>2.0</td>
<td>90</td>
</tr>
</tbody>
</table>

Table 10 supports Singer's assumptions for demographic and economic characteristics of underdeveloped nations. However, these assumptions are subject to question when viewed at the individual nation level. Some are considerably higher than assumed and most are not in line with assumptions. For example, Malaysia and Singapore are next door to each other, yet their various economic and demographic characteristics are radically different. Development models of the Singer variety are not designed to be applied to regions of the earth, they are addressed to individual nations. With this thought in mind, the potential for success of these models when applied to the individual nation level becomes doubtful. Even if Singer type models are adjusted to allow for relative development, they still do not accommodate the time scale of development and the fallacy of closed system development.

In conclusion it should be noted that Singer type models must develop an awareness of other variables which effect the assumed course of development. Such variables might be war, famine, disease, natural catastrophe, corruption, political interference, and a myriad of similar factors that arise daily in developing nations as well as in developed nations.
Chapter 5

Review of Confiscation Models of Development

1. Initial Statement

In very recent times a majority of nations have either looked at or experimented with confiscation type economic and political models. These models are generally accorded a long list of titles ranging from Leninist, Marxian, Communistic or socialistic on the one hand to radical, leftist or totalitarian on the other. There obviously exists a great range of model interpretation and application, but it is not often that political parties care to distinguish the differences between such models. There is little doubt that some countries have been forced into their economic practices through revolution, outside interference, or perhaps through a democratic process of sorts. There is less doubt that people of many developing nations find confiscation models highly attractive, enough so to fight for this belief. Such trends cannot be cast aside without first understanding the processes by which this type of development operates.

It is also known, even by those in differing political camps, that some confiscation models have met with success. By contrast it has also been observed that persons involved in the movement toward a confiscation model have often paid a social price for change.
This study is concerned with the mechanics of the confiscation models and with their sociological relevance. There exist strong points of such models as well as weak points, as will be shown.

2. Confiscation Economic Models

The Appeal of Confiscation in Financing Economic development is not 'pure propaganda' in the sense of economic fallacy. It must be taken seriously, not shrugged off by easy analogies to a 'shot in the arm' or 'the goose that laid the golden eggs'. For confiscation of capital has not killed the goose that laid the golden eggs in the Soviet Union, in China, or in the other 'peoples' democracies' (Bronfenbrenner, 1964:472).

The countries espousing confiscation models of development have progressed industrially and economically much faster than most developing nations using a different economic approach. Pragmatically, confiscation has not lowered general standards of living. In fact, the general standard of living for a majority in the countries where it has been tried has improved as a result of confiscation planning. For many persons in a developing nation there is thus a high attraction to confiscation models, because of the implications for better justice and distribution of goods, at least in theory. All economic or political approaches have some inequalities and distributive injustices, but evidence suggests that confiscation approaches tend to minimize such injustices even though individualism is sacrificed.
It will be our contention that confiscation had done so, is doing so, and will continue to do so, by shifting income to developmental investment from capitalists' consumption, from transfer abroad, and from unproductive 'investment' like luxury housing. Therein lies the appeal of confiscation, although it is argued persuasively on the other side in developed countries that these accomplishments require totalitarian dictatorship for their realization and that development is not worth this price (Bronfenbrenner, Op. Cit.:473).

Bronfenbrenner has written an excellent synopsis on confiscation economic models, at least in this writer's opinion. He has distinguished three models of confiscation practice that help to portray various confiscation approaches. In addition, he has evaluated confiscation models in a very objective and neutral tone, which is not the case with all economic and political writers. Unless otherwise stated, the following discussion of the confiscation models follows Bronfenbrenner's presentation closely (Bronfenbrenner, Op. Cit.:472-494).

Model 1 addresses basic confiscation practice and theory. A hypothetical economy is assumed to have a net national and personal income of 100, after depreciation and before direct taxes. Income is divided into service income and property income. This holds true both before and after taxes. Service income proportionate to property income is 85:15. It is noted that readers may substitute their own values when deemed necessary (Bronfenbrenner, Op. Cit.:474). It is also assumed that of the property
share of income (15 absolute), one-third (5 absolute) will comprise net savings above the depreciation of capital.

Net savings are also broken down into forms available for domestic economic development and savings dissipated in foreign investments. Out of an assumed net savings of 5, 40 percent (2 absolute) is dedicated to domestic economic development. The remaining 60 percent (3 absolute) is dissipated in foreign investments.

Population growth is assumed to be 1.5 percent annually, the same value as the capitalist models assume. Aggregate net income growth is assumed to be 1.7 percent annually. "This last figure is compounded of a 15 percent return on developmental investment" (Bronfenbrenner, Op. Cit.: 475). Additional assumptions are: a 60 percent return on population growth and a 0.5 percent for entrepreneurship or innovation. Realistically, this innovation percentage increases "includes the introduction of methods already in vogue in other countries" (Bronfenbrenner, Op. Cit.: 475). With the assumed population growth rate of 1.5 percent and income growth rate of 1.7 percent, only 0.2 percent per capita income growth is realized annually. This rate represents near stagnation and does not assume redistribution of wealth. This model would obviously be less than desirable
to those among the developing nations considering a confiscation model. It would also serve to widen an already salient gap between the developed and the developing nations. Table 11 depicts clearly the rather stagnant conditions of Confiscation Model 1.

Table 11
The Status Quo: Economic Stagnation
Confiscation Model 1

<table>
<thead>
<tr>
<th>Line #</th>
<th>Units</th>
<th>Current</th>
<th>+5 yrs</th>
<th>+10 yrs</th>
<th>+20 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. real income absolute</td>
<td>100</td>
<td>108.8</td>
<td>118.4</td>
<td>140.1</td>
<td></td>
</tr>
<tr>
<td>2. service inc.</td>
<td>&quot;</td>
<td>85</td>
<td>92.5</td>
<td>100.6</td>
<td>119.1</td>
</tr>
<tr>
<td>3. property income</td>
<td>&quot;</td>
<td>15</td>
<td>16.3</td>
<td>17.8</td>
<td>21</td>
</tr>
<tr>
<td>4. saving ratio</td>
<td>%</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>5. developmental income</td>
<td>%</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>6. Pop. growth rate</td>
<td>%</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>7. income growth rate</td>
<td>%</td>
<td>1.7</td>
<td>1.7</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>8. per capita income rate</td>
<td>%</td>
<td>.2</td>
<td>.2</td>
<td>.2</td>
<td>.2</td>
</tr>
<tr>
<td>9. per capita income index</td>
<td>100</td>
<td>101.0</td>
<td>102.0</td>
<td>194.1</td>
<td></td>
</tr>
<tr>
<td>10. per capita service inc.</td>
<td>&quot;</td>
<td>85</td>
<td>85.9</td>
<td>86.7</td>
<td>88.5</td>
</tr>
</tbody>
</table>


Model 2 as discussed by Bronfenbrenner suggest ways
of application of confiscation models that deal directly
with stagnation problems common to Model 1. Model 2
involves a revolution of some type, but not necessarily
one of violence. This type of movement may range from
capital levy to nationalization of capital investments
and equipment. "At any rate, all capital goods which
yield profit become State property" (Bronfenbrenner, Op. Cit.:477). Profits formerly going to property
owners now go to the State. It is possible that former
property owners retain bare legal title to assets.

This model (Model 2) does not aim at redistribution
of wealth directly, and income from property goes to
the State, not service income sectors. Bronfenbrenner
refers to this condition as "Confiscation, Russian
Style" (Bronfenbrenner, Op. Cit.:477). The assumption
here is that two-thirds of property income (10% of total
national income) is channeled into non-productive
government expenditures such as armaments, weapons
systems, and military and space technologies. Even
with a 5 percent annual leakage of these funds, Model 2
is superior to Model 1. A higher growth rate of per
per capita income is realized by movement of former property
income into development income. Per capita service income
does not stagnate despite no attempt at direct redis-
tribution of wealth. It is thus somewhat superior to
the stagnant conditions of Model 1. Model 2 can be easily interpreted with reference to Table 12 which follows.

Table 12
Confiscation: Russian Style
Model 2

<table>
<thead>
<tr>
<th>Line #</th>
<th>Units</th>
<th>Current</th>
<th>+5 yrs</th>
<th>+10 yrs</th>
<th>+20 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>real income absolute</td>
<td>100</td>
<td>113.1</td>
<td>128.4</td>
<td>166.1</td>
</tr>
<tr>
<td>2.</td>
<td>service income</td>
<td>85</td>
<td>96.2</td>
<td>109.1</td>
<td>141.2</td>
</tr>
<tr>
<td>3.</td>
<td>property income</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4.</td>
<td>saving ratio</td>
<td>%</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>5.</td>
<td>development investment</td>
<td>%</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>6.</td>
<td>pop. growth rate</td>
<td>%</td>
<td>1.5</td>
<td>1.55</td>
<td>1.60</td>
</tr>
<tr>
<td>7.</td>
<td>aggregate income</td>
<td>%</td>
<td>2.48</td>
<td>2.50</td>
<td>2.53</td>
</tr>
<tr>
<td>8.</td>
<td>per capita income rate</td>
<td>%</td>
<td>.98</td>
<td>.95</td>
<td>.93</td>
</tr>
<tr>
<td>9.</td>
<td>per capita index income</td>
<td>100</td>
<td>104.9</td>
<td>119.7</td>
<td>120.1</td>
</tr>
<tr>
<td>10.</td>
<td>per capita service income</td>
<td>85</td>
<td>89.1</td>
<td>93.3</td>
<td>102.1</td>
</tr>
</tbody>
</table>


Although Model 2 appears economically superior to Model 1, Model 3 has certain advantages not found in the other two. Model 3 accepts a lower rate of growth after the 'revolution', but assumes higher short term personal
incomes. This is achieved by using former property income for various consumption use. The model redistributes one-third of property income (5% of national income, 6% of service income) to recipients of service income. In this sense property income is broken down into three equal categories: development investments, leakages, and transfers to service income. Bronfenbrenner refers to Model 3 as "Confiscation, Chinese Style" (Bronfenbrenner, Op. Cit.: 480). Model 3 does indeed have the disadvantages of Model 2. However, common persons benefit faster because of the redistribution of assets. But, those who spend income profit more than those who save it.

Study of Table 13 shows that Model 3 and Model 1 have similar per capita income rates, but more redistribution of wealth results under Model 3. Refer to Table 13 to clarify this point.

One of the features of Bronfenbrenner's presentation of the confiscation models is his awareness and recognition of historic trends. This is important because the confiscation models give some attention to social variables, a position noticeably absent in the capitalist models. For reasons of brevity I will present Bronfenbrenner's social recognitions in summary form (Bronfenbrenner, Op. Cit.: 483-487).
Table 13
Confiscation: Chinese Style
Model 3

<table>
<thead>
<tr>
<th>Line #</th>
<th>Units</th>
<th>Current</th>
<th>+5 yrs</th>
<th>+10 yrs</th>
<th>+20 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>real income absolute</td>
<td>100</td>
<td>109.8</td>
<td>120.8</td>
<td>146.6</td>
</tr>
<tr>
<td>2.</td>
<td>service income</td>
<td>90</td>
<td>98.8</td>
<td>108.7</td>
<td>131.9</td>
</tr>
<tr>
<td>3.</td>
<td>property income</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4.</td>
<td>saving ratio %</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>5.</td>
<td>development invest. ratio %</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>6.</td>
<td>pop. growth rate %</td>
<td>1.5</td>
<td>1.55</td>
<td>1.60</td>
<td>1.65</td>
</tr>
<tr>
<td>7.</td>
<td>aggregate inc. growth %</td>
<td>1.86</td>
<td>1.88</td>
<td>1.91</td>
<td>1.93</td>
</tr>
<tr>
<td>8.</td>
<td>per capita inc. growth rate %</td>
<td>.36</td>
<td>.33</td>
<td>.31</td>
<td>.28</td>
</tr>
<tr>
<td>9.</td>
<td>per capita index income</td>
<td>100</td>
<td>101.7</td>
<td>103.4</td>
<td>105.8</td>
</tr>
<tr>
<td>10.</td>
<td>per capita service income</td>
<td>90</td>
<td>91.5</td>
<td>93.1</td>
<td>95.2</td>
</tr>
</tbody>
</table>


Bronfenbrenner's social recognitions for Model 3 are as follows: (1) Social mobility was more probable in the early developing countries. The appeal of confiscation is far less under these conditions. (2) Expropriation in early years lacked today's appeal because capital was not generally in the possession of foreign
nations. (3) The time frame of development was usually of little concern in the past. Today, however, countries want development as soon as possible. (4) The drive toward conspicuous luxury is common today among the more affluent in developing nations. This draws more attention to the gap between the haves and have-nots. (5) The Iron and Bamboo Curtain governments are today more capable of handling confiscation schemes compared with the Western governments of the 18th and 19th Centuries. (6) Although confiscation of property played a small role in European development, the confiscation of resources played an important role indeed. Confiscation of resources played a major role in investment into modernization for the Western nations.

Bronfenbrenner has shown sufficient cause for the developing nations to be attracted by the various types of confiscation models. He also has issued some cautions that Western powers may well heed in the future.

Crumbs from the table will not do, nor pie in the sky when you die. Here lies the rub, for those benevolent global planners in the United States and the international agencies who hope to forestall confiscatory financing indefinitely by a spate of kind words and a few billion dollars spread thinly in time and space over the underdeveloped world (Bronfenbrenner, Op. Cit.: 489).

The appeal and political attraction of confiscation models cannot be denied, especially when economic progress
is only a promise to many. Herein lies a major commentary on confiscation models.

The attempt by the West to bribe or buy its way out of confiscation of its investments in the underdeveloped countries may yet become the white man's burden of the twentieth century. It is costly enough in the present, to taxpayers in the advanced countries and to victims of inflation and material shortages. What is more alarming is that each installment paid on the cost will increase rather than decrease the cost of each subsequent installment, with no upper bound in sight until the borrowing country has achieved development at a rate satisfactory to its leaders (Bronfenbrenner, Op. Cit.:490).

This statement was made almost two decades ago and this is exactly what has happened in parts of the Middle East and Latin America. Significant investments were made by the United States and other countries in developing countries, usually for development of needed resources. These funds and materials were confiscated, a matter which now is history.

One is often led to wonder if certain practices of developed countries does not drive developing nations toward various confiscation measures. Conditions of capital development and its inherent inequalities makes the confiscation models either attractive or considered necessary. These conclusive views do not, however, lead to the conclusion that Bronfenbrenner is given to radical views.
They do not disturb my general anticipation of an increasing appeal of confiscation in economic growth, until the bulk of world development is financed by State expropriation of the property share of the national income. Neither do they disturb seriously my general recommendation of continued economic isolation and withdrawal from most of the non-Socialist underdeveloped world at the 'least worst' policy for Western capitalism in the face of the threat implied in the appeal of confiscation. These defeatist conclusions apply particularly in Asia, where the direct influence of the Russian and Chinese expropriations is greatest, and where counterpressures from the West can least easily be brought to bear (Bronfenbrenner, Op. Cit.: 494).

3. Evaluation of Confiscation Type Models

It is obvious that the various confiscation type models as reviewed by Bronfenbrenner do not make the closed system assumptions typical of Singer type models. Confiscation models take cognizance of leakages and of the value of foreign investments. In some cases these models encourage foreign investment, with a strategy of waiting for more profitable confiscation returns in the future. Such models also do not make non-dynamic assumptions relative to economic growth.

The classical theory of production is formulated under essentially static assumptions which freeze— or permit only once—over change—in the variables most relevant to the process of economic growth. As modern economists have sought to merge classical production theory with Keynesian income analysis they have sought to merge the dynamic variables: population, technology, entrepreneurship and etc. But they have tended to do so in forms so rigid and general that their models cannot grip the essential phenomena of growth,
as they appear to an economic historian. We require a dynamic theory of production which isolates not only the distribution of income between consumption, saving and investment but which focuses directly and in some detail on the composition of investment and on developments within particular sectors of the economy (Rostow, 1970:33).

The various confiscation models do not overtly address the improvement of the agricultural sector or the transfer of agricultural production to the cities. In fact these specific plans are often among the most jealously guarded secrets of a number of confiscatory nations. However, several things are known in certain selected cases.

One fact known is that Russia succumbed to some rather unfortunate experience in the 1920's regarding agriculture and planning.

The initial attempt to run the economy was a disastrous failure. Under inept management (and often cavalier disregard of "bourgeois" concerns with factory management), industrial output declined precipitously: by 1920 it had fallen to 14 percent of prewar levels. As goods available to the peasants became scarcer, the peasants, themselves, were less and less willing to acquiesce in giving up food to the cities. The result was a wild inflation followed by a degeneration into an economy of semi-barter. For a while, toward the end of 1920, the system threatened to break down completely (Heilbroner, 1970:77).

It may be assumed that Russia's presently rather large grain deals with the United States either reflect continued agricultural failure, or stockpiling of grain as a hedge against future agricultural failures.
The Chinese appear to have had more success with their agricultural production. In fact some think that modern China is experiencing the first period in their history relatively free from famine and hunger (Committee of Concerned Asian Scholars, 1972:150-154).

Rather than rely upon market forces which perhaps had been responsible for China's decline in past times, modern China collectivized resources and land. Thus, they did not destroy family social organization, they simply made groups of families the owners of land. This was partially accomplished by pooling manpower, land, and equipment and also by cooperatively dispensed profits from production. For this reason, incentive was not stifled as was the case in the Russian approach. Farming for the Chinese was approached from a communal perspective.

The original agricultural commune adopted by the Chinese prior to 1958 proved unworkable and resulted in duplication of red tape and labor. For this reason a three-tier organization scheme was set up, which remains today. The three-tier organizational approach is essentially an incremental increase in size of units: (1) production teams, (2) production brigades, and (3) communes (Committee of Concerned Asian Scholars, 1972:153).
A production team consists of approximately thirty families. Responsibilities include agricultural planning and profit distribution. Often the production team is really an extended family, a traditionally important social unit in Chinese history. Thus, the Chinese model does not completely fracture the basic family unit. It is interesting to note that apparently the Chinese did not separate sociological functions from the economic functions within their model. This may account for the relatively stable social organization of the Chinese model.

The Chinese production brigade consists of several production teams. These brigades are actually an organizational planning unit whose functions include logistics, channel of distribution movement and production. At the higher administrative level production brigades merge to form communes.

A commune includes ten to thirty production brigades, each with decision making power. Demographic and vital statistics data are channeled through communes to higher bureaus for record purposes. Thus, all things considered, the basic Chinese village structure has not been radically changed. It was, however, remodeled and streamlined and given more autonomy, but with some direction from higher administrative levels. China has decentralized
mid-range planning to communal power status. This has been effective because incentive and direct identification with labor output has not been divorced from the ordinary man, as has been the case with the Russian development models. In addition, sociological variables have been central to China's planning schemes.

It is obvious that in a confiscation model some rather extreme form of planning and control must be exercised. In the Russian style models low productivity and lack of efficiency resulted because this was not evident. Agricultural productivity failed rather miserably because plowing was done by Machine Tractor Stations on a contract basis. Performance was judged by size of area plowed rather than quality of plowing (Campbell, 1960:72-73). There existed no competitive access to plowing and no recourse available to the farmer to redress poor quality of plowing. A further built in problem characteristic of the Russian model was encountered. Management personnel were likely to attempt to set readily achievable goals rather than optimistic goals, since the probability of meeting the more realistic goals was higher (Nove, 1958:134). This did not encourage productivity.

The Chinese have fared better than the Russians in several important respects. A U.S. Plant Sciences
Delegation went to China for inspection purposes in 1974 (Vallianatos, 1976:73). It cannot be certain if what they saw is truly representative, but their reports indicated that China had done well in an agricultural sense. "One does not sense the hopelessness evident in some other countries" (Wortman, 1974:16).

China accomplished much of her development feat with little technology and outside help. Little help was available from the West and Russia removed her technicians from China in the 1950's (Vallianatos, Op. Cit.:73). With a population in excess of 850 million there was little alternative to human labor. Agriculture was placed at the top of the priority list. Such a large population requires nutrition in sufficient quality and quantity if some social stability is to prevail.

The Chinese approach required extreme order and discipline to succeed. It appears the Chinese paid this price well, but it cannot be certain if other cultures with different values could adapt to this as successfully as did the Chinese. However, the Chinese model does provide a challenge and an alternative for developing nations to consider, especially with regard to the distribution of resources.
But the real answer to the Collectivist challenge will not be found in the realms of doctrine or of a theory. To give the Chinese their due, their solutions did not spring fullblown from Marxist-Leninist dogma, even as modified by Chairman Mao Tse-tung. They were worked out step by painful step within the framework of their particular vision. And with all their faults and shortcomings, visitors give them credit for evolving a more or less egalitarian society to the fair sharing of scarcity (Oka, 1975:7).

The important point to be noted is that the Chinese dealt effectively with large populations, scarcity of food and resources, and unfavorable political pressures from without and within. It is likely that sociological variables and an emphasis upon feeding populations were as important in the Chinese success as were the economic and political approaches used to carry out their program of development.

A point of major interest which seems to be a rather strong appeal argument for confiscation oriented models arises from the above. China was faced with similar economic, population, resource and technological problems which are characteristic of many of the other developing nations today.

The Chinese, however, did not assume a massive input of technology and industry would lead to development. They had to feed their huge populations and this goal received the focus of development attention. As noted, despite the news media focus upon the regimented life
style there and re-education projects of college students and former political groups, the general social organization of the peasants and villages was not radically altered. The Chinese merely instigated the idea of group ownership of land and collective production over individual ownership. In this manner the obvious problem of redistribution of wealth and land did not greatly penalize individuals since most had little or nothing to lose in the first place. Clearly, a majority prospered at the loss of a few. A majority of wealthy individuals and military men fled to Taiwan and a lesser number migrated to Hong Kong and Northern Thailand. There have been rumors that significant numbers of landholders or rich were killed, but numbers and cases of this occurrence have not become completely substantiated. It is not surprising that complete and valid information is not generally available because both political sides have engaged heavily in propaganda. Both sides of the political fence have engaged equally in discrediting success on the part of the other side. Although the objectives and motivations are rather obvious, it does make developmental sociology a bit more difficult.

Not only did differing political groups in China shelter their people, but China closed her doors to outsiders shortly after her revolution and has not seen
fit to reopen them to any great degree as of yet. These patterns have not been peculiar to China and for this reason many nations following confiscatory models release little information to outsiders. Also, it is logical to assume that only favorable information is released. In this regard, it has been noted that some confiscatory applications in Asia have tended to use labor intensive methods for production.

The notion of labor intensive developmental production may seem somewhat backward to many in the West, but in light of the facts in China, perhaps this approach has merit. In China's case a technological revolution would only have displaced greater numbers, raised unemployment and potentially produced civil unrest and social disorganization. Labor intensive agriculture is not backward under these conditions because large population sectors are meaningfully employed. In addition from the information available it appears that communal groups had collective power, i.e., decision making roles relative to their own social structure. This is a novel approach that seems to be working quite well, certainly better than Russia's approach.

The population aspect of the Chinese model has sociological significance for development study. If economic indicators show increases in absolutes and
other development indicators increase as well, there is implication that social disorganization may be increasing. It was pointed out earlier the pattern has become characteristic of the United States as well as of some other developed nations. The rigid social structure which evolved in Chinese society may not have been such a great price to pay, when viewed in light of other social factors.

Population is, indeed, a nation's greatest resource, though like other resources it may be squandered or misused. What greater asset can a nation have than a multitude of able-bodied citizens, ready to stoke its furnaces, work its mines, . . . what greater liability can a nation have than a mass of surplus people, living in hunger, and poverty, scratching at tiny plots of land whose produce will not feed them all, swarming into cities where there are no more jobs, living in huts or dying in the street, sitting in apathy or smouldering with discontent, and ever begetting more children to share their misery? The relationship between numbers and wealth and power is not simple, but surely it is significant (Organski, 1961:3-4).

Organski's logic is very clear and in the opinion of this writer, exactly on target. The general assumptions made by Singer type models do not deal with redistribution of wealth or power. They usually result in continuation of historic trends. It is likely that some applications of Western models do little more than contribute to continuation of present circumstances for a majority in developing nations. The reasons why some model
applications fail and others succeed is perhaps to be explained sociologically rather than by economists and business leaders.

In the United States, for example, there has been little change in wealth distribution despite favorable increases in economic indicators. Table 14 supports this point well.

Table 14

Percentage of Total Income Received by Different Income Groups, 1947 to 1972 (U.S.)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total/</th>
<th>Lowest 1/5</th>
<th>Second 1/5</th>
<th>Highest 1/5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972</td>
<td>100</td>
<td>5.4</td>
<td>11.9</td>
<td>41.4</td>
</tr>
<tr>
<td>1967</td>
<td>100</td>
<td>5.5</td>
<td>12.4</td>
<td>40.4</td>
</tr>
<tr>
<td>1961</td>
<td>100</td>
<td>4.7</td>
<td>11.9</td>
<td>42.2</td>
</tr>
<tr>
<td>1957</td>
<td>100</td>
<td>5.0</td>
<td>12.6</td>
<td>41.4</td>
</tr>
<tr>
<td>1951</td>
<td>100</td>
<td>4.9</td>
<td>12.2</td>
<td>42.2</td>
</tr>
<tr>
<td>1947</td>
<td>100</td>
<td>5.1</td>
<td>11.8</td>
<td>43.3</td>
</tr>
</tbody>
</table>


It would appear that distribution wise, the economy of the United States is rather stagnant much as Model 1 and the Russian model (Model 2) are. The Chinese model (Model 3) at least offers incremental increases of
relative economic position to those supporting that program. Little wonder that this confiscatory approach appeals to peasants in many developing nations. Perhaps there are other social inputs into the success of confiscatory models that have been overlooked by the capitalistic or property based income models discussed by Singer.

For purposes of nation power a nation is no larger than the portion of its population that makes a contribution to the furthering of national goals. We call these people the effective populations (Organski, 1972).

The Chinese approach has not displaced persons in the economic sense. It has, however, attempted to convert them into "effective populations" and based upon recent experience it appears this endeavor has been quite successful. It is also clear that the Chinese approach did not impede incentive as did the Russian approach. The West does not, nor has it ever, had a monopoly on values supportive of economic improvement. The Western world has not claimed to have a correctness of economic values, but the majority of development models do reflect a Western origin.

Fortunately for any plans which we may have for encouraging economic growth, China, Southeast Asia, the Islamic cultures of the Near East, India, and, although these are often ignored, the high native civilizations of West Africa are all thoroughly familiar with trade, credit, banking,
and private property. In the Islamic countries in particular, one is struck by the resemblance of these patterns to those of medieval Europe. China also seems familiar to an American in these respects. India avowedly has a different value system from the rest, but anyone who has done business there will recognize that indifference to economic gains is largely limited to ascetics (Linton, 1970:101).

The confiscation models are as dependent upon sociological factors and variables as are the Singer type models. The Chinese perhaps had some advantage over a few other nations in that they did recognize the immediacy of feeding their population and did not set out to transfer their rural population to the cities. Some reports have suggested that the Chinese moved urban populations to rural settings. As a result planning was geared away from massive peasant exodus toward the cities for technical jobs that did not exist. An additional strong point was that politics were geared to reach from higher levels down to the individual peasant. It appears that the Chinese were able to motivate peasants to such an extent that success in development did not seem an unreasonable objective or illusion. It is appropriate to note that populations can evolve values and attitudes that are anything but favorable toward development. The evolution of negative development values among a people has occurred in history.
One often hears that our own reservation Indians have no desire to improve their economic condition. Government experts will tell them how to breed cattle or get better crops by scientific methods, but they will go on as they are. If one follows back the history of the dealings of our Indians with the United States government, it is easy to understand the reason for such apathy. Tribe after tribe made a real effort to copy white ways when they were placed on reservations. They saw that the old life was ended and did their best to adapt. However, whenever a tribe got a communally owned cattle herd which could be a valuable source of income, stockmen who wanted the range brought pressure in Washington, and the tribe suddenly found its herd sold and the money "put into trust." If a tribe developed an irrigation project and brought new land under cultivation, presently an excuse would be found for expropriating this and moving the tribe to a still more submarginal territory. The Indians were frustrated and puzzled by changing government policies, in which the only consistent feature was that they always lost, and finally settled back into apathy and pauperism (Linton, Op. Cit.:98).

It is doubtful that people who have endured such experiences time and again can be easily persuaded to try once more. In this sense the confiscatory models offer a radical alternative to Singer type models. At any rate they offer a chance to begin anew with a clear slate. The appeal is doubtless more attractive to those who have tried the Singer type approaches and have gained nothing or perhaps even lost ground.

There is even more appeal to those born into poverty conditions. The notion of communal property and wealth is not at all peculiar when placed into this context. The sharing of property and wealth may seem
staggering to most Westerners, but those in developing nations have been sharing poverty in a communal sense for ages. The opportunity to share new wealth brought about by redistribution is another sharing experience. Stratification is certainly not new in the world, nor is it solely a product of capitalism. Capitalism is, however, somewhat more conducive to continuing social inequality, both socially and economically.

Equally crippling to the development of the poor countries is their rural elites and the contempt these land owning minorities feel for their peasant majorities. The massive exodus of the rural population of the underdeveloped countries from agriculture to the cities reflects the desperate effort of the peasants to escape the crushing poverty of their social and physical environment. These peasants have vastly inferior basic facilities like water and health care. Their children can for the most part aspire to no more than two years of elementary schooling. Their levels of living have changed very little... When a family collapses into indigence it breaks up, joining gangs of rural guerillas or becoming urban beggers, prostitutes, and thieves. The margin of survival for both the poor and the indigent is narrow (Vallianatos, Op. Cit.:153).

Anyone who has lived in developing countries among the poor knows Vallianatos' observations are correct, if unfortunate.

The exotic and quaint pleasures, foods, dance, art and so on of developing countries are generally reserved for the rich tourists and visiting scholars. That is why local people see little alternative to supporting confiscation models, if there is to be hope of some improvement
in the future. There are many scholars who do not see confiscatory models as utopian, but rather as less frustrating alternatives to Singer type models. All models must be viewed within the social and historic context in which they evolved and are applied.

This brings us to the crux of attitude differentials found in the so-called battle between capitalistic and confiscatory models of development. The conflict is far deeper than indicated by the attention given to this issue. The conflict is essentially sociological in its manifestations. A large number of nations deemed developed have traditionally been characterized by a profit seeking motive. An even larger number of currently developing nations have traditionally been empire seeking nations.

The key to capitalist success was not simply the ability to organize individuals. After all, the Romans, the Incas, the Mongols, and the Confucian bureaucrats of China were all superb organizers. Rather the success of these capitalist centers was due first to their ability to focus on profits to the detriment of most other considerations (Weber, 1969:1094-1099).

Perhaps the question regarding what development is or should be can be found in this view. The capitalistic and confiscatory approaches echo memories of empire seekers versus profit seekers. It is true that a number of Western developed nations have controlled empires,
however, these empires were trade and resource empires. The traditional empire building nations often expended great sums of money for the glory of the empire itself. Profit was clearly not their motive. In fact, many empire building nations spent far more than could ever be gained just to build an empire and hold it together. Lack of interest in traditional empires no doubt helped a number of developed nations to achieve this status.

Western Europe had the great fortune of never uniting. The failure of 1000 years of effort at putting the Roman Empire together again meant that no single imperial structure was able to dominate Europe. This lack of domination aided economic advance; for imperial structures drain away business profits, stifle free thought and subjugate it to political order, overtax their subjects, attempt to impose religious and cultural uniformity, and seek glory and pomp (Chirot, 1977:21).

The attitudes that laid the groundwork for the developed world have traditionally been profit oriented. In this sense the confiscatory models are not so much profit oriented as they were "catch up" patterns. This thought introduces a new approach to the old profit versus empire conflict. However, the confiscation oriented nations face more severe social problems today than did the developed nations in times past. For this reason the regimentation and harsh social control typical of developing nations may be justified in light of the problems they face. There are no longer simple profit
seeking nations nor are they empire building nations. They are simply trying to survive. There are certain other contributing factors that make development somewhat more precarious than in times past. The profit motive has been used by nations favoring confiscatory models to explain the relatively poor economic conditions characteristic of developing countries. Profit oriented nations are blamed for causing the poverty found in developing nations today.

The presence of foreign investment in non-core economies in the early twentieth century has often been used to explain the poverty that prevailed there. But this argument is clearly a misguided reading of the facts, for those non-core areas that held the largest foreign investments per capita were also the most prosperous non-core societies. The bulk of foreign investment was attracted by the presence of valuable export commodities, and the more of these that existed, the wealthier the society (Frank, 1970: 4-17).

In the above light even the underdeveloped nations exploited by the capitalistic nations were better off economically than the isolated nations having no contact with capitalistic or communal oriented nations. Thus, the important variables are more than profit or economic indicators. They are also more than communal sharing of wealth. They are inherent in social organization complete with attitudes, values, motives, and abilities and coupled with the development approach used to achieve progress.
The confiscation models have in some cases been more efficient in dealing or altering social organization than have the profit oriented models discussed by Singer.

It is not correct to say that development ends ethnic divisions, not as long as there exists a culturally based division of labor in which certain culturally defined groups continue to occupy only certain economic positions. . .
Development does not end regionally based hostilities if it perpetuates regional inequalities in power and wealth. . .
Development does not eliminate religious conflict if religious differences remain correlated with major ethnic, regional, or class differences (Chirot, Op. Cit.:56-57).

Perhaps the better performance of confiscation models has not been because of the superiority of the confiscation approach, but because of the central issuing of power to deal with such problems. In this sense the confiscation models are perhaps the children of the old empire building tradition. It will be difficult, however, to fully develop this line of thought due to the lack of information and data for countries having taken the confiscation approach. Outside of the short-term success they seem to be enjoying, they remain fairly mysterious to most of us. But, it does appear that the confiscation models do have some advantages over Singer type models in the short run that cannot be overlooked.

Indeed, in not a few countries, the only way quickly to increase the well-being of the poor would be through a redistribution of landed
wealth, creating either small peasant farms, or communal tenure systems which encourage labor intensive methods of cultivation (Griffin, 1976:1). Before leaving this topic, it must be pointed out that the data available for the capitalistic nations do not always give a very true picture of actual living and social conditions either.

India for example, has experienced no rise in average income during the present decade; moreover, there is evidence that the incomes of the bottom percentiles of the population started to fall at least as early as the beginning of the 1960's (Dandelaar and Rath, 1971). Similarly, in Bangladesh, despite the paucity and poor quality of the data, there is unmistakable evidence that between a third and 40 percent of rural households have suffered a sharp decline in their standard of living (Khan, 1974:21).

Circumstantial evidence from Morocco also indicates that the impoverishment of the peasantry continues (Griffin, Op. Cit.:2).

From the above quotations, it should be clear that economic indicators do not tell the full story of development. This also holds true for the confiscation models as well as for the profit oriented models. Developmental sociologists must remain very careful of drawing conclusions about economic models and their application without doing so in a sociological context. It is the social context and within the social structural organization that the development picture gains form.

In conclusion several observations can be made about the confiscation models. First, they have the
power to deal directly with social organization changes or reinforcement. Generally, the profit oriented models simply assumed needed changes will occur, or that changes that do occur are for the better. Second, the confiscation models are ideal for dealing with the physical and social environmental settings in some nations. That is the cultural values and social patterns are receptive to confiscation approaches. It is also clear that profit motives are alien to some cultural settings and profit models may be doomed to failure when applied to nations where such patterns exist. Third, the real appeal of developmental approaches may lie, not only in existing conditions, but in notions of what development is or should be which people have. Certain societies may desire strong social control and a more equal sharing of wealth or hardship. Other peoples may find profit seeking the essence of their life. It is not up to the development sociologist to decide what is good for whom and under what conditions people will be developed. His charge is to provide the foundation for making wise decisions.

In summation and retrospect, it is best to simply say that both the profit and confiscation models have social merit and appeal or they would not have such a wide following. It is up to the various involved groups
and populations to decide what course of development they desire. It is also the same groups and populations which must guide development and progress in such a manner that social organization and social structure are reinforced in addition to realization of successful material progress.
Chapter 6
Toward A New Development and Growth Model

1. Economic and Social Development: A Movement
   Toward Unity

All too often it has been assumed that increases in the value of economic indicators represented national development. Today this assertion does not receive the general agreement it once did.

During the 1950's and for most of the 1960's, economists and national policy makers concentrated on raising aggregate rates of growth of domestic product. This tendency was reinforced by international aid agencies which set growth targets and devised performance indicators on the basis of which assistance was allocated (Griffin, 1976:2).

When economic indicators were interpreted in this manner, poor and stagnant developing nations actually received less aid than nations which were developing at a faster rate. Thus those countries which most needed aid were the countries which sometimes benefited the least from donor nations. Some of the nations that seemed to be developing the fastest by economic indicators experienced a widening gap between economic classes. Indeed, in Pakistan, during the period of swift expansion when the economy was hailed as a model of capitalist development, the real incomes of both the urban and rural poor were falling. In Malaysia per capita income was increasing, but the Gini-coefficient was also rising from 0.40 to 0.51. Rural areas suffered decreases in real income.
(Grinnin, 1976:2-3). It is clear that despite increases in the value of economic indicators in these countries, conditions were becoming worse for the lower classes in their populations. A realization of this incongruity was expressed by Griffin as follows:

The gradual realization that growth was doing little to alleviate the misery of much of mankind led many analysts to urge that economic policy be reoriented away from a preoccupation with the growth of production and in favor of the creation of employment opportunities for those who either had no job or were in disguised unemployment (Griffin, 1976:3).

In light of the above noted discrepancies, growth as it has traditionally been viewed has not succeeded as well as previously believed. Models of development which measured progress by using economic indicators could well reach misleading conclusions. In fact, economic indicators such as GNP or per capita income are averages and tell virtually nothing about quality of life or the equality of distribution of funds. What apparently happened to some analysts was an infatuation with growth with little regard for social and environmental impact.

There is nothing in front but a flat wilderness of standardization either by Bolshevism or Big Business. But it is strange that some of us should have seen sanity, if only in a vision, while the rest go forward chained eternally to enlargement without liberty and progress without hope (Chesterton, 1926).
There is certainly nothing wrong or immoral about economic growth, but there is nothing inherently good about it either. The concept of good or evil is constructed within the human consciousness. Neither the Communistic or Capitalistic models of economy have a monopoly on correctness or goodness of development. It is within the realm of human social organization that attitudes, values, and beliefs are fostered regarding the desirability or morality of a thing or idea. It is also within the realm of human social organization that development is defined and judged. Man cannot be separated from his social system, and thus, since it is man who creates and defines development, a development process is inherently a sociological process. In this sense, the concern of communist and capitalistic models of development with economic indicators can be explained. They are in competition and can use economic criteria to demonstrate superiority over one another. This has led to an intoxication with growth figures, which has become the topic of study among some economists.

The fragmentation of knowledge and people by excessive specialization, the disequilibrium between the human economy and the natural ecosystem, the congestion and pollution of our spatial dimension of existence, the congestion and pollution of our temporal dimension of existence with the resulting state of harried driveness and stress—all these evils and more are symptomatic of the basic malady of growthmania (Daly, Op. Cit.:14).
Often the intoxication with economic indicators focuses attention away from the social consequences of economic growth. The sociological concern with growth is, however, the social costs of growth. The President's Council of Economic Advisors has commented on this, although in form somewhat opposite than might be expected.

If it is agreed that economic output is a good thing it follows by definition that there is not enough of it (Economic Report of the President, 1971:92).

The assumption here is that economic growth has no finite end. Also, and of more importance, it is assumed that there is not a point at which economic growth may produce grave social consequences. This perspective is common to all the various political systems and business orientation. Daly has addressed this issue in an interrogative stance.

"When do the costs of growth in GNP outweigh the benefits?" is contained in the question itself. This occurs when the decreasing marginal benefit of extra GNP becomes less than the increasing marginal cost. The marginal benefit is measured by the market value of extra goods and services - i.e., the increment in GNP itself in value units. But what statistical series measures the cost? Answer: none! This is growthmania; literally not counting the costs of growth (Daly, Op. Cit.:150).

Daly goes on to suggest that the situation described can become even worse. The costs of growth are figured into the GNP and result in inflated figures. A number of unwanted side effects of this growth are actually
added into the GNP. There is no accounting process by which these costs may be subtracted from GNP.

We count the real costs as benefits—this is hyper-growthmania. Since the net benefit of growth can never be negative with this Alice—in—Wonderland accounting system, the rule becomes "grow forever" or at least until it kills you—and then count your funeral expenses as further growth. This is terminal hyper-growthmania (Daly, Op. Cit.: 150).

In this respect the sociological costs of the social disorganization process become benefits, when in fact they represent costs which should be subtracted. It is for reasons such as this that economic models of development do not tell a full story.

It would appear that the more fundamental aspects of life as we know it have become somewhat secondary to economic interests. Perhaps it is this process which causes a large number of scientists and citizens alike to question the nature and course of progress.

It is equally interesting to note that a number of developing nations adopted the social organization patterns of developed Western nations. This may account for the fact that these nations defined progress as done in the West. It would be more realistic for these nations to look to the sociological realm for answers that explain why some nations have developed and others have not, at least in terms of economic development.
It is perhaps in the cultural and intellectual sphere that the essence of the differences between core, semi-peripheral, and peripheral societies is most evident. Unfortunately, ideas are hard to measure, and because of that, the defenders of non-Western cultures have repeatedly stressed that "Third World" cultures have retained their superiority in the face of Western military, economic, and technological success (Chirot, Op. Cit.:39).

At this point one should be careful not to misread the impact of certain aspects of culture. It would seem doubtful that any nation could legitimately claim to be more humanistic than another. Inequality and discrimination within social organizational structures certainly appear in all nations. Any claim to cultural superiority of this type is nothing more than ethnocentrism at best.

All attempts to prove that any culture is more humane, civilized, or philosophically attuned to universal truth than any other are fruitless except as a means of boosting cultural pride (Chirot, Op. Cit.:40).

In fact, time and energy spent defending the superiority of one's own cultural values and practices is often wasted and misses the point development projects.

Rather, the key question is: What cultural patterns have shaped change in the twentieth century? The answer is clear. Because of the overwhelming economic and military strength of the West, each contemporary culture has had to adapt to Western ways or perish (Chirot, Op. Cit.:40).

To put the above discussion in its obvious perspective, it is quite clear that survival has become
the overriding factor in the modern world. This survival may be in a military, social, or agricultural sense, but one thing is clear. Modern societies do interact and what one society does affects another society. The observed supremacy of the West in a technological and scientific realm has prompted many traditional societies to either initiate change, or at least consider this as an alternative to their current practices. Societies thus cannot be viewed as separate entities which undergo natural unplanned change.

Recently, we have come to view society as more open to deliberate reconstruction, and its processes as subject to guidance. . .

Over the last twenty years, our collective ambition has risen. We decided to change, by design and in accord with guidelines laid down nationally, the relations between the races (Etzioni, 1969:190). Societies do retain traditional values and cultural patterns, but deliberate change is always superimposed on traditional ways.

Unfortunately social and economic change presents problems. Social disorganization as a process has become increasingly obvious among many of the more developed nations. Although economic indicators have risen, social disorganization indicators have risen more rapidly. Well intentioned induced change has often resulted in latent functions that were not expected or desired.
Even the best minds remain somewhat confused over the results of social change and the failure of induced development programs.

But the sad truth is that we do not know how to guide societal changes in the desired directions, and hence ten and fifteen years after various programs have been initiated, many of the problems we set out to solve will still be with us (Etzioni, Op. Cit.:191).

There are certainly a great many factors which account for the failure of development programs which are of a sociological nature.

Fifteen and ten years ago, under-developed countries were formulating master plans for their modernization. Fewer than one out of ten were implemented even in part. In short, while there are significant differences in the complexity of problems various societies face, in the respective capacity to handle them, and in the specific kinds of deficiencies their governing processes show, all societies have yet to manage affairs more effectively (Etzioni, Op. Cit.:191).

One possible reason that societies have not learned to manage themselves more effectively is due to the rather infantile stage of the social sciences insofar as developmental study is concerned. There may be a reason for this situation.

Doing so we are immediately struck with one reason societies often score poorly in their self-management: they spend relatively very little on knowledge and much more on "doing." And most of the funds that go into the production of knowledge are earmarked for the natural sciences, i.e., for the study of the non-social environment (Etzioni, Op. Cit.:193).
The state of development sociology, as well as other social sciences, cannot be expected to improve unless there is adequate funding and a desire to accumulate the knowledge needed. It cannot be assumed that a low level of knowledge and resultant poor planning can produce anything other than bad results. It is little wonder then that implementation of developmental plans has resulted in such disastrous results. This poor showing cannot be blamed entirely upon the social sciences. However, improved funding of the social sciences may result in better development models. Without taking credit from economists, an economic plan for development is on shaky grounds if it does not take human (or socio­logical) factors into consideration. This unfortunate condition is the trend at this time.

Development policies, modules, and programs attempt to maximize certain values. More often than not these values are economic ones. The maximization of certain values or goals may result in overall failure of development programs.

He would in fact disregard most other social values as beyond his present interest, and he would for the moment not even attempt to rank the few values that he regarded as immediately relevant. Were he pressed, he would quickly admit that he was ignoring many related values and many possible important consequences of his policies (Lindblom, 1969:154).
It is the important consequences of policies that most characterizes the purpose of developmental planning. Developmental models must be oriented toward the progress of mankind and toward improvement of man's lot. Otherwise, development remains only an economic and technological game.

Developmental plans and models must be geared toward economic happenings, but they must also recognize that what is socially correct for one nation may be disastrous for another nation.

In the first decade of the twentieth century, virtually all new ideas came from the tiny number of Western societies at the core of the capitalist world system. Latin American societies could try to imitate French intellectual fashions and political forms, German military organization, but innovation in Latin American cultures was just that - imitation - not domestic dynamism. Latin America was not alone (Chirot, 1977:40).

It is doubtful that simple imitation of another country's successful development scheme will produce anything other than changes or problems for the native social organization system.

There must exist ways for countries to develop, both economically and scientifically, and still retain their cherished cultural patterns and values. It would seem rational to suggest that developmental plans or models allow for this possibility and not be oriented toward changing other nations into patterns of the West.
In this respect, some alternative models to industrial development are well suited for certain developing nations. As noted, some modern development models assume that economic development is the end goal and that industrialization is the process by which to reach this goal. It has also been pointed out earlier that social disorganization seems to be increasing at a faster rate than economic indicators in some developed nations.

Conceivably development plans that are oriented toward solving more fundamental problems are warranted. It is possible that developmental goals of a non-industrial nature may prove equally progressive as have traditional models in the past. The author of this study is optimistic that an alternative to industrial development can be developed and at the same time operate to reinforce the social organization of the countries that choose to select non-industrially oriented futures.

2. Essential Development: From Fundamental Development Toward Complex Development

One of the most essential and basic problem man faces is very old. It is simply how to feed one's populations. Although Thomas Malthus received much recognition for his writing on the issue, writers from the beginning of recorded history have commented on this subject. Aristotle is on record with the remark:
"that from time to time, it is necessary that pestilence, famine, and war prune the luxuriant growth of the human race" (Newsweek, Nov. 11, 1974:60).

Dr. Jay Forrester, a professor at MIT, came under fire when he suggested letting the least fit die in order to save the more robust victims of hunger (Newsweek, Nov. 11, 1974:60). In this regard, 1974 was the year of international focus upon hunger as a world problem. A number of highly publicized conferences occurred in 1974, however, the outcomes from these meetings did not change the obvious. Population is growing faster than world food supply. Since a number of nations, maintain large populations for political power, it is obvious that cutting down populations is not going to be well accepted. This, nevertheless, is the most rational and direct move to deal with global hunger.

This was painfully clear at the World Population Conference in Bucharest last August. Advocates of population control were sometimes heckled. Ridicule was heaped upon proposals from the developed countries - led by the U.S. - that called for setting up family planning programs in underdeveloped nations and reducing the world's birth rate from 2% now to 1.7% by 1985 (Time, Nov. 11, 1974:75).

This general attitude has also bee attacked politically by representatives of developing nations.

Latin American delegates claimed that overpopulation was a myth invented by the rich to exploit the poor. China's representative, Huang Shu-tse, declared: "The large population of the
Third World is an important condition for the fight against imperialism." No wonder that one delegate from a sparsely populated nation muttered that the conference was "more demagoguery than demography" (Time, Nov. 11, 1974:75).

The allegations against the developed world may or may not be correct. It is certain that most developing nations cannot feed their populations and that this problem is going to have to be approached in a non-political manner. Political argument and bitter debate may reassure political convictions, but it will not feed people. Neither will demagoguery supply food for populations yet to be born. It is possible that intelligent and essential development planning will solve this problem and contribute to establishment of a better world for the poor as well as the rich. Without such rational and essential planning there is little hope things will improve.

The world food shortage has sparked comments from important men that give a clue to the impact food will have on foreign policy in the future. For example, there is more and more discussion, both open and secret, about triage. Triage is essentially the allocation of resources to areas where they will do the most good. Agricultural triage is the allocation and delivery of agricultural resources to nations whose cooperation is deemed useful and supportive. In this sense, food or the exportation
of agricultural technology and resources will be aimed
toward nations who have made the most effort to help
themselves. Withdrawal or withholding of such aid from
nations who have been unwilling to undergo social change
or refused to cooperate with developmental planning
is the companion policy. Such policy will be labelled
as inspired by revenge or imperialistic design. However,
in light of current conditions, the policy may be a
logical step to encourage progress and more self-sufficiency.

This may be a brutal policy, but it is perhaps
the only kind that can have any long-range impact.
A triage approach could also demand political
concessions. The U.S. may be roundly denounced for
"imperialist arrogance," but Washington may feel
no obligation to help countries that consistently
and strongly oppose it. As Earl Butz told Time:
"Food is a weapon. It is now one of the principal
tools in our negotiating kit" (Time, Nov. 11, 1974: 80).

It is also conceivable that agricultural triage could
be politically legitimated on several grounds. A country
may feel compelled to feed another country on humanitarian
grounds, however, there is nothing imperative about
feeding someone dedicated to your destruction. Why should
any nation contribute to its own destruction? Agricultural
triage also gains diplomatic power when considered
under these circumstances. The process of agricultural
triage is currently under review by powerful agencies
and its effects could be far greater than initially
imagined.
The U.S. is one of a few principal suppliers of food, not only to developed nations, but also to underdeveloped nations. The effects of agricultural triage could thus possess more power even than petrol triage which is being already exercised by the OPEC nations. On this premise, food self-sufficiency would seem to be the first step in a development programs. Although petroleum is necessary for continued economic growth in industrial nations, lack of petroleum results first in economic disaster. Lack of food results in death for large populations and ensuing social disorganization. There is no logic in remaining overly concerned about economic growth when far more pressing needs such as food, are evident.

As pointed out in earlier chapters of this dissertation, economic models of development tend to assume agricultural production will rise to meet the needs of the occasion. In light of the evidence thus far available this is not happening. It is less likely that the continuation of unsuccessful programs will yield improvements in the future. Not all development programs are failing, but many are having less than expected success and the problem of feeding a growing population is getting worse.
A major conclusion of the author is that a number of developing nations should consider agricultural production as their major development goal. This conclusion does not mean that technology is considered undesirable or that a degree of industrialization is unwanted. It does mean that in cases where countries have suitable land and manpower, a prime consideration of development programs should be the feeding of the population. This point becomes stronger when consideration is given to political and ideological differences that exist between nations today. As pointed out earlier, a number of individuals have suggested that overpopulation is a myth perpetrated by the advanced nations. However, the responsibility of encouraging population growth requires the acceptance of a responsibility for feeding the consequent populations. It cannot be considered that affluent nations have a moral or ethical requirement to feed the less fortunate nations, if those nations continue to contribute to the cause of their hunger. This situation presents some dilemmas for the development sociologist.

There are nations, as noted, which desire population growth in light of already serious food shortages. In some cases as pointed out, they desire this population growth as a political weapon. It would appear
that such nations have violated the humanitarian principles they accuse the affluent nations of violating. In this regard, the Chinese confiscation model does put agricultural production on a high priority list. A significant number of other developing nations do not and their success in feeding their people has certainly been less than China's.

In concluding this section, it may be pointed out that a major thesis has been presented. This is that some developing nations should seriously consider agricultural development as an alternative to industrial development. Industrialization may follow at a later date, but for the short-term, the feeding of populations should receive priority. This position is favorable to both confiscation and capitalistic oriented nations. It is obvious that some social change must be induced and rising expectations must be controlled. This is often a necessary condition in development of a stable society that can meet its most essential demands. The goal of increased agricultural production will easily fit into plans for long-term progress. The key issue and thesis of this study is that the feeding of a population is the most essential ingredient for developing a stable society and social organization pattern. Agricultural development is thus seen as the way out for certain nations.
3. Relativity and Social Organization As Elements of Development Models

It is clear that development in many countries has not accelerated as quickly as planners had hoped. In some instances it appears that ground has been lost rather than gained. Social problems as well as the process of social disorganization seem to be increasing in frequency and velocity. It is also apparent that a majority of nations must import food to meet basic food demand. However, in some nations the importation of food and foreign aid still do not meet necessary survival minimums.

Despite its affluence or poverty each nation wishes to rank as high as possible within the ordinal heirarchy of nations. Although this writer is not a dedicated follower of Marx, he did state something of crucial importance to this theme.

A house may be large or small: as long as the surrounding houses are equally small it satisfies all social demands for a dwelling. But let a palace arise beside the little house, and it shrinks from a little house to a hut... however high it (the little house) may shoot up in the course of civilisation, if the neighbouring palace grows to an equal or even greater extent, the occupant of the relatively small house will feel more and more uncomfortable, dissatisfied and cramped within its four walls (Marx and Engels, 1958:93-94).
When such thinking is applied to the community of nations, conclusions as to the relative states of various nations may be misleading. If nations harbor differing value systems, social organization patterns, and goals, then they have different development goals. There is no reason for all nations to become industrial centers. To elaborate somewhat on this point, it would be unwise for all nations to become industrial giants for several reasons. First, to take the example of the automobile, there are only so many automobiles that can be used. The earth is finite in size and the space needed for roads and highways is limited. Second, many developed nations are overwhelmingly dependent upon food rich nations to maintain subsistence levels of food consumption. As they increase population wise, many will doubtless become more dependent upon other nations for food. Many nations in Europe, East Asia, and areas of the United States have already reached current practical limits of population density, industrialization, and spacial development. In this regard, the environment has suffered to such a degree that there is some question if the environment can be returned to normal (Ehrlich, Op. Cit.: Chapters 3 and 4). It is hoped that modern science can solve the problem, but it is optimistic to assume scientific progress in the
future will be as rapid as it has been in the past. Alternatives to industrial development do not preclude increases in technological development, nor do these alternatives suggest an anti-industrial stance. The biggest problem in formulating alternatives schemes of development is to communicate that they do not represent a threat to social organization.

A major task in developing an alternative approach to development is insuring that development is relative to the needs of the involved populations. Familiarity with the reasons development programs have failed is a good initial step which helps one to become aware of the relativity of development.

The colonial rulers attempted to contain most changes within the limits of traditional groups and to limit, as far as possible, the extent of any change. They tried to contain these changes in the local level within traditional systems. The broader strata were expected to perform various new roles, especially economic and administrative, while at the same time they were denied some of the basic rewards inherent in these settings. Above all, they were denied full participation in a common system of solidarity. In other words, they were expected to act on the basis of a motivational system derived from a different social structure which the colonial powers and indigenous rulers tried to maintain (Eisenstadt, 1966:110).

Any development scheme must appeal to involved populations, both socially and materially. Such schemes must not appear to destroy traditional social organization patterns. The crucial problem is to induce
social change in a functional manner and to reinforce patterns of social organization.

... some of the forces leading to or retarding change operate through and in the minds of people. In order to achieve social change, the attitudes of individual men and women and of groups must change (Vries, 1961:40).

Attitude change in groups must be general if social stability is important. For example, economic values favoring profit making may be useful for economic development, but these same values may represent a threat to patterns of social organization. Attitude changes must thus be induced with an awareness of long-range and overall social effects of those changes upon the society as a whole. The client population for attitude changes must also be aware of the expected benefits of such change and how changes may be expected to affect them in both the short-term and the long-term.

What I am arguing here is that political development and social change can come about either evolutionary or revolutionary only when the consciousness of the people has been awakened to the advantages of change and there has occurred a radicalization of the consciousness of the people (Botchway, 1970:2).

Social change oriented toward development can more easily become realized by people when it is understood. The processes by which social change occurs can be more manageable if populations are able to see the advantages
of this change and it can also be observed that social change does not represent a social threat, either real or perceived. For example, the intent to move populations from rural sectors into urban sectors by Singer type models may or may not have been threatening to social organization. However, unless populations are informed and able to see advantages in such a movement, it is not surprising that they may react negatively to urban immigration patterns. In this respect a lack of information and understanding may seriously hamper an otherwise excellent development plan. The same situation may hold true for alternative approaches to industrial development. Social change and development could potentially result in a more efficient and productive pattern of social and physical organization if populations are made aware of the advantages and goals of the proposed change.

In formulating an alternative approach to traditional industrial development the relative time sequence of progress must be given considerable attention. Not only must populations be informed of the expected advantages of social change in a developmental frame, they must also be made aware of how long this change will take.

Without seeking to justify the Russian effort, it is worth pondering one last question. Can rapid industrialization, with its inescapable price of
low consumption, ever be a "popular" policy? Will poor people willingly vote for an economic transformation which will not "pay out" for twenty or forty years? (Heilbroner, 1970:79).

Perhaps the advantages of development in an economic sense would seem less so if populations were aware of the relative time span of industrial development before any advantages are apparent.

It is highly doubtful whether the achievements of the Industrial Revolution would have been permitted if the franchise had been universal. It is very doubtful because a great deal of the capital aggregations that we are at present enjoying are the results of the wages that our fathers went without (Bevan, 1957:46).

However, development may be oriented toward increasing social organization through economic improvement. Ostensibly, this statement is the same as saying economic development will reinforce social organization. However, in the opinion of this writer, there exists a very important difference in these development goals. The difference is essentially one of placing social goals in a position superior to economic goals. For example, the secondary goal of economic improvement should be seen as a consequence of the primary goal of social improvement. In this sense mere economic development is not being sought at the expense of social progress and stability. The strengthening of social organization is the major objective, and from this process, economic improvement is achieved through greater social efficiency.
and stability. Minimization of social costs is expected to contribute to economic development and at the same time, a stable pattern of social organization remains a development priority of the first order.

From this perspective agricultural development as an alternative to industrial development offers advantages to be realized within a relatively acceptable time span. Social organization is expected to remain stable and basic life demands are not disrupted from social processes.

For instance, at the lowest levels of subsistence there is little to spare for those who cannot help themselves, and the weakest must go to the wall. It is only as the surplus increases that men take increasing care of the leper, the mentally deranged, the crippled, the blind, and other victims of chance. The desire to care for the sick, the incompetent, the unlucky, the widow and the orphan is not necessarily greater in civilized than in primitive societies, but the former have more means to spare for the purpose (Lewis, 1970:86).

Development planned for satisfaction of the primary needs of a group, to reiterate, may possess more of a potential for strengthening social organization. As an alternative model, agricultural development could be initially aimed at satisfying basic subsistence needs. Surplus agricultural production could be aimed at several objectives. Surplus production of food could be sold or traded for money or technology, or both.
Such development is similar to the initial stages of Western industrial development. The major difference is that in Western development agriculture became mechanized and its surplus financed industrial-urban growth. There obviously exists a potential market for agricultural products today. This situation suggests that agricultural development be approached as follows. Nations utilizing the agricultural development model could orient labor and production toward their sustenance needs and at the same time reinforce their social organization structures by elimination of food needs.

Another aspect of agricultural development suggests the above approach to progress has merit. Given the information presented earlier, it is obvious that nations are not equally gifted with resources or assets. Some nations have great mineral or metal resources while they have little land fit for agricultural use. Other nations possess agricultural potential but are destitute of resources needed for industrial development. There is no reason that agriculturally developed nations cannot trade or barter with industrially developed nations for mutual benefit. There is no reason why nations needing food should not welcome such a move.
As suggested earlier, there is no reason why every nation must strive for like forms of social organization, development patterns, or style of living. If development is relative, then essential and basic progress in each nation relates to the needs and desires of the people of that nation. Some nations may desire to retain traditional or slightly altered forms of social organization which dictate incremental improvements in living conditions and life chances. This decision is to be made by the countries and their populations themselves, not by the opinions of the representatives of the developed world. Another merit of an agricultural development approach is that mutual inter-dependence of involved nations is assured. Industrial nations trading or interacting with agricultural nations share a common bond. Although each have different specializations and goals, both require the other for survival. This development approach has not been tried on a global or regional level. For example, the United States is a major supplier of world food, but it is also a major industrial and political force in the modern world too. The OPEC nations have demonstrated that critical resources can result in underdeveloped nations achieving unusual political or economic power. With much of the world
in need of food and no relief in sight, agricultural surplus and production represents an innovative shift in modern development goals. The potential power of agriculture is equal to industry. Such a move may accelerate world peace as a result of the mutual interdependence of nations.

4. Modernization and Social Organization: From Diversity Toward Unity

As pointed out numerous times before, change in social organization has been the price modernization in an industrial sense has demanded. Rostow has asserted that in pre-Newtonian times, when modern technology was lacking, social change was lacking as well (Rostow, 1971:56).

Ultimately, these constraints, operating in complex ways, were judged the cause of the cyclical patterns typical of the history of traditional societies (Rostow, Op. Cit.:3).

Other writers have elaborated this point more bluntly and suggested that development in a Western sense requires particular patterns of social organization.

What is involved in modernization is a 'total' transformation of a traditional or pre-modern society into types of technology and associated social organization that characterize the 'advanced,' economically prosperous, and relatively politically stable nations of the Western World (Moore, 1963:89).

Although Western development resulted in unanticipated social change, this very change has often been viewed as necessary and unavoidable.
While they admit that technological advance has frequently brought disaster to persons caught between the old ways and the new, they consider these costs in human wreckage to be unavoidable and, on the whole, worthwhile (Landes, 1969:121-123).

Apter has drawn an analogy between Camus' Sisyphus and modernization as it is viewed in much of today's world.

Sisyphus, returning again and again to roll his rock up the hill, may appear absurd. Yet on each occasion he is happy. How odd that seems: And how like our own times. The work of modernization is the burden of this age. It is our rock (Apter, 1965:1).

When development is not viewed in a relative sense and when development planning gives little regard to social organization, we indeed find ourselves trying to play a modern Sisyphus.

Society as viewed in this dissertation always pays the costs of development. More often than not social organization patterns are disrupted as nations become modern. What is missing is a recognition of the purposeful action behind development. It is not technology per se that causes development and which triggers processes of social disorganization, rather it is a number of social factors which combine to shape the course of development.

Science and technology do not grow of their own momentum but advance through the work of dedicated, hard-working, creative individuals
who follow highly idiosyncratic paths to their discoveries, inventions, and productive innovations (Rodgers, 1969).

Said another way, the application and use of scientific discoveries are what account for the effects of modernization upon social organization. It is also true that social organization can affect the applications of technology and in the end, the path taken by modernization.

Societies, furthermore, do not yield passively to the 'thrust' of modernization. Political and economic actors of the world's nation-states make conscious decisions about what kinds of technological development to encourage and then carry out these decisions in investments, laws, sanctions, subsidies, and so on. . . . It is instead a diverse collection of patterns rooted in specific choices that individuals, groups, and nations have made for themselves and imposed on others (Rodgers, 1977:54).

What is of interest in this light is that social change accompanying industrialization has come to be viewed by many as inevitable.

It is the great transformation - successful, all-embracing, irreversible. By the middle of the twenty-first century industrialization will have swept away most pre-industrial forms of society, except possibly a few odd backwaters (Kerr, 1964: 221-223).

It is not altogether odd that industrialization is often viewed as the Frankenstein monster that has now turned on society, its creator.

Under present conditions men are not at all the masters of technological change; they are its prisoners. Although the voluntarists may celebrate man's shrewdness and freedom, the celebration cannot alter the condition that their own theories
reveal. The shout of freedom, D.H. Lawrence noted long ago, "is the rattling of chains, always was" (Winner, 1977:55).

Thus, a number of thinkers suggest modernization and industrialism is the harbinger of the future course of events. Some writers, as noted earlier, believe that the cost of modernization is financed out of the pocket of customary social organization and social stability. And, other writers suggest that technology is now in control of mankind. In the opinion of this writer all the theories and speculations of the previously cited writers suggest something else. The proverbial saying "that necessity is the mother of invention" has truth in it. However, there are essential factors to be considered in this proverb. It is likely that necessity and discovery coincide often enough. Scientific and technological discovery did find useful application at various times in history. The major alliance between necessity and application of invention is that invention is generally used for short term gain and additional invention born of primary invention continues this trend. Technological and industrial invention thus has not, as a rule, been applied with the idea of strengthening social organization. There is no reason to believe that invention for a purpose of social development could not have occurred. It is simple that social considerations
have traditionally received low priority during technological development processes. People have guided development and modernization. These movements are not a Frankenstein monster. The real monster is development without long range purposes and little regard to social consequences based upon the essential needs of society.

It is also noteworthy to return briefly to the notion of necessity. If science and technology have become a monster over man, perhaps a clouded observation has been made. Perhaps the modern monster, and thus, the developmental dilemma, is man's inability to see alternatives to industrial development as it has traditionally occurred. Current and large scale world hunger has presented mankind with an age old, yet often forgotten, necessity of prime magnitude. That necessity is the feeding of populations. Agricultural development represents a new slant to an old theme. The implementation of agricultural goals into development represents an innovative approach to an old problem of necessity for mankind. This approach properly applied may at the same time represent a development model oriented toward the reinforcement of social organization. In this regard, progressive development becomes a strong possibility.
5. Agricultural Development and Social Organization: Modernization and Tradition

It was suggested earlier that agricultural development may be both progressive and profitable, from an economic and social standpoint. A note of caution is in order at this point.

Thus supplementing and completing the master objective of the over-all plan must be a whole hierarchy of subplans, the aggregate of which must bring about the necessary final result. And here is a genuine difficulty. For an error in planning, small in itself, if it affects a strategic link in the chain of production, can seriously distort - or even render impossible - the fulfillment of the total plan (Heilbroner, 1970:81).

Obviously, any model of development, agricultural or otherwise, requires guidance and planning at all levels. A successful implementation of agricultural production, establishment of internal and external channels of distribution, and marketing processes are not likely to occur by accident or chance. Such factors must be planned in a manner that reflects social organizational interests. All too often various models of development simply state the necessary conditions for modernization. Although the assumed conditions for economic development may be correct, the assumed social conditions for development may be seriously off base.

It has often been stated that the Western family pattern of social organization is necessary for modern-
ization. In fact the suggestion of Singer type models for the transfer of a majority of the rural population to urban sectors is essentially a strategy in keeping with the development of Western family patterns. Recently, however, it has been questioned if industrialization has led to the development of the nuclear family common in developed nations (Johnson, 1960:30). According to Johnson, the 400 year old stem family in Japan:

... is sufficiently generalized in its nature to conform to the needs of the changing technology of Japan. The traditional family does not have to give way under ... urban or industrial influences (Johnson, 1960:3-4).

Japan is not alone in having a flexible family social organization suitable for adaptation to modernization. In some cases where a stem family was traditional, evolution into a nuclear family structure, was followed by a return to a stem family at a later date.

The collected evidence indicates no trend toward transformation of the present French-Canadian urban kinship system into the more restricted system reported for the United States. While difficulties were reported in maintaining a united domestic family or an integral kin group, there is no reason to suppose that these difficulties were caused primarily by urban living (Garique, 1956:1098-1099).

It has even been observed that family structure and industrial life have become mutually reinforcing in some regions.
There are many reasons for believing that the present system will continue. Far from being incompatible, kinship and urbanism among French-Canadians seem to have become functionally related (Garique, 1956:1099).

Wagley's study of the Brazilian parentela has provided evidence that family structure based upon traditional stem families may fit into the scheme of industrialization. In this sense the nuclear family seems not necessary for industrial development.

It is evident from the data provided that kinship plays an important role in social, economic, and even political affairs. The parentela operates in both rural and urban areas. In the cities, kinsmen tend to purchase apartments in the same building to facilitate the working out of kinship obligations (Wagley, 1960).

Other writers have found similar evidence in London to support the notion that family structure and social organization are not radically altered during industrial development (Young, 1954:137-139). In almost a reverse situation, nuclear and fragmented families on Barbados are highly similar in social organization structure to Western families, however, Barbados is not industrial. In Northern Europe the nuclear family structure called famille particulariste by LePlay existed at least as early as the seventeenth century and before colonization of the New World (LePlay, 1884). All in all some writers believe that the Industrial Revolution may not be responsible for the move toward small nuclear families, while other writers do.
Here again, it was not the industrial revolution that produced the small nuclear family; in fact, the opposite may be true. The prior existence of the small nuclear family as the basic kinship unit of the people who industrialized both Great Britain and the United States may have been responsible for the very forms of social organization that developed with the machines (Greenfield, 1965:96).

Based on the above evidence, an agricultural model of development could incorporate traditional family social organization structure into progressive plans for the future. For the most part, the underdeveloped world is agricultural, although only in a self-subsistence form. If surplus agricultural production became a developmental goal rather than industrial development, the prospects for strengthening social organization for the society as a whole might exceed those of industrial societies.

To elaborate somewhat on this idea, most underdeveloped nations are characterized by stem families and traditional patterns of life. Agricultural production would not necessarily mandate the transfer of populations from rural to urban areas, as is assumed with Singer type models. The Russian type confiscation model also transfers these populations into urban or industrial areas, often by forced migration. The Chinese model of confiscation did move some populations, however, this forced migration was apparently dictated by political
concerns. At any rate, the Chinese did place agriculture high on the priority list and utilized available human labor to achieve this goal, without disrupting patterns of traditional social organization. Although social organization in modern China is more gemeinschaft in nature than in most advanced nations, industrial and technological development followed agricultural development. As a result Chinese social organization is stable and strong, even if somewhat rigid by Western standards. The Chinese used existing social organization structures to design and test their development strategies and applications. There is merit in this approach, although some of the problems encountered during the development stage in China are now common knowledge. For this reason nations attempting agricultural development along this line can hopefully avoid the problems faced by the Chinese. Some social problems can at least be circumvented.

Another relevant issue that affects economic and social organization development is a conceptualization of the relativity of development. This was mentioned briefly in an earlier portion of the present chapter. Although most nations are classed in an ordinal ranking system of development indicators, this practice overlooks fundamental conditions that have bearing upon
agricultural development. An over-concern with ordinal rankings potentially produces negative functions for social organization. In this regard, undue concern for the possession of the material and economic goods characteristic of more affluent nations shifts attention away from relative progress within the developing nation. In this respect, social unrest, unrealistic expectations, and frustration exact tolls on social organization, and in turn, weakened social organization can only produce negative effects upon development, either capitalistic or communistic in origin. This brings us to a second major thesis of this study.

Agricultural development as an alternative to industrial development must remain as free as possible from political constraints. In this respect, agricultural development is a humanitarian approach which can strengthen social stability, initiate development at the most fundamental and relative level which is necessary to deal with social and human survival. Had previous models of development dealt with these basic issues the process of social disorganization would possibly not have outrun economic growth, at least in some instances. Agricultural development must thus be viewed in a relative sense for individual nations, as suggested several times in this chapter. Pointing out that development
would have been more quickly realized under particular political persuasions serves no positive function for social organization, nor does it contribute toward a more peaceful world. Development must not only contribute to the realization of progress, but it must also do so for each level of society, both high and low.

In concluding this chapter, the following summary reiterates the major points presented.

1. Whatever course development takes, it must be geared toward strengthening social organization as well as the material aspects of man's existence.

2. Development must initially strive to satisfy the most essential criteria necessary for stable social organization. In this light, a satisfactory diet is among those conditions necessary for stable social organization.

3. Social organization is relative to individual cultures. It is fruitless to compare developing nations in a rank order sense, because each must weigh and judge progress in terms of its unique cultural values and motives.

4. Modernization does not necessarily have to take one commonly accepted form. Differing needs and conditions of nations offer the criteria from which to formulate plans for modernization and progress.
5. Agricultural development offers an alternative form of development and progress for some nations. Nations having suitable conditions for agricultural production potential which can be developed in a unique manner with both short-term and long-term progress as an objective should consider this alternative.
Chapter 7
Agricultural Development: A Hard-Nosed Utopianism

1. Agriculture as a Developmental Goal

The population versus food production dilemma has been discussed throughout history. Today all political camps pay attention to the hunger issue and set forth plans to solve the problem. No group has produced an answer on a national or global basis for a prolonged period of time. Whether communistic, capitalist, or other philosophies predominate, problems of inequality and unequal distribution remain. Even in areas characterized by critical shortages of food some prosper while others starve. The suggestion has been made that political concerns at times shift away from the true crux of the matter: How to feed the earth's populations and at the same time achieve social stability. This notion is expressed by Berger:

The world today is divided into ideological camps. The adherents of each tell us with great assurance where we're at and what we should do about it. We should not believe any of them (Berger, 1974:xii).

It is not unrealistic to suggest that the more critical problems of the world today, including the critical problems of development, be tackled in a direct fashion. This specifically means working to absolve the hunger problem.
We need a new method to deal with questions of political ethics and social change (including those of development policy). This will require bringing together two attitudes of "hard-nosed" analysis and of the utopian imagination. What this book is finally all about is this - some first steps toward a hard-nosed utopianism (Berger, Op. Cit.:xiv).

Agricultural development is a-political in a sociological framework. The suggestion of agricultural development as an alternative developmental goal is just that; a suggestion. Models or plans of development generally require the combined efforts of several scientists. An inter-disciplinary approach will be required, one which may not be simple or painless.

Political propaganda and subversion do little for displaced families, starving people, and social disorganization. Good intentions and hopes do not help much either as evidenced by many failures. With the world hunger problem increasing in severity every day, there are reasons why agriculture should remain important in already developed nations. There are more reasons why agriculture should be given prime importance in underdeveloped nations.

That agriculture is the basis of the growth society, indeed of all society, is easily forgotten in the midst of urban industrial life. Yet urban industrial society was made possible by developments and changes in agriculture, and no less does the continuation of this society depend upon successful agriculture (Anderson, 1976:197).
This study is not concerned with the placement of blame for social injustice or inequality, but there is an awareness that both major political ideologies of the world give high regard to agriculture.

It is agreed in both East and West that successful agricultural development triggered the rise of urban life and industrialism as we know it today. The conditions present during the historic rise of industrial development have changed somewhat. It now appears there are limits to growth and many resources are in short supply given the demand placed upon their use today. For these reasons and more to be discussed later, agricultural development is no longer a precursor to later industrial development. Barring new technology making energy available to all, we can assume sufficient supplies of energy and resources are no longer available. Total resource concentrations and regional distributions make this fact so. It is possible that new forms of energy and synthethic production of resources may help this problem, but this has not been realized to date. Meanwhile, populations in the underdeveloped world continue to grow exponentially with an accompanying demand for food. Energy demands in the developed world continues to increase faster than population growth. Even with tremendous strides in agricultural technology, food demands are out-stripping food resources.
Agriculture is in too many ways functionally linked to industrial development to receive anything but the highest priority. A revolution in agricultural production laid the foundations for the rise of industrial capitalism, and a revolution in agricultural production will inevitably accompany the emergence of a new society... An agricultural revolution must accompany the successful development of all Third World countries. A world agricultural revolution will be required if the threat to survival posed by overpopulation and food shortages is to be surmounted (Anderson, Op. Cit.:200).

As noted, both the Marxian theorists and the capitalist theorists have assumed industrial development to be the proper development goal. It has been stated that agricultural development should be considered as the very first goal of any development process, but for the time being this point will remain somewhat subdued. Although the communists and capitalists disagree about the validity of overpopulations as a world problem, both are actively trying to reduce growth rates in the populations they control. Doubtless, both sides recognize the real fallacy of over-population and under-agricultural development and production.

The most advanced agricultural technology applied to the most fertile land can still fall short of food requirements if the numbers of people which must be fed are simply to great (Anderson, Op. Cit.:202).

Despite recognition of the critical food shortage in the world today, all continue to suggest industrialization will solve the problem. This indicates a reversal of
traditional political rhetoric explaining historical growth issued by both sides. This situation becomes more complex with additional information.

On a worldwide basis, only 11 percent of land is permanent cropland, 19 percent meadow and permanent pasture, 40 percent wasteland, and 30 percent forest land (McHale, 1972:19).

Although additional land could be productive, investments to bring available land into cultivation is estimated to total approximately $280 billion a year. This figure represents the cost of feeding the annual population increase of the world (Ehrlich, 1973:204). It is more than is available for most developing nations, even with foreign aid. It would help if developed nations gave financial assistance for agricultural development in greater amounts than is presently the case. Although some developed nations (both the U.S. and U.S.S.R.) do assist agricultural development of underdeveloped nations, the bulk of foreign aid is in the form of military assistance.

The irony of the world's land situation is that, in an era of pressing food needs, urbanization is gobbling up large chunks of prime farmland, especially in the most highly developed areas of the world (Anderson, Op. Cit.:205).

It is the more developed regions of the earth that have the most prime farmlands. However, these same nations are losing a sizable proportion of their best
agricultural resources. The rate of loss of such prime farmland is alarming.

The United States has been the most careless in regard to giving up farmland for urbanization and attendant highway development. With powerful real estate developers and highway construction companies in the forefront, urban sprawl eats up 2.2 million acres of good farmland every year, a rate 50 percent higher than a decade ago even though population growth has been halved ... (Anderson, Op. Cit.:205).

California, a highly productive agricultural producer, stands out as one of the prime examples of agriculture resource loss.

California is a leading example of cropland burial, a continuation of which will lead to the loss of the state's best farmland by 1980. By 2020 the projection is for 13 million acres of California's arable land to be lost, one half of the total tillable acreage (Ehrlich, 1973:83).

Other major agricultural states are losing the fertile soil battle to real estate developers, highways, and urban growth. One author has suggested "only real estate speculators can win in this situation (Dowie, 1974:107). It is interesting to note that in a time of critical global food shortage many nations are concerned about the costs of coffee, sugar, and cocoa. The world hunger problem also becomes more critical and ironic when viewed in a future perspective. Rising affluence in some nations suggests that food demand will increase faster than population growth. A 3.7 percent increase
in food demand for developing nations compared with a 1.6 percent increase in food demand for affluent nation yields a 1.6 percent increase in food demand by 1985 (Anderson, Op. Cit.:207).

This means the world's food supply by 1985 will have to be increased by one-third again from its present size if today's dietary standards are to be maintained (Jackson, 1974:6).

The global food problem is even more serious than the figures presented would indicate. Interestingly, it has been the slower growing nations that have greatly increased their per capita food production. The less developed nations, although growing faster in population size, have experienced slower agricultural increases, and in some cases, a decline in agricultural output (Anderson, Op. Cit.:207). Population increases and agricultural decline in many areas led to the prediction that the United States could not fill the gap by 1974 (Paddock and Paddock, 1967:140). With some help from bad weather in 1972, their prediction turned out to be quite exact, as a storage glut of 20 years earlier had all but disappeared (Anderson, Op. Cit.:207). More and more affluent nations continue to import increasing amounts of food.

Over one half of U.S. soybean exports go to Europe and one quarter to Japan, also a heavy food importer. Denmark is the world's leading importer
of protein, mainly in the form of feed grains, soybeans, and oilseed cake; the Netherlands ranks second in protein imports (Borgstrom, 1973:5).

Japan, a highly developed Asian nation, must import a full 83 percent of its food supplies (Borgstrom, Op. Cit.:5). America is by far the largest exporter of food to developed nations, however, Americans often remain unaware of impending problems for the agricultural future.

Americans have not lived so much beyond their immediate means as they have borrowed heavily from the future; soils have been depleted and resources rapidly consumed. The future will become even more costly (Anderson, 1976:210).

One aspect of future problems will be that the major dependers upon American agricultural production will find previously (abundant food exports) in shorter supply, and thus, far more expensive. Developing nations may find they must compete with more affluent nations to purchase American food exports. Thus, Americans may find they receive the blame for the growing world food crisis although agricultural conditions and resources are threatened on home soil. And in the end, social organization problems will strain stability on a national, regional, and global level. Anderson has stated this outcome more eloquently than others.

The manner in which the food versus population contest is played out on a global scale is replete with irrationalities and inequalities. The rich eat too much and too inefficiently. The poor charge greed and gluttony. The poor continue to have rapid
population growth directly in the face of a mounting food crisis. The rich charge irresponsibility. In the end, both rich and poor are losers, for no one can live at peace in a world beset by hunger and want on a massive scale (Anderson, 1976:211).

In conclusion the case for agriculture as a developmental goal rests on consideration of present conditions balanced against future expectations and predictions. A growing food shortage on a global level is not mere speculation. It exists here and now and is becoming more critical daily.

Based upon information, prediction, speculation, and data already presented, agricultural development is necessary for future survival of society and mankind. There is no logical reason for all developing nations to follow the guide of developed nations, especially when many developed nations already face critical conditions. Why not develop agriculturally and meet subsistence needs as well as surplus demands for export?

2. Innovation and Decision: Factors Affecting Agricultural Development as an End Goal

One must learn by doing the thing, for though you think you know it - you have no certainty, until you try (Sophocles, 400 B.C.). Agricultural development is not likely to appeal to great numbers of people unless it can be demonstrated that there is merit in such an approach to progress. Moreover, it will be difficult to demonstrate merit in
agricultural development unless this approach is attempted on a large scale. The problem is essentially twofold: (1) Convincing planners and policy makers to attempt agricultural development, and (2) demonstrating to national leaders that this approach is in their best interest. These are not easy tasks.

Generally, individuals tend to expose themselves to those ideas which are in accord with their interests, needs, or existing attitudes. We consciously or unconsciously avoid messages which are in conflict with our dispositions (Rogers and Shoemaker, 1971:105).

Predispositions, however, are inherent in models of development. Political ideologies, social philosophy, and the normative system characteristic of all social systems combine to predispose persons toward certain attitudes. In most development cases, as noted earlier, it is not surprising to find predispositions to equate economic growth with progress. Economic growth, however, as also noted, does not guarantee progress. Nor has economic growth freed the world from starvation and survival imperatives. Innovation and adoption of agricultural models of development must thus deal directly with the attitudes affecting development in currently developing nations. Increased agricultural production, in the writer's opinion, must become the normative desire in such societies and the process of institutionalizing this norm is a highly complex process.
Institutions, or institutional patterns, in terms which will be employed here, are a principle aspect of what is, in a generalized sense, the social structure. They are normative patterns which define what are to be felt to be, in the given society, proper, legitimate, or expected modes of action or of social relationship (Parsons, 1965:56).

The process of institutionalizing agricultural development as a normative pattern involves the alteration of major social organizational structures.

Initially it must be demonstrated that the man-food dilemma is real and increasing in severity daily. It must also be emphasized that this problem affects all persons in a social system. Economic surpluses cannot purchase food that does not exist, although economic prosperity can finance agricultural development. In this respect, agricultural development rather than industrial development, must become viewed as being in the best interest of some developing nations. It is probable, as has been emphasized, that the traditional norms and values which support industrial progress will be difficult to alter.

There is furthermore no general reason to assume that "self-interest" is a simple and obvious thing. On the contrary, it appears to be a distinctly complex phenomenon, and probably the analytical distinctions to be made respecting it are relative to the level of analysis undertaken, hence to the problem in hand (Parsons, Op. Cit.:59).
For some developing nations agricultural development will conceivably require less change in social organization structures than will industrial development.

Most people in economically underdeveloped societies have more of a large family system than we, and under the impact of a money economy this tends to break up. But the need of social participation, the willingness and desire to contribute to others, remains, and seeks other outlets (Hoyt, 1965:291).

If we accept the notion that development, whichever form it takes, should reinforce social organization, it follows that societies traditionally engaging in agricultural activities will suffer less social disorganization if agricultural activities are continued, but in larger scale applications. In this regard, such a decision should be made in cognizance of certain problems.

It is of critical importance to determine how much agricultural technology is desirable. It is not in the interest of improving quality of life to displace agricultural workers in the short-term. This concern does not represent an anti-technology attitude, it simply recognizes a planning imperative. As mentioned earlier, the farmer and family life have been greatly changed by use of agricultural technology in the developed world. In most cases the small farmer can no longer compete with large corporate agricultural firms.
In the opinion of this writer, destruction, intended or accidental, of traditional social organization does not represent progress.

Elaboration of the opinion expressed in the preceding paragraph will hopefully make the point clearer. Engineers tend to see the world as an engineering system, bankers tend to see the world as an economic system, and so on. Sociologists are no different from other scientists or participants in their views. They tend to categorize the world into different socio-cultural systems. There is one important difference between social scientists and a number of other thinkers, however. Machines or industrial growth do not exist independently in the cosmos. They are part of a world made by man. Mechanical or physical systems utilized by man are articulated as parts of social systems. In this sense, the generation and formulation of values, norms, attitudes and ideologies by man ultimately influences all developmental programs. For example, we can look at some of the environmental factors which influenced traditional development patterns. It is obvious that man's ideas were influenced by the natural environment, but different adjustments to this environment were worked out by different peoples.

With regard to the point just made, solar or geothermal energy may become widely available in the
future. However, only the more affluent nations will be able to obtain these new energy forms in the early stages of their availability. It is thus the underdeveloped nations which will be least likely to be able to afford this new source of energy. This phenomenon illustrates the interplay of socio-cultural factors and social development.

In terms of this model, social structures are seen as generated, elaborated, and maintained through an interplay of cultural, personality and situational factors in an interactional framework (Bertrand, 1972:28).

The various social structures characteristic of modern industrial nations did not arise overnight. They arose as a result of cultural, personality and situational factors which developed over time. What is of equal importance is that the social structures which arose in industrial nations did not do so without social costs.

2. Tension as a normal and ever-present element. Stresses and strains are inherent in any process that involves the initiation of action and decision making. This is not to be construed as a negative factor; rather, it should be understood that the viability of the structure may depend on conflict, deviance, or nonconformity which leads to innovative adjustment (Bertrand, 1972:29).

The opposition to railroads, labor unions, air travel and other such examples are now legend in American history. The stress and strain that made up the evolution of modern social structures is now very much a part of
the way of life in the United States. It is also probable that social stresses and strains will ultimately lead to continued innovative adjustment within social structures, but stable organization does not occur overnight.

3. The emergence of a relatively stable organization. The end result of the "transactions" which take place in the interplay of cultural, personality and situational factors is social organization. . . (Bertrand, 1972:29).

Social organization is not static, it is dynamic and always undergoing change. The constant change process, however, leads to a type of stability known as a steady state. In this respect, norms and values undergo a constant evolution toward stability. This process has importance for the development models which call for innovative applications. This leads us back again to the notion of innovative adjustment suggested earlier by Bertrand. Present world conditions are ripe for innovative adjustment needed to cope with a new definition of the situation. This point requires further elaboration.

An industrial ideology has evolved over the years for both capitalistic and confiscatory oriented nations. This industrial ideology has become very much the definition of the situation for most, however, for reasons pointed out earlier in this study, a larger normative
system favoring industrial development has become the norm among most nations in today's world. An industrial definition of the situation has become transcultural for a majority of the modern world nations, both the developed and the underdeveloped world. Agricultural development could be labelled an innovative adjustment to a new definition of the situation; that situation being critical food shortages.

The conceptual notion of values and norms is important in planning strategies to get nations to choose agricultural development over industrial development.

Values give direction to social action, whereas norms coerce social action. Analytically distinct from both of these is the "definition of the situation" in terms of an ideology (Dutta, 1971:82).

As developing nations adopt models of development, the definition of the situation becomes synonmous with the ideology accompanying the pattern of development. In other words, the perceived or compelling factors and conditions which lead to the selection of a particular development model also indicate that the perceived definition of the situation accounted for the selection of the model of development. In this light all models of development are ideologically based, or ideologically influenced at any rate. Both the capitalistic and communistic models of development aim at
economic growth and technological progress from an ideological perspective which is little more than a politically normative viewpoint.

For the above reasons agricultural development does not indicate an ideological defection, but it does indicate a changing normative pattern complete with a value shift. Ideologies do remain in the general scheme of decision making even though norms and values are deliberately altered. Social action is what is desired, and this social action will be directed toward a value shift as well as a normative change in redefining the definition of the general situation.

The purpose of symbolic imagery in an ideology is primarily not merely to give direction, nor at the other extreme to coerce action, but to motivate social action by emphasizing an ideal typical "definition of the situation" (Beertz, 1964:47).

The potential sociological input into the persuading of some nations to adopt agricultural development patterns lies in the alteration of their definition of the situation. Sociological knowledge must be focused upon formulating a convincing argument to demonstrate the necessity of agricultural progress. In this light, a new definition of the situation must be very carefully contructed and then sold to the recipient populations. This requires a conscious attempt to alter some values and norms so that agricultural motives will not only be
perceived, but also accepted.

With this as a departure point, it can be stated that any attempt to persuade the people of a nation to adopt agricultural production as their developmental goal must be viewed as an attempt to alter the social organization patterns in such a way that the merits and necessity of stressing food production can be perceived and accepted.

It is beyond the scope of this study to prepare a design for such a model. This task requires the work of a large number of specialized scientists in many different disciplines. It is also beyond the scope of this study to predict how social organization will be affected during agricultural development. However, it can be reiterated that any degree of social stability can be attained only when a large percentage of a given population is fed adequately. The effects of hunger, both physiological and psychological, can only be expected to contribute to any long-term social stability or development.

The following chapter will attempt to show how agricultural development, if successful, can be expected to help conditions in underdeveloped nations. Ultimately, it is behavior in this realm which must be dealt with by development. This fact highlights the sociological factors that are inherent in this alternative model of development.
Chapter 8

Spurious and Direct Effects of Agriculture Upon Development

1. Initial Statement

It was suggested in Chapter 7 that agricultural development must be demonstrated to be in the best interest of developing populations. This chapter represents an attempt to depict agricultural development as more than a move toward material progress. The writer wishes to show the reader how agricultural development can affect the more sublime aspects of man, and in turn, contribute to the overall process of national development.

In keeping with the above objective, agriculture will be viewed from a nutritional perspective, although there are other perspectives which could be used. First, agriculture will be discussed as the basis of nutrition and as an independent variable in the development process. Second, nutritional effects upon individual development will be reviewed. Third, nutritional effects upon group behavior will be considered. Finally, agricultural development will be suggested as having far deeper influence upon development than is obvious. From this perspective, agriculture and social organization will be the key to man's continued existence.
2. Agriculture and Nutrition as Independent Variables in Development

The history of social thought regarding man's development has long been embroiled in debate over the perennial nature versus nurture question. Both sides of this question present seductively appealing logics. Thus, we can very logically assume that they work simultaneously. For example, based upon numerous medical and nutritional studies it is known that considerable impairment of mental processes, i.e., ability to grasp the more complex concepts result from poor nutrition. Such facts certainly bear upon the development potential of a society.

The effect and influence of nutrition upon other developmental indicators is noticeably lacking in theories of development. Nutrition is generally relegated to the status of a residual in development studies. Yet, nutrition is often seen as a social indicator depicting the stage of development a country or people have attained. There is doubtless some merit in this view, however, there always exists the possibility that nutrition is an antecedent variable rather than simply a consequence of other factors. And, nutrition may be a direct consequence of the agricultural resources of a nation.
It is not unlikely that most people would improve their diet if they had the means and funds to do so. It is also likely that many societies cannot improve more rapidly because of the long term cumulative effects of poor nutrition over years and generations.

... the behavior of a human being represents to a certain degree "a function" of the quantity and of the quality of energy received, as an "independent variable." As long as every social process in the final result consists of the totality of human behavior - acts and the action of the peoples, it becomes obvious that social processes also are conditioned by this independent variable (Sorokin, 1975:4).

This view purports that hunger, nutrition in this sense, is an independent variable rather than merely a residual or consequence of development. This thought is illuminated by the following quotation.

This theoretical proposition, which emerges from the preceding, is as follows: other conditions being equal, and particularly during the equal intensity of food taxis, the more obstacles there are in the way of obtaining similar foods in general, or better foods, the more complex a man's pure and mixed food taxis acts become. In other words, the more time, energy and activity he must spend in procuring food, the less becomes the proportion of his other acts which are stimulated by other determinants (Sorokin, Op. Cit.:91).

Development, particularly economic and material progress, definitely falls into the category of other acts outside food taxis. In this respect, food taxis can mean the restoration of a body resource or the arrangement to procure necessary body resources; food in this case.
It logically follows that grossly inadequate nutritional conditions heavily influence development and progress in all of their connotations. This does not imply a value, positive or negative, but simply means it is one of many factors involved in development. It is often the case that insufficient nutrition results from insufficient supplies of necessary agricultural production.

Unfortunately, nutrition has generally not been viewed within a sociological framework. Nutrition is very much a sociological issue when perceived as an independent variable in the development process.

Those who argue that malnutrition has been underrated or significantly overlooked in this cause and effect relationship with the developmental process are on firm ground. To date, although information is becoming increasingly available about the importance of adequate protein nutrition in the diet of the populations of the developing countries, surprisingly, little research effort has been directed to examining nutrition as such within the broad context of human resources development and its impact on the quantitative and qualitative progress of nations (Barg, 1973:50).

There is a definite need to incorporate knowledge of nutritional effects upon development into the social perspectives regarding adoption of agricultural developmental goals. The two approaches complement one another and may be expected to discover some previously unobserved relationships among development variables.
In concluding this section, it has been suggested:

(1) That nutrition is an independent variable in the development process, and (2) Quality nutrition requires sufficient agricultural resources. Agricultural production, as a developmental goal, would represent an attempt to improve the nutritional, social and economic lot of underdeveloped nations. This idea has been speculated upon before by others.

It is an interesting speculation, at least to ask whether the expansion of Europe and especially of English speaking societies after 1700, was not the result of a substantial qualitative improvement in the diet as a result of the development of turnips and clover, and the enormous improvements in livestock that took place in the eighteenth century in England and other parts of Europe (Boulding, 1973:xix).

3. The Effects of Nutrition Upon Individual Development

There is a fairly comprehensive body of medical literature describing the effects of nutrition upon individual behavior and physical development. Seldom, however, have development sociologists applied this knowledge to the study of social organization, and particularly to development efforts to change organizational patterns. The actual effects upon development and social organization of nutritional problems remains unclear. These factors must, of course, be viewed within
the context of a social setting and herein lies the significance of agriculture in national development.

Children who survived a severe episode of chronic malnutrition run a higher risk of failing to profit from the cumulative knowledge available to their socioeconomic group. Survival from severe malnutrition may constitute the event that starts a developmental path characterized by psychologically defective functioning, school failure, and subsequent subnormal adaptive functioning at the familial and societal levels. The ultimate result of this chain of events is what in an ecological sense could be called a "spiral" effect (Cravioto, 1973:17).

The above conditions are characteristic of a large proportion of the developing world. The cumulative effects are not only dysfunctional for social organization, they also present serious obstacles to progress. Without progress in food production, the effects of inadequate nutrition become even more significant.

A low level of adaptive functioning, lack of modern knowledge, social customs, infection, or environmental insufficiency of food-stuffs produces malnutrition, resulting in a large pool of survivors who come to function in suboptimal ways. Such survivors themselves run more risk of being the victims of their poor socioeconomic environment, since they are less effective than otherwise would be the case in their social adaptations. In turn, they will choose mates of similar characteristics and may rear children under conditions and in a fashion fatally programmed to produce a new generation of malnourished individuals (Cravioto, Op. Cit.:18).

Such conditions, as described in the above quote, have long been in effect in much of the underdeveloped world. They have produced cumulative results over the years.
These conditions account for the poor mental and physical development of many, but also explain the perpetuation of these unfortunate conditions. At the individual level, malnourishment makes it more difficult for the individual to function within the larger society, and, in turn, threatens the potential for development.

Nutritionists have singled out two time periods of life during which nutrition has strong influences upon mental processes. These periods are during gestation and during the first two years of life (Correa, 1975: 1-48). It appears that during the 8th through 12th weeks of pregnancy the fetal cerebral cortex forms. Improper nutrition at this stage of fetal development results in insufficient protein available for cortex cellular development, which is most important to brain growth. Insufficient protein in the diet is characteristic of underdeveloped nations. McCance has shown that fluctuations in nutritional levels produces permanent consequences if imposed during critical periods of growth (McCance, 1962:671). Others have demonstrated this irreversible consequence was most marked in increases of cell numbers and cell growth as a function of the early growing period (Winick, 1970:451).

... the regions of the brain with rapid cell division are most vulnerable to the effects of malnutrition, and in view of the different
regional growth patterns there are likely to be different regional effects of malnutrition on the brain (Dobbing, 1970:411).

There is little doubt among medical researchers that the effects of malnutrition are lasting. The effects of poor nutrition upon developing countries is thus of paramount importance in the perspective of the adoption of an agricultural model of development. Such information has generally not been known except by a few medical and nutritional scholars. The incorporation of such factors into the sociology of development has been rare.

Wilkenson has suggested that man no longer is in a process of evolution as was true in the past. He believes man alters his culture to deal with a changing environment. "His behavior is not primarily determined by genetics, but by learning and intelligence (Wilkenson, 1973:9). If Wilkenson's views are correct, poor nutrition would retard man's ability to adapt.

Nutrition has also been linked to IQ and intelligence. Although the exact meaning and implications of IQ remain uncertain, IQ does share a statistical relationship with performance in a number of life's processes. Table 15 presents data regarding scores on the Army General Classification Test and numbers of persons graduating from college. Table 16 shows a significant statistical relationship between IQ and college graduation. See Tables 15 and 16 to clarify this point. Other studies
of the relationship between IQ and nutrition are of importance to development sociologists. There is evidence that babies born during the winter months generally have lower IQ's than summer month babies and, in addition, winter babies have lighter body build and less height (Knoblock, 1958:1201-1208). It is believed that during warmer seasons the mother's appetite is less, thus resulting in a smaller amount of nutrient intake for the mother.

Studies of identical twins point out differences in IQ and a relationship between IQ and body weight. Willerman and Churchill have reported that twins are characterized by association of lower IQ with lower body weight of one of the twins, generally a lower IQ of 5% for one of the twins (Willerman and Churchill, 1967:623-629). In these cases it is believed that unequal distribution of nutrients among the twins accounts for the difference in IQ's.

Tests on non-twin births has shown effects of nutritional supplements on child IQ. Scientists have reported that mothers receiving vitamin and mineral supplements gave birth to children with IQ's averaging 4% to 8% higher than babies born to mothers not taking the supplements. (Harrel, et. al., 1955:8). Additional studies indicate that malnutrition of the mother
Table 15  
Scores on Army General Classification  
Test and College Performance (U.S., 1949)

<table>
<thead>
<tr>
<th>Score on Army GCT</th>
<th>Number entering college</th>
<th>Number graduating college</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-37</td>
<td>889</td>
<td>0</td>
</tr>
<tr>
<td>38-42</td>
<td>1,099</td>
<td>0</td>
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<tr>
<td>43-47</td>
<td>2,248</td>
<td>0</td>
</tr>
<tr>
<td>48-52</td>
<td>4,373</td>
<td>0</td>
</tr>
<tr>
<td>53-57</td>
<td>7,934</td>
<td>0</td>
</tr>
<tr>
<td>58-62</td>
<td>13,497</td>
<td>16</td>
</tr>
<tr>
<td>63-67</td>
<td>21,569</td>
<td>87</td>
</tr>
<tr>
<td>68-72</td>
<td>32,330</td>
<td>320</td>
</tr>
<tr>
<td>73-77</td>
<td>45,600</td>
<td>935</td>
</tr>
<tr>
<td>78-82</td>
<td>60,648</td>
<td>2,253</td>
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<td>83-87</td>
<td>75,239</td>
<td>4,560</td>
</tr>
<tr>
<td>88-92</td>
<td>88,007</td>
<td>8,162</td>
</tr>
<tr>
<td>93-97</td>
<td>96,671</td>
<td>12,768</td>
</tr>
<tr>
<td>98-102</td>
<td>99,863</td>
<td>17,601</td>
</tr>
<tr>
<td>103-107</td>
<td>96,671</td>
<td>21,797</td>
</tr>
<tr>
<td>108-112</td>
<td>88,007</td>
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<td>113-117</td>
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<td>118-122</td>
<td>60,648</td>
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<td>128-132</td>
<td>32,330</td>
<td>14,820</td>
</tr>
<tr>
<td>133-137</td>
<td>21,569</td>
<td>10,716</td>
</tr>
<tr>
<td>138-142</td>
<td>13,497</td>
<td>7,205</td>
</tr>
<tr>
<td>143-147</td>
<td>7,934</td>
<td>4,510</td>
</tr>
<tr>
<td>148-152</td>
<td>4,373</td>
<td>2,640</td>
</tr>
<tr>
<td>153-157</td>
<td>2,248</td>
<td>1,427</td>
</tr>
<tr>
<td>158-162</td>
<td>1,099</td>
<td>734</td>
</tr>
<tr>
<td>163+</td>
<td>899</td>
<td>620</td>
</tr>
<tr>
<td>Total</td>
<td>1,000,000</td>
<td>201,550</td>
</tr>
</tbody>
</table>

Table 16
Statistical Relationship Demonstration For
Army GCT Score and College Performance

<table>
<thead>
<tr>
<th>IQ</th>
<th>Enter/College $f_1$</th>
<th>Grad/College $f_2$</th>
<th>max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-37</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>38-42</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>43-47</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>48-52</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>53-57</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>58-62</td>
<td>.000079</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>63-67</td>
<td>.000511</td>
<td>.000025</td>
<td></td>
</tr>
<tr>
<td>68-72</td>
<td>.002100</td>
<td>.000430</td>
<td></td>
</tr>
<tr>
<td>73-77</td>
<td>.006743</td>
<td>.000891</td>
<td></td>
</tr>
<tr>
<td>78-82</td>
<td>.017932</td>
<td>.003294</td>
<td></td>
</tr>
<tr>
<td>83-87</td>
<td>.040577</td>
<td>.010151</td>
<td></td>
</tr>
<tr>
<td>88-92</td>
<td>.081111</td>
<td>.026395</td>
<td></td>
</tr>
<tr>
<td>93-97</td>
<td>.144517</td>
<td>.059118</td>
<td></td>
</tr>
<tr>
<td>98-102</td>
<td>.231925</td>
<td>.115446</td>
<td></td>
</tr>
<tr>
<td>103-107</td>
<td>.340171</td>
<td>.200514</td>
<td></td>
</tr>
<tr>
<td>108-112</td>
<td>.460415</td>
<td>.308574</td>
<td>.151841*</td>
</tr>
<tr>
<td>113-117</td>
<td>.581800</td>
<td>.434642</td>
<td></td>
</tr>
<tr>
<td>118-122</td>
<td>.693700</td>
<td>.564929</td>
<td></td>
</tr>
<tr>
<td>123-127</td>
<td>.788100</td>
<td>.686014</td>
<td></td>
</tr>
<tr>
<td>128-132</td>
<td>.861700</td>
<td>.787561</td>
<td></td>
</tr>
<tr>
<td>133-137</td>
<td>.914900</td>
<td>.865700</td>
<td></td>
</tr>
<tr>
<td>138-142</td>
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<td>143-147</td>
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<td></td>
</tr>
<tr>
<td>153-157</td>
<td>.993300</td>
<td>.988800</td>
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</tr>
<tr>
<td>158-162</td>
<td>.996900</td>
<td>.994800</td>
<td></td>
</tr>
<tr>
<td>163+</td>
<td>1.000000</td>
<td>1.000000</td>
<td></td>
</tr>
</tbody>
</table>

$n_1 = 210,366 \quad n_2 = 118,999$

$$SL = .001 \quad 1.95 \sqrt{\frac{n_1 + n_2}{n_1 n_2}}$$

$$X^2 = .00195 \text{ at } .001$$

$D_{max} = .15184$ (which is greater than .00195)*Significant

increases probability of premature birth and a greater probability and incidence of emotionally handicapped children (Birch, 1970: Chapter 3). All in all, the effects of nutrition upon mental and physical development are well documented and accepted by medical scientists. For sociological and development purposes, the nutritional effects web becomes more complex.

Because we know that nutrition affects brain development, we are not surprised to read that IQ is also affected by nutrition. Numerous references have already been cited to support this view. To bring IQ into a more practical perspective it is necessary to view related social phenomena. Refer back to Table 15 and Table 16. In these tables, the data leave little doubt that the leaders and intellectuals of such countries tend to come from the more educated classes. This statistical relationship appears to be true for both the already developed nations and the developing nations. Although not every educated person will find himself in a leadership position, the probability of attaining a leadership position rises with education success. In this sense, the ideas, inventions and implementation of developmental planning will be under the supervision of the educated. Today it is the scientists and technologists who supply the necessary brain power and innovation to deal with
the massive problems of development. Often the successful implementation of knowledge requires a rise in the level of education of the general population. This point is evident in programs of population control, energy conservation, and agricultural technology. Obviously, there are political, social class, and chance factors that influence one's chances in life. But, the cumulative effects of poor nutrition present the individual with a handicapped position from the beginning. In this respect, at the individual level, many developmental plans and innovations have been proposed to win the battle against inadequate nutrition. However, malnutrition is increasing in severity and complexity in the underdeveloped world today. Agricultural development offers potential absolution of this problem to persons living in developing nations. Agricultural development is ultimately tied to social organization and development within this scheme and web-like social structure.

4. **Nutritional Effects Upon Group Behavior**

The study conclusions and results of nutritional effects upon individual development have already been presented. The implications of poor nutritional effects upon group behavior and performance are of great importance to development sociologists. The importance of shifting nutrition into a sociological framework is found in
the relationship between economic growth and nutritional inputs.

Nutrition has also been linked to labor productivity. In an economic sense, output is one of the prime indicators of development attainment. However, if nutrition affects labor productivity and economic output, nutrition then becomes an independent variable, not a residual of economic development. Given the mounting research available regarding the effects of nutrition upon individual and group behavior, it is logical to suspect that nutrition is one of the prime elements retarding progress in both a material and social sense.

A problem in development sociology is the fact that regional differences occur which go beyond cultural or geographic distributions. Linking nutrition to health indicators further links nutrition to other indicators of development for which good data does not yet exist. It has been shown that calorie and protein intake share a close statistical relationship with height, weight, and IQ of children. Studies have time and again pointed out these relationships (Meredith, 1968:336-337).

Lohman, et. al., has constructed a general table to demonstrate intake needs relative to various types of work (Lohman, 1950:166-235). It is obvious that insufficient nutritional intake affects productivity
as well as behavior. In terms of developmental concern, this information is of crucial importance.

Nutrition and agricultural development have great importance for social interaction and social stability. In this regard, (1) Agricultural development deals directly with food and nutritional needs of individuals. (2) It is the products of group behavior by which development is judged. Nutrition affects behavior. (3) Social stability cannot be realistically expected under conditions of prolonged hunger.

5. Concluding Remarks

It has been suggested throughout this study that social scientific attention has generally been shifted away from the more fundamental and mundane elements of human life. In this respect the energy requirements of humans and the social organization structures within which humans live and interact have generally been given secondary importance in development studies and plans.

It has also been suggested that the modern world faces serious food shortage problems on a global level. It is true that not all nations have this problem at present, but given the technological nature of the world system, affluent nations can no longer afford to remain oblivious to hunger in other parts of the globe. Agricultural development offers an alternative solution to this problem. This suggestion is an attempt to deal
with the fundamental problems faced by a majority of mankind today. In this respect, world peace and social stability are long range hopes of mankind.
Chapter 9

Summary, Conclusions, and Hopes for the Future

The perspective of the writer, his review of literature and of current development models and his conclusions and recommendations are summarized in this chapter.

1. Perspective for the Study

Although it is often difficult for writers to remain objective and value free about subjects which are emotional and urgent, this writer has attempted to remain as dispassionate as possible in the treatment of a highly emotional topic. There are, however, many subjective factors which influenced the selection of a study topic and there are many "socialization" factors which influenced how the writer addressed the topic. It is hoped that the reader will detect the reasons and motivations behind the study, and feel that some contribution toward solving the problem of mankind has been made.

It may be helpful to the reader to briefly outline the writer's experiences which led to his concern with mankind's future and development. Unexpected circumstances presented the writer with the opportunity to spend some time in a number of developing countries, primarily Asian and Latin American. During this time, his various experiences and observations led to the formation of...
several strong opinions. These opinions are as follows:
(1) However different cultural and social organization patterns appear in practice, most people are remarkably similar in their concerns for the present and future. They also echo these same concerns for their children.
(2) However different conditions surrounding developing countries may be, most citizens of these nations are primarily concerned with survival and with some degree of social stability, at least in the sense that these conditions allow for a degree of certainty about the future.
(3) In both Communistic and Capitalistic oriented nations, the above concerns remained of major importance to the average citizen, and especially to the rural citizen.
(4) The above concerns revolved around issues inherent within social organization. This is, most citizens were overwhelmingly concerned with having enough to eat, and thus, being able to maintain some form of stable social interaction. All other concerns, whether economic or political in nature, were seen as tangential to these concerns. This study has been an attempt to elaborate these observations and opinions in terms of a scientific perspective and sociological framework.

As noted earlier, it is the opinion of the writer that many of the most critical problems faced by developing countries are of a sociological nature. In this regard, a great deal is known about the physical and
material environment, application of resources, industrialization techniques, and political approaches to development. It is, however, sociological issues and considerations which ultimately decide the final impact of development projects. It is thus that growing numbers of scientists and representatives of government agencies are beginning to view sociological inputs into development in a favorable light. This trend provides the development sociologist with an increasing chance to demonstrate a capability for contributing to the successful formulation of development policies and programs.

2. **Summary of Review of Literature on Developmental Models**

An extensive review of literature devoted to the major types of development models led the author to the following conclusions. Both the capitalistic and confiscation oriented development models are primarily concerned with efforts designed to improve what may be termed economic indicators. With the possible exception of the Chinese confiscation approach, these models assume increases in agricultural production will occur if increases in industrialization are planned. However, neither approach considers how agricultural production increases are to occur. Both types of models for development aim at moving rural populations into industrial centers, but neither allows for effects on social
organization patterns and quality of life. It is the conclusion of the writer that the assumption of the models that production will increase in sufficient quantities to feed the growing urban populations is not sound. This conclusion was elaborated in the dissertation in the manner summarized in the following paragraphs.

Many developed nations and most developing nations are food importers. Despite this fact, both the capitalist and most communistic models of development ignore this fact in making the assumption that agricultural production will increase in response to industrialization. No regard is given in the models to the unequal distributions of resources, capital, labor, or arable land. Also, little attention is given to climatic changes which may severely affect agricultural productivity. A majority of today's developing world is suffering from poor nutrition or malnutrition as a result of insufficient quantities of agricultural products and their availability. The above facts and observations led the writer to conclude that the major development problem facing the developing world, and much of the developed world, is one of agricultural production. The development models reviewed are noticeably lacking in planning and formulation for agricultural production goals.

In further elaboration of the above conclusions, the Singer type models assume a closed economic system
which will attain financial solvency in approximately 67 years. Rural populations are expected to migrate into industrial sectors, to assume jobs for which they have to be trained. At the same time, it is assumed that agricultural production will increase to meet demand. The weakest aspect of the Singer type models is the assumption that birth rates will stabilize at a 1.5 percent annual growth rate and that enough food will be produced to feed the growing populations.

The Confiscation or socialist models present an alternative to the Singer type models. However, many of the assumptions made by Singer type models are made by the confiscation type models. For example, annual population increases are assumed to be 1.5 percent. Also, at least in some cases, the confiscation models aim at moving rural populations into industrial sectors. The Chinese approach was a noticeable exception in that populations were moved toward rural sectors. The Chinese approach is also exceptional in that agriculture received a very high priority. The confiscation approaches differ in another respect from the Singer type models. They appear to be more effective in marshalling labor and resources into a developmental objective. This is the result of more direct military and political control. In other words, the citizen has little alternative but to cooperate. Such models are generally characterized by less individual freedom than is allowed by most
of the capitalistic approaches to development.

In the writer's opinion neither the confiscation nor the Singer or capitalistic approaches to development are oriented toward the crucial question: How do we feed a growing population without lessening qualities of life and creating greater degrees of social disorganization.

3. Conclusions and Hopes for the Future

The conditions outlined above lead the author to a major conclusion. The models of development reviewed do not deal directly with the problems and manifestations of hunger, nor do they attempt to create greater efficiency in social organization. Given this conclusion, it is recommended that development program planners for underdeveloped nations seriously consider agricultural development as an alternative to industrial-economic development. Considerable data and facts have been presented to demonstrate this approach to development has both short-term and long-term merit.

In the author's opinion, agricultural development will result in less disruption of social organization patterns because most developing nations are characterized by rural populations. Also, agricultural development deals directly with problems such as nutrition, which models of industrial development simply assume will be absolved. It can also be expected that developing nations having suitable conditions and environments for surplus agricultural development can sell or trade
these surpluses to other nations. This eventuality offers a potential for the realization of global stability in that agricultural and industrial nations will interact in the interest of mutual benefit and profit.

In final summary and conclusion the author suggests that modern man faces a grave situational condition. He is inalterably subject to a survival imperative. Obtaining sufficient quantities of food and maintaining a relatively stable pattern of social organization remain paramount to man's continued existence. Currently espoused methods for attaining cultural goals of industrialization and economic growth pay little regard to social organizational disruptions or to insuring that populations have enough to eat. Agricultural development models, in the writer's opinion, offer an alternative to industrial and economic growth oriented models, at least in those areas and nations which have the necessary conditions for agricultural development. Nations without this potential may choose to go the route of industrialization, thus, contributing to an interdependence of nations. Such an interdependence would also contribute to a more peaceful world.
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VITA

The author was born in Temple, Texas, on December 14, 1946. He received his elementary education in Riverside, California and Temple, Texas. He graduated from Temple High School in May, 1964. He then worked contract labor jobs until March, 1966.

On March 23, 1966, the author enlisted in the United States Army. Following short training, he served extended tours of duty in Southeast Asia and Central America with the U.S. Army Special Forces. He was granted an honorable discharge three and a half years after enlistment.

The author began his educational experience in September, 1969, at The University of Texas at Austin. He graduated from The University of Texas in May, 1971, with a degree in Sociology, and with minors in Classics and Asian Studies. Full time graduate study was begun the following September at North Texas State University. He received the Master of Arts degree from North Texas State University in May, 1973, with a major in Sociology and a minor in Asian History. The writer then attended Graduate Business School for a year at North Texas State University.

Full time graduate study was begun at Louisiana State University in May, 1974. The writer is presently a Candidate for the degree of Doctor of Philosophy in sociology at Louisiana State University.
EXAMINATION AND THESIS REPORT

Candidate:  Billy Markley Turner

Major Field:  Sociology


Approved:

[Signatures]

Major Professor and Chairman

Dean of the Graduate School

EXAMINING COMMITTEE:

[Signatures]

Date of Examination:

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