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A CASE STUDY OF AN INTERNATIONAL
DEVELOPMENT PROJECT: THE INSTITUTO
NACIONAL DE COMERCIO EXTERIOR Y INTERIOR
IN CIUDAD SANDINO, NICARAGUA

By

Ronald G. Kirschenheiter

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

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ABSTRACT

A CASE STUDY OF AN INTERNATIONAL DEVELOPMENT PROJECT: THE INSTITUTO NACIONAL DE COMERCIO EXTERIOR Y INTERIOR IN CIUDAD SANDINO, NICARAGUA

By

Ronald G. Kirschenheiter

This case study attempted to evaluate the impact of an international development grain drying and storage project in Ciudad Sandino, Nicaragua. A critical evaluation was made of several major theoretical schools of thought including "conventional theory" and "dependency theory." These macrosociological perspectives were supplemented with a more microtheoretical approach to the analysis of community development projects based on the works of Andre Gorz and Paulo Freire. This study applied Normative Sponsorship Theory which explains how different units of social organization form linkages to achieve common goals.

A wide variety of research methods were adopted throughout the research including the analysis of numerous documents of official organizations, formal and informal interviewing and participant observation. A lengthy survey was also conducted of the campesinos in the Ciudad Sandino area. This research attempted to discover and analyze the goals, norms and values of the various relevant social units affected by the INCEI program, to isolate many of

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the rural communities' problems and needs, and to trace the complex patterns of interaction within these communities and between the United States and Nicaragua. Further, the social, political and economic consequences of the recent Nicaraguan Revolution received special attention.

The primary findings of this study revealed that, although the INCEI program originally retained the potential for responding to the needs and capabilities of the small farmers in the Ciudad Sandino area, for the most part, it failed to do so. Over six years after completion of the silos, INCEI had yet to have any significant impact on the lives of the rural population and had failed to change the farmers's patterns of grain treatment and storage. Thus the stabilization of the market prices for corn and beans in Nicaragua, the primary objective of the INCEI program, never became a reality.

DEDICATION

DEDICATED TO THE MEMORY OF CARMELITA
SALGADO CERRATO AND THE MARTYRS OF
THE NICARAGUAN REVOLUTION

ACKNOWLEDGEMENTS

Selecting a guidance committee is one of the most important tasks facing any graduate student. I feel most fortunate to be able to thank my committee members, Bill Ewens, Zolton Ferency, Jim McKee, Chris Sower and Scott Whiteford for assisting me in this challenging endeavor. Each of these scholars proved to be knowledgeable, patient and understanding whenever I turned to them for assistance. I wish to especially thank my Chairperson, Bill Ewens, for his encouragement and thoughtfulness throughout this research. Bill is one of those unique individuals who not only teaches the ideals of Friere and Marx in the classroom but also attempts to practice them daily in his relations with others. I also want to thank Ruth Hamilton for introducing to me many of the ideas contained in this dissertation.

Finally and most importantly, I want to thank my tres princesas, Abbi, Gretchen and Kara. These three beautiful human beings, not only tolerated six grueling years of graduate school, law school, field research and a variety of jobs but also helped me to grow emotionally and intellectually while achieving our goals. Quite simply, without their constant love and support, I never would have made it.

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CHAPTER I

INTRODUCTION

Any discussion of international development must accept as its starting point two basic facts, the great inequality that exists at the national and international levels and the tendency of this inequality to resist change. At least two major schools of thought have evolved in the social sciences in an effort to explain these injustices and what changes are necessary to eliminate them. The following pages will attempt to survey the major propositions expounded by these two basic theoretical approaches which, for purposes of discussion, will be referred to here as conventional developmental theories and dependency developmental theories.

It should be mentioned that this discussion is not intended as a detailed analysis of each and every theory presently popular among students of development or a critical indepth evaluation of the strengths and weaknesses of each of the various positions. Rather it is my intention to present an overview of the subject, to explore what this writer feels are the major deficiencies and contradictions inherent in many of the different theories, and to use this discussion as a window from which to view a specific Agency for International Development project in Nicaragua.

CONVENTIONAL DEVELOPMENT THEORY

At the present time, social scientists have yet to even arrive at a consensus at how many different types or approaches to developmental theory are presently circulating in the literature. While perhaps the more critical observers on the subject have identified at least two major trends, that of a dependency perspective versus a more conventional or mainstream approach to the problem (Frank, 1967, 1969; Santos, 1970; Bodenheimer, 1971), other authors fail to agree on even this basic starting point.

Two of the more recent books on this subject, for example, conflict on even this elementary point. Chodak (1973) tells us that the present state of developmental literature contains five distinguishable approaches to the subject. He argues that the various developmental theories can be classified accordingly: (1) evolutionary theories, (2) theories which emphasize the growing "systemness" of society, (3) theories which focus on individual motivational factors leading to development, (4) political and economic theories of development, and (5) modernization theories or those which attempt to "bring technology, ways of life, social organization, art, modes of production, and even fashion up to date". (Ibid., p. 253).

Chodak's otherwise fine work fails to supply even a superficial discussion of the major tenets of dependency theories and his extensive bibliography included at the back of his book excludes any references to scholars such as Amin, Beckford, or Frank. Chodak apparently refuses to present and evaluate the dependency perspective because he refuses to engage in what he considers a political as opposed to his more "scientific" approach to the problem. He fails to realize that his exclusion of this vital area of the literature is every bit as much of a political statement as would be critical analysis of the literature.

Long (1977), on the other hand, divides the various approaches to development into at least four basic avenues. He focuses on: those which adapt a modernization approach, those which concentrate on social and cultural obstacles to development, those which adapt a dependency perspective, and those which tend to stress individual motivational factors, or as he puts it, "the analysis of entrepreneurship".

Although both of these authors have greatly contributed to my own understanding and organization of the subject matter, the following discussion will not adopt in its entirety either of these classification systems. Rather it is my intention, as stated previously, to divide this survey of the literature into two major bodies: dependency theory and conventional development

theory. This latter category will be further subdivided into three basic subcategories: those which adopt a social-psychological approach, those which emphasize a political and economical perspective, and so-called modernization theories.

It appears obvious that any such classification scheme is to a great extent an artificial and arbitrary segmentation of the subject matter. Whether a certain theorist such as Weber or Marx should be placed into any particular category is frequently an intellectual exercise in hair-splitting and often a matter of degree and personal preferences. This scheme is adopted primarily for purposes of discussion and only secondarily to expound upon the fact that the various theoretical approaches to the problem do tend to emphasize different social, political, and economic factors in the interdependent social process referred to as international development.

MODERNIZATION THEORY

What are commonly referred to as theories of modernization are labeled such because they tend to stress the differences between those countries commonly referred to as "modern", such as the United States, Western Europe, and the Soviet Union, and those which have to date failed to achieve a corresponding level of affluence. The popularity of this area is attested to by the fact that

different volumes of bibliographies have been published on the subject (Brode, 1970; Spitz, 1969).

Whether a country or society is or is not classified as "modern", which in effect often implies "like the United States", depends to a great extent on the definitional whims of the social scientist doing the defining. Moore, for example, states that a modern society is one which has experienced a total transition from traditional or pre-modern society to the level of technology and political and social organization presently found in the Western democracies (Moore, 1963; 89). Lenski and Lenski reflect this view, and while generally stressing the desirable effects of modern industrial technology, they emphasize that the modernization process involves all aspects of society, not just the technological (Lenski and Lenski, 1974; 414-459).

Bendix (1967) adapts a somewhat different point of reference. While not denying that modernization tends to follow a general pattern in different societies, he also stresses the uniqueness of the process depending on the particular country's historical frame of reference. He argues that all nations cannot be expected to follow in the historical footsteps of England or the United States, that shortcuts in the modernization process are certainly possible, and that government plays a crucial role in either accelerating or impeding the developmental

process towards modernization.

Apter differentiates between terms such as "modernization", "development", and "industrialization", and states that modernization is but one type of development. Modernization, for Apter, necessarily contains three factors. First, a social system which accepts and advocates change as part of its value system. Second, a social structure which differentiates with regards to various occupations and at the same time, is flexible enough to allow movement within the various layers of the social structure. And third, a social system which includes and perpetuates the type of knowledge, training, and skill necessary for life in a technologically advanced world (Apter, 1965; 67). Apter goes on to point out that just as modernization is but one type of development, so is industrialization but one kind of modernization. He notes that whereas a particular country may be able to modernize with only a minimum level of industrialization, that same country could not industrialize without modernization.

Thus in general terms, modernization to these theorists refers to a better way of life. A way of life which is most often found in the advanced, affluent nations of the world. Modernization becomes in many ways, a process of imitating the accomplishments of the advanced, more developed nations by those which are "underdeveloped". To a very limited extent, my own research might be viewed

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as a case study of an attempt at transplanting the advanced grain drying and storage practices of the United States to underdeveloped Nicaragua. Unfortunately as the results of this research will reveal, imitation is not always the purest form of flattery. Within the context of international development, such so-called "transfers of technology" are oftentimes a disguised effort at perpetuating a dependency relationship. Blind imitation of the agricultural practices of the Center nation, without regard to the unique cultural and political conditions of the recipient or dependent country, more often than not, has produced little in terms of a better life for those on the bottom of the social structure.

Despite denials to the contrary (see Chodak, 1973; 252), the intellectual roots of modernization theory are buried in the theoretical soil of the nineteenth century theories of social evolution (Portes, 1976). Auguste Comte (1898), Herbert Spencer (1901), and in more recent times, the writings of Lester Ward (1911), Talcott Parsons (1954), and Leslie White (1969) all tend to view gradual change in societies as a reflection of prior adaptations of nature. Spencer not only viewed human societies as comparable in many ways to biological organisms, especially in terms of growth and reproduction, but also that this growth or development of societies cannot be accelerated or diverted, but must follow a natural pattern.

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These theorists assumed that social change and development were inevitable and viewed it as pursuing a gradual unilateral course of progression with each society eventually passing through the same basic historical stages or periods of transition. Only minor emphasis was placed on the actual causes of social change or on what role conflict should play, if any, in sparking these advances since the controlling forces were motivated by almost a natural law (Eisenstadt, 1965).

Although today these evolutionary approaches to development are rarely supported in their original or purest forms, many of the nutrients left behind in this "fertile soil" of sociological thought remain in the theoretical constructs of modernizational theorists. Chodak, for instance, has identified Leslie White as "the most representative and elaborate of the evolutionist approaches in anthropology today" (1973; 32). This is because White, in his discussion of history as the evolution of culture, places special emphasis on the fact that culture, in addition to beliefs, values, norms, and social organizations and institutions, also includes the material goods made by humans and the way in which they make them.

White (1969; 366-374) stresses the key role that energy has placed in this process. He describes the human race as gradually progressing through a number of stages, each of which he identified by the type and quantity of

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energy available at that period of time. From the period where humans were the primary source of power, through the stages of the ancient great civilizations built on animal and plant power, to the present age of fossil fuels, the human race's level of material affluence is directly linked to its ability to harness and produce energy.

White regards the discovery of nuclear energy as "a tremendously significant technological event" which implicitly will herald in a new, more prosperous stage in the cultural evolution of the human race. White also believes that the State will play an ever more dominant role in the control of human affairs. He does not perceive this as a necessarily negative or positive event as much as an inevitable one. After all, this is a result of social evolution, a process which is predestined to occur.

Other central figures in modernization theory reflect similar views of development. Rostow (1960) in his frequently cited "Non-Communist Manifesto", maintained that development can still be regarded basically as a linear process with developing societies tending to pass through various stages from traditional, to pre-conditions for economic take-off, to take-off, through the drive to maturity, and finally to the age of high mass consumption. Wilbert Moore's expansion on this theoretical conception of modernization tends for all practical purposes to equate the concept with industrialization (Moore, 1963; 89-112).

The task of the social observers then becomes to identify the conditions necessary for transition to the next stage of development, the obstacles present in particular societies which hinder this process, and to elaborate on the consequences which will flow from the failure to correctly address these problems.

These theorists further point out that the primary obstacles to development include rapidly increasing populations, as well as various types of waste including needless military expenditures, high levels of luxury consumption among the upper classes of these countries, and widespread corruption at the governmental level. These obstacles prevent the rapid accumulation of capital necessary to achieve self-sustaining growth (Rosen and Jones, 1977).

Of these, the inability to feed an ever-increasing population clearly presents a prime obstacle. Robert McNamara, President of the World Bank Group, has stated that of the more than 2,000 million people living in the approximately 100 countries of the developing world, over 800 million presently exist in an absolute state of poverty that is "a condition of life so limited as to prevent realization of the potential of the genes with which they were born; a condition of life so degrading as to be an insult to human dignity" (World Bank, 1975; v). Tydings (1970) calculates that during the 8-day mission of man's first

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lunar walk approximately 100,000 humans starved to death - most of whom were children.

Each year food production falls farther and farther behind the burgeoning population. Although most Latin American nations are far from the most deprived of the developing world, on the average one Latin American child dies from either hunger or disease every minute of every day. Out of a total population of approximately 280 million, 50 million are either unemployed or underemployed, and about 100 million are functionally illiterate (Galeano, 1973; 31-32). During the 1960's, the United Nations' so-called "Decade of Development", over half of the world's population, instead of increasing their protein and calorie intake and improving their standard of living, actually suffered lower levels of consumption, endured more unemployment, and earned less real money.

In response to this avalanche of depressing statistics, many leaders of the developed world conclude that population control must receive priority over economic development. In fact, such control will indirectly lead to development when measured by such factors as per capita income. As President Johnson once stated in a speech to the United Nations assembly, "Let us act on the fact that less than \$5.00 invested in population control is worth \$100 invested in economic control." (Galeano, 1973; 33). McNamara has presented the severity of the problem in even more explicit

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terms; unless these trends are reversed, he argues, it will be impossible to maintain world peace or to provide for the security of the United States.

Thus the decade of development turned out to be such a dismal failure because of, among other factors, political instability, rapid population growth, unfavorable land tenure systems, and the abnegation of their responsibilities by local governments (Zimmerman and Duwors, 1970). Modernizational theorists maintain that once these excesses are controlled, that once the population increase becomes reduced and eventually eliminated, along with wasteful military expenditures and unproductive consumption patterns, then the conditions for economic "take-off" will exist. The mechanization of agriculture will lead to greater production which in turn will establish a base for further industrialization. Foreign aid and private foreign investment channeled through effective programs of technical assistance will provide the nutrients necessary to fertilize this growth (Moomaw, 1966). Typically multinational corporations play a center role in this scheme since they provide advanced technology and greater efficiency, more jobs with greater access to the international market, and in general, demonstrate to the local population how to imitate the superior western methods of management and production (Rosen and Jones, 1977).

WEAKNESSES OF MODERNIZATION THEORISTS

Numerous authors have provided an extended analysis of the weaknesses inherent in the modernization approach. (See, for example, Ocampo and Johnson, 1972; Salisbury, 1970; Chodak, 1973; and Long, 1977.) Therefore only a brief summation of their key criticisms will be presented here.

Clearly one of the key flaws contained in much of the modernization literature is that it basically reflects an ethnocentric capitalistic world view. Tipps notes that although the literature of contemporary modernization theory has been cleaned to the extent that it now projects a more neutral impression, the underlying biases behind this approach remain intact. Today, although "it speaks of 'modernity' rather than civilization, 'tradition' rather than 'barbarism' - it continues to evaluate the progress of nations, like its nineteenth century forebearers, by their proximity to the institutions and values of Western, and particularly Anglo-American societies." (Tipp, 1973; 199-226). Furthermore, this model does not accurately reflect the historical, developmental experiences of the West, but presents an "idealization" of their position (Smith, 1973; 87). It frequently tends to either ignore or to underemphasize the fact many of the industrial and developmental achievements of the United States, for example, became possible only through exploitation and oppression of her own people.

Many critical scholars have clearly documented this fact. Dowd points out that slavery permitted the exploitation of 15 to 20 million men, women, and children, over half of whom were killed in the process, for the benefit of a minority of rich Southern landowners and Northern manufacturers (Dowd, 1973; 46). Genovese has provided a brilliantly researched documentation of this process and maintains that only a very small percentage of capitalists were the direct beneficiaries of this exploitation (Genovese, 1974). Tabb provides further support for this contention and notes that while, "Often the terrible burden of slavery is acknowledged, rarely is the contribution of slave labor to the capital accumulation process seen as the sizable factor in American development that it truly was." (Tabb, 1974; 301).

Modernization theorists, while focusing on the internal obstacles to social change, frequently tend to downplay the external restraints imposed by a global system of capitalism. Development must also be viewed from the macro-level of political and economic relationships. Special consideration must be given to determining what effect these external forces have in terms of a country's individual development. It does little good, for example, to double production of basic agricultural commodities through modern practices of cultivation if these crops are raised primarily for export and the price on the world market is heavily

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influenced by a few developed countries (Chodak, 1973; 297). Many mainstream theorists tend to circumvent these problems by simply accepting the global structure of political and economic relations as given.

Modernization theorists have also been criticized on a number of other accounts. Long argues that some leading theorists exhibit at least 2 major limitations in their formulations. First they often project the impression that it is possible to attain "an aggregate assessment of the degree of structural differentiation of society as a whole". Yet all societies have social institutions, roles, and relationships which are both differentiated and undifferentiated. Frank (1967), for example, stresses that there is little difference between the political, economic, and social elites of less developed countries and those of the United States in terms of differentiating their roles and relationships to each other. Furthermore it is also a fallacy to assume that different societies can be rigidly classified in terms of whether their value and role systems are based on "universal-achievement" variables or "particularistic-ascriptive" criteria.

Secondly, even if the argument is accepted that the less developed nations are much more undifferentiated in their role patterns and social institutions than the more developed countries, it does not necessarily follow, as many modernization theorists imply, that modernization will

lead to greater differentiation. Traditional and modern value systems are not mutually exclusive or in conflict with each other. As this study will demonstrate, it is possible to introduce into a small agricultural community the most modern system of drying and storing basic grains, at a cost of millions of dollars, and yet have relatively no impact on the traditional forms of grain drying and storing. Other studies have also reaffirmed the fact that the "old" and the "modern" can exist together and both assist and obstruct development (Salisbury, 1970; Singer, 1968).

These artificial dichotomies created by many modernization theorists of modern versus traditional, achievement orientation versus ascription, differentiated social structures and institutions versus the undifferentiated, have important implications in terms of research as well as theory. Not only does it reflect an ethnocentric bias towards linear development, but it then presents the research problem as one of hypothesizing the collapse of traditional cultural practices or of proving how such outmoded patterns of behavior are preventing development from taking place. It appears clear that the often unstated implication behind such research is that unless "help" comes in from the outside, primarily the Western nations, little improvement can be expected from the developing countries operating on their own. It is a short practical step from

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such a theoretical position to advocating developmental policies which perpetuate a dependency relationship.

This discussion of modernization theorists is by no means intended as a caricature of their position. Even superficial experience in the field of international development, especially at the local level, will reveal the inadequacies of this theoretical perspective when put into practice. If modernization theory has come under increasing attack in recent years, it is not because the theory has yet to face practical application, but because it has been applied in country after country for decades and failed to produce results.

THE PSYCHOLOGICAL/SOCIAL APPROACH TO DEVELOPMENT

A second major approach to development tends to primarily emphasize the psychological and social factors of individuals and groups which lead to development. These theorists often attempt to identify and isolate the values and attitudes possessed by the "modern man" and then to uncover which social groups or classes exhibit these characteristics to the greatest extent. The work of Max Weber remains the primary impetus behind this school of thought.

These theories do not view development as an inevitable stage of societal evolution, but stress the uniqueness of the process. They take as their starting point that

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some societies are developed and others are not and that the presence of certain attitudes and values within a particular society must exist as a necessary precondition to sparking the developmental process. Thus, they attempt to identify and explain what it is that was different historically about the United States and Western Europe which allowed them to develop.

WEBER AS AN INTELLECTUAL FATHER IMAGE

Max Weber clearly provided the "intellectual father image" for many of these modern theorists. His influence is reflected in the work of numerous scholars such as McClelland (1961, 1969), Hagen (1962), and Eisenstadt (1968). It is valuable here to review some of the major ideas contained in Weber's, The Protestant Ethic and the Spirit of Capitalism. This discussion is by no means intended as an original interpretation of this classic work nor as a critical review of the weaknesses of his research. Other writers have adequately addressed this topic elsewhere (Green, 1959; 1962).

As Chodak observed, Weber's work has had such a profound impact on social scientists in general, and developmental theorists in particular, that entire careers have been built on either attacking or defending him. Yet the real importance of Weber's research today "may not consist so much in what it actually says about the influence of

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the Protestant Ethic on the spread of the spirit of capitalism as in its indispensability to an understanding of what has been written on industrialization and development in Europe". (Chodak, 1973; 152)

Weber's first step in his analysis of the growth of capitalism was to critically evaluate and discard many of the common explanations which had been presented previously. His historical research revealed many of these then popularly accepted explanations were simply not founded in fact. Material conditions, for example, had little to do with capitalism's rise. Florence in the 14th and 15th centuries was extremely wealthy yet provided somewhat barren soil for the seeds of capitalism. By contrast, the back-water, dirt poor thirteen colonies of the New World presented fertile acreage indeed.

Nor was it accurate to state that the difference in the presence of capitalism could be found simply in the value that a particular society placed on making money. Weber argued that the impulse to acquire ever greater amounts of money and material comforts is omnipresent. "The impulse to acquisition, pursuit of gain, of money, of the greatest amount of money, has in itself nothing to do with capitalism . . . one may say that it has been common to all sorts and conditions of men at all times and in all countries of the earth." (Weber, 1969; 17).

Moreover, Weber did not feel it was accurate to say that Catholics and other sects believe in sacrificing the present in hopes of achieving their just rewards in another world any more than Protestants do. This explanation fit neither the facts of today nor of the past. Furthermore, although many factors such as rational structures of law and administration and scientific knowledge and technology contributed to the rise of capitalism, these factors in and of themselves were not sufficient to explain its birth and rapid growth.

What then is the explanation? Weber believed that the key lay in the fact that Protestants possessed an unusual high percentage of managerial ownership and skilled labor positions, and that Catholics, in similar historical, political, and economic positions as Protestants, did not tend to develop at the same level of economic advancement as the Protestants. Weber explained these social facts in terms of the differences between Protestants and Catholics themselves. In other words, in terms of their beliefs. While Catholics possessed a "traditional" world view, Protestants were motivated by what he termed the "Protestant Ethic".

Unlike the traditional approach where business exists for people, the Protestant Ethic teaches that men and women should exist for religion through business. Weber pointed out that the earning of ever greater amounts of

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money, while at the same time avoiding all spontaneous enjoyment of life, is completely irrational unless one realizes that the act of making money is itself the result of virtue and proficiency in one's calling. "Seest thou a man diligent in his business? He shall stand before kings." (Psalm VIII).

The traditional approach to making money and business presented an obstacle to the development of capitalism. Through many of its most scholarly spokesmen, it taught that the accumulation of wealth was wrong and that poverty, to a certain extent, was admirable. Weber believed that a religious upbringing under the auspices of the Protestant Ethic presented the greatest opportunity for overcoming this more traditional view of the world.

Weber felt that the concept of a "calling" was unique onto Protestants. This concept gave a new, more vibrant religious and moral significance to worldly labor and accumulation. The Protestant Ethic stressed the supreme value of this calling and held that it was reflected in one's life in this world. "The valuation of the fulfillment of duty in worldly affairs is the highest form which the moral activity of the individual can assume." (Ibid., p. 80). This dictate varies considerable from the traditional approaches of "give us this day our daily bread" and "blessed are the meek and humble for they shall inherit the earth".

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Perhaps the overriding dogma preached by Calvinism is predestination. In theory "Calvin rejects in principle the assumption that one can learn from the conduct of others whether they are chosen or damned as an unjustifiable attempt to force God's secret" (Ibid., p. 115). Yet the fact remains that if a person is chosen, almost by definition of the fact, he or she must lead a good life. A good life meant a prosperous one, "for if God . . . shows one of his elect a chance of profit, he must do it with a purpose".

The Protestant Ethic aided capitalism in several other ways as well. Through Baxter it taught that, "Waste of time is thus the first and in principle the deadliest of sins." (Ibid., p. 157) and found division of labor highly desirable. Even more importantly, it taught men and women to acquire capital but forbid blatant visible consumption. Under Puritanism, one "like the servant in the parable must give an account of every penny entrusted to him" (Ibid., p. 170). At the same time, "The restraints which were imposed upon the consumption of wealth naturally served to increase it by making possible the productive investment of capital." (Ibid., p. 172). Not only did the Protestant Ethic justify the owner class, but it also provided this class with an abundant supply of sober, conscientious, and unusually industrious class of laborers "who clung to their work as a life purpose willed by God"

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(Ibid., p. 177).

It would be wrong to assume that the Protestant Ethic held that becoming wealthy was an end in itself. It did not directly promote capitalism as much as capitalism evolved from its doctrines. Weber maintained that many of the results of the work of the Protestant Ethic's disciples was "unforeseen and even unwished for". By Benjamin Franklin's day, much of the religious fervor behind the Protestant Ethic had already died out. Yet the ideas remained. It was these ideas, it was argued, which provided the impetus for conquering traditionalism and making possible the growth of capitalism and modern development.

Numerous authors have sprouted from Weber's groundwork and have attempted to expand upon it. Rather than stress capital formation, they attempted to identify and praise the "modern man", whose spirit of entrepreneurship made development possible. Although he states the Weber's effort has become outdated, Hagen's theory of status withdrawal strongly reflects Weber's influence.

Hagen argues that modern and traditional societies produce different personalities. The traditional society produces an authoritarian personality who refuses to take risks, to be original, or to rebel against and oppose those in positions of power over him. Modern society, on the other hand, tends to produce what Hagen labels an "innovational personality". This individual is confident,

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curious, and a problem solver. Hagen believes that the transformation from underdeveloped to developing nation status can be accomplished through a process he calls "status withdrawal".

Status withdrawal means disrupting one's role in society by undermining an individual's values and beliefs. This results in frustration and alienation which gradually builds up and passes through various stages, including the retreatist personality to the ritualistic, to the innovative, and eventually the reformist personality, which allegedly tends to dominate modern society.

Another theorist who emphasizes the psychological characteristics of individuals present in developing societies rather than the societies themselves is Alex Inkelas (1969). Following the lead of Parson's, this approach again focuses on the value-normative or functional interests of society. It believes that ideas, attitudes, and values as exposed by modern, so-called "developed individuals" provide the spark plugs for getting a country started on the road to development.

In his frequently cited study, Inkelas interviewed 6,000 men (women were naturally excluded) from 6 developing nations in order to determine just what it is that makes men modern. Education was found to be the most significant factor in this chain reaction, but occupational experience in large scale organizations, "especially in

factory work", was revealed to be a close second. These Harvard scholars, financed primarily by the Rockefeller and Ford Foundations, discovered that modern men not only think differently, but also act differently. These researchers concluded that, "To a striking degree, the same syndrome of attitudes, values, and ways of acting - such as openness to experience, independence from parental authority, and taking part in civic affairs - defined the modern men in each of the six countries and in all the occupational groups."

Perhaps the most famous researcher in the area of psychological motivation, however, is David C. McClelland. McClelland's findings support many of Weber's contentions. He believes that his studies have in fact demonstrated that religion does play an important role in development. The more dominant place religion has in a particular society, the greater are possibilities of achievement by individuals in that society. Catholic parents in Germany as well as the United States exhibit much stricter child-rearing practices than Protestant parents. They demand more obedience and punish more frequently when this obedience is not forthcoming. This theoretically tends to undermine the development of values such as independence and "achievement motivation". This research if accepted, obviously has dire implications for countries such as Nicaragua, as well as the rest of Latin America, where well

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over ninety percent of the population consider themselves Catholic.

McClelland maintains that economic development historically in all societies has resulted from achievement motivation. Much of his research consists of identifying this factor, which he later labeled "n Ach" for need for achievement, in a variety of cross-cultural and historical situations. This need, however, does not encompass the need for personal satisfaction or self-actualization in Maslowian terms. The need for achievement in this context means economic achievement, in short, money.

Chodak argues that this need for money reflects not greed or a love for money for its own sake. Instead, in tune with Weber's approach, money symbolizes success and should be accumulated, not spent (Chodak, 1973; 169, 173). Thus in short, McClelland's advice to the developing world is to plant and cultivate the seeds of achievement motivation through the educational process and with care, it will germinate and blossom into the flower of economic development.

LIMITATIONS TO THE PSYCHO-SOCIO APPROACH TO DEVELOPMENT

Theories which focus on the psychological factors related to development and on the recruitment from groups possessing these characteristics have obviously contributed

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to our knowledge of development. At the same time, however, these theories reveal several key flaws or limitations when examined from a more critical perspective. It is perhaps worth noting that such weaknesses do not make these theories "bad" in contrast with other "good" theories of development. As with most problems in social science, there is not necessarily a "right" or a "wrong" answer. The issue should become one of realizing the inherent limitations of this approach, and then taking steps to correct them. Unfortunately, this is a "sociological fact of life" which many advocates of this school of thought have failed to accept.

Although the lists of characteristics which propel men into "modernity" vary from theorist to theorist, from religion, to education, to work experience, to childrearing practices and so on, these perspectives clearly emphasize individual, psychological variables which influence development. These internal individual factors constitute the motivating force behind social change. This approach tends to completely ignore the vital materialistic and historical forces at work.

This branch of conventional developmental theory appears to disregard the international political and economic realities which harness and oppress development. It fails to address the very real possibility that so-called "modern individuals" who internalize the values, attitudes,

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and goals of the developed nations - which here again has traditionally meant the western capitalist countries - eventually became roadblocks to development rather than avenues to it. Even a superficial historical analysis of many developing societies demonstrates that values such as individualism, the profit motive, and excessive consumption patterns do not constitute the most viable vehicles on the road to development, especially when they come to believe they are somehow different and superior and in turn organize themselves into a ruling elite (Feder, 1971).

Nicaragua, for example, has long been under the control of individuals who most likely would have scored very high on any scale of modernity. They frequently speak English, have their children educated in the United States (as they were), and otherwise share the values of an upper-class modern American. Yet these admirable characteristics have done little to lift the country from the grips of underdevelopment or to cut the ties of dependency which exist between Nicaragua and the United States.

By focusing on individual psychological variables, these theorists also tend to underestimate the sociological reality of poverty and oppression. This author's own experience of living and working in the highlands and the coast of Peru for a year and a half have convinced me that even "modern individuals" who possess an admirable spirit of independence, curiosity, and creativity are stifled by their

immediate physical and cultural environments. The same foreign student who is administered a battery of tests while studying in the relatively luxurious and eliteous environment of Harvard University would register a very different score on an index of modernity if forced to scrap out a living for a family of five from a quarter acre of rocky soil in the Peruvian Andes while subsisting on a daily diet of baked potatoes, chica, and coca leaves.

Furthermore, simply because factors such as religious values facilitated development in a particular historical timeframe does not mean that these same factors are absolutely necessary preconditions to economic growth. Gerschenkron (1962) argues that this theory implies a rigid concept of historical necessity which appears unfounded in the real world. Clearly the possibility exists that other psychological variables and social institutions may fulfill this same role in a different time and place.

A new, still maturing doctrine of Marxist Catholicism may someday fill the role in Latin America which Calvinism and the Protestant Ethic played in Europe and the United States. To say the least, Catholicism has not prevented such now legendary figures as Camilo Torres in Columbia or Ernesto Cardenal in Nicaragua, both of whom are Roman Catholic priests, from achieving a revolutionary consciousness unknown to many disciples of Calvinism (Gott, 1972; 268-307; Cardenal, 1976).

The writings of many neo-Weberian theorists then reflect the ethnocentric biases mentioned earlier with regard to modernization theorists . They assume a common objective of a capitalistic democratic society patterned after the United States and Europe and populated by the same type of psychologically motivated individuals which they believe exist here. They apparently fail to realize, or at the very least accept, the fact that the road to development may be paved with a variety of different values and ideologies. The influence of socialism (Gurley, 1976; Bonachea and Valders, 1972) and nationalism (Nyerere, 1968) are but two prime examples of this.

POLITICAL AND ECONOMIC APPROACHES TO DEVELOPMENT

In the social sciences, the disciplines of economics and political science deserve a special place for their contributions to theories of economic development. In fact, it may come as a surprise to a few readers of this dissertation that some authorities on the subject believe that these disciplines are the only areas where theories of development are the primary focus of scholarly concern. Chodak (1973; 210), for example, bluntly observes that practically no historian today believes that development is a legitimate concept which can be addressed in terms of a historical process. With regard to sociology, he notes that

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"Sociologists often work on developmental problems, but after their perplexing disappointments with earlier attempts to interpret it, they have obtained a sort of idiosyncratic aversion to it and often give 'development' the widest possible berth."

Development from this perspective means obtaining a narrowly defined set of objectives: it means establishing the nation, protecting one's borders, and industrializing and finally increasing production. It is concerned with increasing the overall level of national income through rational organization and administration of a country's natural and human resources. Politically it often means eventually establishing a liberal democracy ideally accompanied by great degrees of personal freedom.

Advocates of economic theories of development often accept social and psychological variables of a particular society as given. They place heavy reliance on quantifiable data and stress that the rate of investment is the secret to obtaining economic growth. Meier and Baldwin (1957; 110), for example, explain that the rate of growth "is equal to the propensity to save times the inverse of the accelerator. Income must increase, therefore, at a compound interest rate if full employment is to be maintained".

It logically follows under this analysis that, simply put, countries are poor and underdeveloped because they are

poor and underdeveloped. This "Catch 22 of development" expounds that they are poor because they have no capital to invest and have no capital to invest because they are too poor to be able to save (see Chodak, 1973; 227; Nurske, 1957). If they ever hope to break out of this vicious cycle of poverty and underdevelopment, they must somehow accumulate capital to invest. It is this line of reasoning which logically justifies foreign aid in the form of grants and loans. Other advocates who adopt more of a "self-help" approach to development argue that a great increase in agricultural production can supply this vitally important initial investment (Reynolds, 1977; Mellor, 1966). Unfortunately, many of these same theorists fail to acknowledge that this circle of frustration had to begin somewhere.

Other theorists have comprised additional lists of factors which are necessary for economic growth. Mosher (1966) identifies the variables which he considers are necessary for development. These include: transportation facilities, markets, technology, education, credit, and incentives. Which of these variables are of prime importance varies from theorist to theorist. Yet in general, they do tend to agree that the political situation in a given country is to be accepted as given, and their task is to operate within that structure whether it be a liberal democracy or an oppressive dictatorship. As Albert O. Hirschman, a leading spokesman of this school observes,

"I attempt to answer these questions by avoiding the tempting device - or slight-of-hand - which consists in discovering some 'prerequisite', be it a resource base, a rate of capital formation, an elite, an ideology, or a personality structure, that must allegedly be introduced before change can possibly assert itself. Rather, I am trying to show how a society can begin to move forward as it is, in spite of what it is and because of what it is." (Hirschman, 1973; 6; emphasis in the original.)

Hirschman's own scheme places heavy emphasis on the individual entrepreneur. Yet unlike those theories who stress the psychological characteristics of individuals, Hirschman focuses on the role government can play in stimulating private investment and increasing production (Hirschman, 1958). He believes that "strategic unbalanced government investments", such as establishing industrial parks, transportation facilities, and public power plants and utilities, will provide the incentive for private individuals and firms to set up industries.

Political theories of development also cover a wide range of alternatives, as Pye (1963) has aptly demonstrated. Frequently these perspectives stress the problems involved with becoming a modern nation-state and with efficient public administration. Stress is often placed on transforming agrarian societies, especially in Africa and Asia, into ideally liberal democracies with a broad yet

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stable level of political participation (Apter, 1965; Bendix, 1964).

Chodak argues that political developmental theorists appear less goal-directed than those of the economic developmental school, although certain parallels between the two do exist. For example, both anticipate various levels of individual freedom, government planning, and mass participation. The interaction of these factors determines the possible range of future development.

Gabriel Almond and Powell perceive the political system in terms often used in economic analysis. They view it as a process of transforming political inputs into outputs and believe that the performance of the system can be graded on how effectively this process is handled (Almond and Powell, 1966; 877). This model is specifically designed to assist political leaders in rationally selecting between various objectives and responding to the often conflicting pressures exerted on them by various interest groups. With the exception of Pye, Ilchman and Uphoff (1971) are among the few writers who have attempted a sophisticated synthesis of the political and economic frameworks and who then go on to pepper their work with a seasoning of sociological research. These authors begin with recognition of the fact that the most influential studies in this area, including the works of Parsons

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(1951), Almond and Deutsch (1963), primarily adopt a systems or functional approach to the problem. They then admit, however, that neither political scientists, economists, nor social scientists in general can presently contribute anything of value in the conduct of politics or in making rational choices of scarce resources. Their own effort, The Political Economy of Change, attempts to correct this deficiency. They argue that, "What is needed are some ways of assessing the comparative efficiency of policy alternatives and some means of formulating priorities." (Ilchman and Uphoff, 1973; 11). In effect their own book might be regarded as an attempt at practical model for the do-it-yourself statesman.

Ilchman and Uphoff begin their analysis with five basic assumptions. First, that political behavior and decisions among alternatives can be analyzed and explained in terms of resources, which are loosely described as the activities and values of individuals. Second, that humans make decisions and act rationally in pursuit of their objectives. Third, that an analysis of this process is facilitated by segmenting the various interest groups into sectors in order to study the interchange of demands and resource allocations. They purposely avoid the use of such terms as "elites" and "masses" because they believe such distinctions are deceptive, tend to oversimplify, and ignore the conflicts within such groups. The fourth

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assumption is that "most estimations of value can be made in marginal terms". And finally, that any difficulties with measurement which appear insoluble in the abstract can be made more concrete when evaluated comparatively. In other words, any particular sector will desire some amount of X more than some amount of Y.

The various terms these authors use are original and picturesque. The political arena is divided into two main factions, the "regime" or the government presently in power, and the "sectors". A sector is defined as "a group of persons who respond to political issues in a similar fashion" (Ibid., p. 39). Sectors are portrayed as stratified into five key groupings. The first is the core combination which "is an alliance of those sectors that have most influence over public policy and the personnel and goals of the regime" (Ibid., p. 43). In developing countries especially, the military and upper classes tend to occupy this strata. Second in importance is the ideological bias group. These individuals often receive verbal support and prestige but few material rewards. The so-called intellectual class resides here. Next comes the stability group or "silent majority". They frequently end up giving more than they receive and are often used by the core combination and ideological bias group for their own purposes. Fourth is the extra-stability group which is typically ideologically oriented against the regime. The

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regime often considers them extremists and responds to their demands by coercion, threats, and oppression. Last and least are the unmobilized sectors. These individuals have few if any resources and thus have no effective basis for making demands on the regime.

Ilchman and Uphoff then devise an elaborate scheme for describing the interchange which occurs in the political process. They treat the process of supply and demand in the political arena as similar in operation to the economic realm. Political activity involves maximizing one's own resources while, if possible, minimizing or appeasing the demands of the opposition. Political resources are something either a regime or the various sectors use to accomplish their goals. Among the resources held by the regime are economic goods and services, authority, status, information, and coercion; those held by the sectors are economic goods and services, status, legitimacy, information, and violence.

Political exchange briefly is the process by which sectors make demands upon the regime's resources while trading their own resources to achieve these ends. The regime likewise makes counterdemands upon the sectors' resources. Who achieves what is determined by who is less dependent on the resources of the other. "Political inflation" results when demand for the regime's resources exceeds supply. Hyperinflation is an extreme case of this.

"Political deflation" on the other hand occurs when the regime's resources exceeds the demands of the various sectors. Obviously, a regime prefers political inflation, especially if controlled, and will continually strive to achieve this. "Monopoly" occurs from the regime's point of view when it is the only "seller" of specific resources. "Monopsony" results if she is the only buyer; both of these conditions are also highly favorable to the regime. If the sectors, however, should achieve monopoly or monopsony, the regime's position becomes highly precarious. The key tasks of the regime, and by implication the social scientists advising it, are to stabilize and control this bank-like process; to make sure that the regime's resources do not become overinflated to the extent that there is a run on the bank.

DRAWBACKS OF THE ECONOMIC AND POLITICAL FRAMEWORKS OF DEVELOPMENT

Many of the problems inherent in the economic and political theories of development are more extensively dealt with in the following section dealing with development from a dependency perspective. Thus only a cursory critique of these positions appears here. Here again, it is not my intent to portray these efforts as totally useless in terms of understanding social change, but to highlight the most blatant biases and oversights implicit in

these approaches in an attempt to demonstrate that they often do little more than compose conceptually sophisticated descriptions of development which bears little relationship to the real world.

Criticisms of economists and political scientists by an aspiring graduate student in sociology may contain many unstated assumptions or personal biases. It is revealing, therefore, to note what other economists and political scientists have to say regarding this subject. Dale Adams observes that Marshallian economists, because of their professional theoretical impotency, have been unable in the past to support serious efforts at social change, such as land reform, and will probably continue to defend the present system in the future. Socialist thought and the dynamics of racial and class antagonisms will determine the future course of development, he feels, since his and other economists' "value hang-ups" have relegated their role to that of reporting after-the-fact occurrences (Adams, 1973).

E.F. Schumacher, the noted British economist, was the head planner of the British Coal Board for 20 years. Schumacher's discussion in Small Is Beautiful demonstrates the foolishness as well as the impossibility of the poor nations patterning themselves after the rich in terms of production and fuel consumption (Schumacher, 1973). He stresses that although economic performance, growth, and expansion have become almost an obsession with many

economists, this abiding interest is irrational, unscientific, and operates to the advantage of a privileged minority. Schumacher attacks this view on both moral and logic grounds:

"Economically our wrong living consists primarily in systematically cultivating greed and envy and thus building up a vast array of totally unwarranted wants . . . If greed were not the master of modern man - ably assisted by envy - how could it be that the frenzy of economism does not abate as higher 'standards of living' are attained, and that it is precisely the richest societies which pursue their economic advantage with the greatest ruthlessness?" (Ibid., p. 37)

He notes that the present trend of economists to force noneconomic values into their framework through cost analysis is absurd. It is ridiculous to "measure the immeasurable", or to pretend that everything has a price or can be quantified. Moreover, to measure development in terms of Gross National Product implies that one who consumes more is "better off" than one who consumes less, but does not address the question of what is being consumed.

Schumacher concludes that in order to achieve development, other countries must reject imitation of the West with its mass production, heavy industry, centralized development planning, and advanced technology. Instead he advocates a middle-range, "appropriate" level of technology which responds to the unique needs and resources of each specific area. This technology would be cheap, allow

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equal access to all nations, and maximize the potential for human creativity. His approach thus tends to emphasize a more gradual but deep-rooted process which focuses on education, organization, and discipline - not capital, foreign aid, or type of infrastructure as the key elements necessary for development. He recommends that the developing world not try to "out-capitalize the capitalists", but instead to "evolve a more democratic and dignified system of industrial administration, a more human employment of machinery, and a more intelligent utilization of the fruits of human ingenuity and effort. If they can do that, they have the future in their hands."

Another inherent weakness in many of the economic theories of development is that they only appear to give lip service to the necessity of bringing about a radical redistribution of wealth and production resources within these countries. All too frequently they tend to reinforce the present system of political, economic, and social inequalities rather than attempt to change it. Programs of agricultural development which stress increases in production and the Gross National Product, by their very nature, primarily assist large farmers and landowners at the expense of the huge class of farmers at the subsistence level.

Ilchman and Uphoff are probably correct in arguing that political and economic development is interdependent

and that it is a useless academic exercise to segmentize these approaches and discuss them in isolation. At the same time, however, the problems implicit in Ilchman and Uphoff's scheme reflect the same biases and weaknesses found in many of the theories on which their model is built.

Ilchman and Uphoff's discussion tends to assume that all factors affecting the developmental process are not only knowable, but measurable and quantifiable as well. As noted previously, this is simply not true. They greatly underemphasize the importance of historical factors and random elements, such as the tragic Managuan earthquake of 1972, and the importance these events have upon norms and values of the people.

It appears somewhat of an intellectual cop-out to note that "values, norms, historical factors, random occurrences, and so forth are important elements affecting political developments, but we assume that only what is manifested within some definite time period and impinges upon political exchange requires measurement and analysis" (Ilchman and Uphoff, 1971; 277). The hatred and frustration of all classes of Nicaraguan society against the Somoza regime's handling of the reconstruction effort after the 1972 earthquake was not manifested through strikes and uprisings until several years later when widespread general strikes paralyzed the country for weeks at a time.

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These authors admit that because of "the instrumental value of resources" (Ibid., p. 50), they cannot be compared in absolute terms. Yet it is precisely this fact which makes comparison in relative terms equally difficult, if not impossible. How does one measure the resource of legitimacy compared to that of censorship or coercion? If support is given in the form of an IOU, how would one determine the rate of interest and when and in what form of final payment will be made? If status equals Y information, what does X and Y equal? Even if some type of rough approximation could be devised, most statesmen and anti-statesmen have neither the time nor the resources available to do so.

Moreover, another possible criticism of their approach is that by attempting to explain and measure everything regarding the course of development, in reality they explain nothing. In other words, they would argue that if a regime survives for an extended period of time, then it has successfully managed to balance the exchange of resources, demands, investments, and so on. If the regime collapses, however, the problem results from its failure to balance the exchange process, not with the model itself. It would follow then with regards to Nicaragua that for over 40 years the Somoza family properly responded by allocating the regime's resources to the demands exerted on it by the general population and that this balancing act

broke down in 1979. Such an analysis of the situation in no way reflects the reality of the oppression and unequal distribution of resources which characterized Somoza's long stay in power.

Ilchman and Uphoff also appear incredibly naive in their treatment of the relationship between the underdeveloped nations and the more developed countries. In diagramming their model, Ilchman and Uphoff position the foreign sector in the extreme upper left-hand corner (Ibid., p. 43). Its position and the direction of their arrows implies that the influence of the foreign sector is relatively unimportant as compared to that of other sectors. This does not accurately describe reality, especially among the majority of developing nations. Foreign sectors frequently demand more than they give up in the exchange process. The demands that this sector makes upon the regime often outweigh by a large margin those which the regime makes upon the foreign sector. With regard to most of Latin America, for example, the foreign sector of the United States should more properly be portrayed as part of the core combination group, if not part of the regime itself.

Furthermore, this model clearly reflects a built-in bias on the part of its authors in favor of the ruling class. Although they would deny this criticism and instead allege that this "model of political economy has no conservative bias . . . (that) it is as relevant to a Che Guevara

as to an Eduardo Frei", this allegation has little support in fact. Their model is much more an effort at maintaining the status quo by advising those in power how to stay there. It offers little insight for the anti-statesman as to how the system can be altered.

The key challenge, as Ilchman, Uphoff, and other political economists appear to see it, is to avoid extremes. They view the process of development "from the top down", from the perspective of the regime, which in effect for most of the Third World amounts to oppression. They view human beings as commodities which must be controlled. They assume perfect knowledge of the situation and political equilibrium and that those in power control all means of violence so that it is not possible for the sectors in the periphery to make demands on the regime which cannot be met. Fortunately, as my chapter dealing with the history of Nicaragua will demonstrate, this does not adequately describe social and political forces operating in the real world.

CONCLUSION

In conclusion, there appears little doubt that the various types of conventional theories have in fact contributed to our knowledge of development. Modernization theories have recently stressed that all countries cannot be expected to closely follow the historical development of the United States or Western Europe and have correctly

identified many of the obstacles to development. The psychological and social approaches to development have isolated for purposes of analysis many of the key individual and group factors related to development such as religion, education and occupational experience, as well as documented the central role these elements have played in different historical periods. Even the political and economic theories of development, with their heavy emphasis on "hard", quantifiable data have occasionally facilitated in the establishment of significant economic growth patterns.

Valuable as these theories may appear in these respects, however, their effectiveness, especially for the purposes of my study, remains significantly reduced by their numerous inherent weaknesses. Modernization theories continue to stress imitation of the accomplishments of the "advanced" countries while underemphasizing their exploitation and oppression. They continue to tend to view social change as inevitably following a gradual unilateral course of development. Psychological and social theories of development often still fail to realize that modern values, attitudes and goals such as those exhibited by the developed nations can seriously impede as well as facilitate social change. This perspective, for example, presents an incomplete level of conceptualization and does not portray a realistic picture of the historical determinants and causes of achievement motivation. The political and economic

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approaches to development refuse to seriously question whether the types of production and consumption patterns they so strongly advocate do in fact meet the needs of lesser developed countries. In short, does it make sense to try to "out-capitalize the capitalists"? Moreover what political, economic and social implications do these types of approaches have for the less fortunate members of society? As a result of these serious limitations, the theoretical constructs contained in an alternative field of thought, that of dependency theory, deserve close examination.

CHAPTER II

DEPENDENCY THEORY

Dependency theorists disagree with conventional developmental theorists concerning both the causes and the cures for underdevelopment. Many conventional theorists, for example, believe that the causes are primarily internal obstacles such as waste, traditionalism, and over-population, and the cures are imitation of the West through foreign financial and technical assistance. Dependency theorists, on the other hand, often believe that the primary cause of underdevelopment is international exploitation and oppression and that the cure must result from a fundamental change in the systems of relationships between the developed and the developing countries.

Neither of these theoretical frameworks can be considered to accurately describe society unless they can effectively explain various types of social change. It would be incorrect to say that conventional developmental theorists can never explain change - they can, but the real question is what type of social change does it explain and why. When some type of change becomes necessary in order to maintain the present system of international inequalities, such as was the case with Latin America after the Cuban Revolution, they have successfully supplied a wide range of developmental schemes. Their theoretical constructs encounter serious difficulties, however, when forced to explain other types of social change such as

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violence and revolution. Dependency theorists, on the other hand, have made substantial contributions to our understanding of these social processes.

Furthermore, it remains crucial with any type of research or learning experience to constantly question and analyze the assumptions implicit in any particular theoretical frame of reference. As noted previously, many conventional theorists tend to assume either implicitly or explicitly that development follows a continuum model of linear progression. They emphasize an orderly, cumulative, and stable process of change which often views violent eruptions as abnormal and unnecessary. Stress is placed on the importance of consensus, value orientations, integration, and diffusion as the keys to development. This clearly reflects a view of the Third World "from the top down".

As the following pages will attempt to demonstrate, dependency theorists tend to observe the social world from the periphery, from "the bottom up". They argue that the real social world is composed of social systems which continue to exist under an asymmetrical system of domination where superior social actors control subordinates in their own class interests. They stress that there cannot be an equal relationship between unequals. There cannot be interdependency in the social, political, and economic exchanges between and within societies because this assumes

a relationship between equals which cannot exist without a radical restructuring of the present system.

There is not one dependency theory, but a variety of theoretical constructs which reflect this perspective. It is impossible in this brief survey of the literature to present an analysis of every scholar who has made contributions in this area or to even touch on all the major figures. Although dependency theory is often referred to as being at an infant stage of development, an abundance of material exists in this area with regard to such topics as overpopulation, land reform, agricultural development, and appropriate technology.

This review of the literature then constitutes but a tentative excursion into the area. A serious effort has been made, however, at discussing authors this writer feels are the most insightful authorities on the subject, especially with regard to Latin America. An attempt has been made to summarize their main propositions and arguments and to briefly critique their positions. Finally, a short discussion of the most blatant weaknesses of this perspective will be presented.

THE DEVELOPMENT OF UNDERDEVELOPMENT

Ander Gunther Frank (1967, 1969, 1972) deserved credit for presenting many of the central themes of "dependistas" to students of this subject in the United States. Frank

first utilizes historical case studies of Brazil and Chile to support his contention that the primary impetus behind much of Latin America's underdevelopment was the expropriation of the economic surplus by the Center (developed) powers. He rejects the dualistic interpretation of underdevelopment so popular among conventional theorists and correctly points out that the indigenous masses, even if existing at a subsistence level, are fully integrated into the world capitalist system. He concludes that within this structural relationship, no process of development is possible until the links between the metropolis and satellite nations are ruptured.

In his latter works, Frank reiterates and expands upon many of these themes. He again argues that capitalism - not the remnants of feudalism, causes and perpetuates underdevelopment. He feels that metropolitan-satellite forms of relationships exist within countries as well as between them and that the closer historically a country has been to the metro power, the more underdevelopment it has experienced.

Frank's analysis derives from at least 4 major hypotheses: that the development of development is strictly limited by a country's satellite status, that periods of greatest development have traditionally occurred when the ties between the metro and satellite nations were weakest, such as during World Wars I and II and the Depression, that

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historically when the metro power recovered from global setbacks it would terminate and prevent regeneration of any progress by the satellite country, and that the present inequitable land tenure systems have commercial, not feudal, origins.

The primary weaknesses in his argument are that Frank fails to realize that in many parts of the Third World, racial contradictions are just as basic as class contradictions. He tends to ignore the social, cultural, and racial differences which exist independent of class and fails to acknowledge that historically the greatest changes in Latin America have frequently derived from the driving force of racial and ethnic consciousness, not simply from class antagonisms. Frank also constantly refers to "socialist development" as the solution to underdevelopment, yet he never defines the term nor discusses specifically how it is to be achieved. His latter work tends to ignore the historical role of the masses, as well as the potential and reality of the ripening class consciousness among this segment of the population. Moreover, he apparently believes that the national bourgeoisie hold the keys to future development, but then does not adequately address the problems of class conflict or why these ruling elites should be willing to change.

Many other dependency theorists have developed the ideas discussed by Frank to a fuller extent (see for example

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Furtado, 1964; Cardoza, 1972; Janvry, 1975; Girvan, 1974; Prebish, 1959). The proposition that much of the surplus value of the Periphery (underdeveloped nations) has been siphoned off by Center powers has been extensively documented. Pierre Jalee (1968, 1969), a French economist, through analysis of statistical data provided by the United Nations, estimates that once profits, interest on loans, and unfair trade practices are taken into consideration, 1.5 times as much aid goes out of the Periphery as comes in. Dale Johnson provides further statistical data to support these claims with regard to Central and South America. While Britain invested 2400 million pounds in Latin America from 1870 to 1913, she took 4000 million out. "Between 1950 and 1961, 2962 million dollars of private U.S. capital flowed into the 7 principle countries of Latin America, while the return flow was 6875 million dollars. . . . Between the United States and all underdeveloped countries, the net inflow of private capital to the United States, according to the U.S. Department of Commerce, was 16.6 billion dollars between 1950 and 1965. Latin America's contribution to this share was 7.5 billion," (Johnson, 1972).

Furthermore, Barnett and Muller (1974) have effectively demonstrated that international development agencies and multinational corporations constitute the primary instruments through which the surplus value of the Periphery

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becomes siphoned to the Center powers. They estimate that between 1960 and 1968, corporations took 79% of their net profits out of Latin America, with the average rate of profit during this period ranging over 40%. The host countries themselves provided 78% of the capital invested in order to produce these exorbitant profits. Over 50% of the time, the "transfer of Western technology" consisted of buying up factories already in operation, and "modern efficiency" resulted in using half the labor power for the same volume of sales as local industry, thus further increasing the present Depression levels of unemployment. These tendencies constitute what Frank refers to as the institutionalization of the development of underdevelopment.

ON THE ROLE OF THE MASSES

Numerous authors have addressed what they perceive as the role of the masses in development. Regis Debray (1967, 1969), at one stage of his own intellectual development, forsake the contributions of political parties and mass educational efforts and believed the guerilla foco should constitute the equivalent of a revolutionary vanguard to lead the masses. He regarded securing power through mass action as a popular myth, kept alive and promoted by reformist trade unions and political parties. Not only has no South American county experienced a popular movement which resulted in revolutionary change, but even if this

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should occur, "the violence with which the people strike back, 'mass action', is easily dismantled by the enemy's organized violence," (Debray, 1969; 33).

Many Marxist scholars, theoreticians, and practitioners have already exposed the numerous deficiencies contained in Debray's approach, especially with regard to mass participation in revolutionary activity (Huberman and Sweezy, 1968). Debray himself later discarded many of his own positions. In view of the "rags-to-riches success" of the Sandinistas in Nicaragua, however, it would not be surprising to see a rebirth of these somewhat romantic ideas.

Until his assassination in 1973, Amilcar Cabral was considered, like Debray, to be one of the foremost revolutionary theoreticians and practitioners in the developing world. As a leading advocate of Pan Africanism, Cabral caused the Guinean revolution to attain an importance and influence in the developing world completely out of proportion to that country's size and economic strength.

Cabral (1969) adopted Marx's method of historical analysis and applied it to the unique political, economic, and socio-cultural conditions of Guinea-Bissau. During the actual revolutionary struggle, he changed from a forced reliance on the petty bourgeoisie to mass support because the movement had been given sufficient time to develop its own future leaders. He constantly stressed the important role of the masses in any successful revolutionary effort

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and argued that socialism was an ongoing process which no country could hope to obtain immediately. Whether Guinea's efforts were labeled Marxist or non-Marxist he felt was a matter for his critics to debate, not for true freedom fighters.

Unlike the implications contained in Debray's writings, Richard Gotts (1972) excellent indepth survey and analysis of violent resistance movements in Latin America since the Cuban Revolution conclusive dispels the conventional myth that the peasantry of the Periphery are a totally passive group of non-actors who possess little revolutionary potential and must be led by an elite vanguard. He does not idealize the possibilities of such struggles, as Debray had a tendency to do, but Gott does demonstrate that practically every major Latin American nation has a history of armed peasant rebellions. In spite of the fact that every revolt in the last 15 years, with the important exception of the Nicaraguan effort, has been brutally suppressed, many of the reforms of the 60's and 70's were a direct response to these threats.

Gott concludes that the prime objective of the guerillas is not to constitute an elite vanguard or create a revolution, but to create the preconditions for revolution. This vital distinction evolves out of the fact that the Periphery is not so much ready for revolution as Debray implied, but that it needs a revolution in order to achieve

true development. Moreover, intervention by the Center powers, the disunity of the Left, and the frequent ignorance of local conditions were the major factors contributing to the guerillas' failure. (Subsequent chapters in this dissertation will attempt to demonstrate how each of these obstacles were successfully overcome in the Nicaraguan revolution.) Gott also maintains that although neither the peasants nor the urban masses are particularly revolutionary, in spite of the unspeakable conditions in which they live, the most important contribution of the guerillas has been their continual emphasis on the key role which the rural masses must play in any effective process of development.

Feder (1975) has also attempted to analyze what are the prospects for the rural masses in the Periphery non-socialist countries in the immediate future. He sets out six basic theses. First, that as a result of increasing populations and expectations and decreasing employment opportunities, the agricultural economies of these countries will continue to generate increasing pressures and contradictions which directly threaten to disrupt the present "disequilibrium balance". Second, that these forces from the bottom of the social structure will prove less powerful than the counterforces from the landed and urban elites, both internal and external, aimed at maintaining the present system. Third, the Center nations will adopt newer methods

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of control and penetration into the agricultures of the Periphery. Feder notes, for example, that in Brazil since 1964 alone, over 32 million hectares of land have been purchased either by U.S. citizens or corporations and that this constitutes almost 4% of the total land in Brazil and over 10% of all farm land.

Feder's fourth thesis is that due to the restraints of the capitalist system, these nations will focus on solving the relatively superficial problems of agricultural production rather than address the more crucial socio-political problems. This will occur primarily through greater emphasis on colonization programs, modernization of large landholdings, and pseudo-agrarian reform projects. Fifth, that it is practically certain that at least one or two countries will attempt a radical change in the present social structure, such as Cuba in 1959 and Chile in 1969. Nicaragua in 1979 became one of these trailblazers. The success of these efforts will be determined not only by the responses of the Center powers, but also by whether these reforms also affect other sectors of the economy, such as the banking and export sectors. Finally, Feder concludes that in light of the present mass poverty and unemployment, even the most radical and far reaching reforms will have little effect on eliminating these problems in the early years of the programs.

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Other dependency theorists have visualized a much more limited role for the rural masses in the struggle to achieve true economic and political freedom. Thus, for example, Galtung (1971) regards the peasants as somewhat passive non-actors in his structural scheme. Frank, as previously noted, originally placed his hope for constructive change primarily with the elite and the middle class of the periphery itself. Dale Johnson, in his essay, "On Oppressed Classes" (1972), continues this trend to a disturbing degree. His basic proposition is that different concepts such as "marginal underclasses" or "internal colonies" provide helpful tools for understanding the dynamics of class relations and conflict under capitalism. He distinguishes colonies from social classes on the grounds that "internal colonies possess a more differentiated social structure. . . (and) possess a culture distinct to the race that transcends the boundaries of class structures". He then goes on to imply that only limited hope exists for the peasant masses because, "Conditions of life among the underclasses are such that it is probably that underclasses will never form the vanguard of the revolutions." (Emphasis added). What Johnson fails to realize is that although there are different methods of domination depending on the specific group, race, and country involved, the final products of the capitalistic system remain the same. While race remains an important contradiction which often transcends class, in terms of the

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overall effects of the oppression and exploitation generated by the system, the similarities between the Latino campesino and the Indian peasant greatly outweigh any of these real or artificial distinctions imposed by sociologists. The analytical value of such dichotomies must be balanced against the divisions this creates within the peasant class itself and the practical barriers this erects against the creation of effective class movements.

Moreover, in dismissing the revolutionary potential of this "newly discovered underclass", Johnson appears guilty of the same condescending bias so frequently found with many liberal social scientists. He refers to himself as a "playwright-protagonist (controlling) the political drama of the modern world" and then goes on to the weary but necessary task of consciousnessizing the poor, underprivileged masses. Unfortunately Johnson never stops to critically evaluate his own level of consciousness or to consider that such analytical concepts as "marginal underclasses" or "internal colonies" may well serve to confuse rather than clarify social reality. While his approach may have analytical value in certain limited cases, especially with regard to Africa, it also provides the potential for assisting the Center nations in their strategy of dividing and controlling the Periphery.

In contrast to Frank, Debray, and Johnson, Rodolfo Stavenhagen (1975) provides one of the most insightful

analysis to date regarding the problems of dependency and the role of the rural masses in reaching solutions to the problem. Stavenhagen does not expound any simplistic answers to these questions nor construct another theoretical model which merely describes segments of the whole. He does adopt a historical perspective in his analysis and at least flirts with the possibilities this holds for raising class consciousness through class conflict.

Stavenhagen quickly dismisses the prevalent myths of conventional theorists that the Periphery can imitate the economic development of the Center nations, that indicators of growth such as yearly increases in GNP accurately reflect a true process of development, or that underdevelopment can be clearly understood as anything but a necessary element in the growth and continuity of global capitalism. Yet he stresses that the forces which maintain the present system of inequality and oppression are also internally based and that any chance of achieving a process of true development would require a radical shift in the class structures of the Periphery nations themselves. Most importantly, Stavenhagen demonstrates that the study of social classes is required, not simply to describe stratification as most sociological studies have traditionally done, but in order to come to grips with the social dynamics which make a change in social structure possible.

Classes must be defined and analyzed in terms of their relations with each other. Under capitalism, for example, the most basic relationship is the expropriation of the surplus value from the working classes, whether industrial or agricultural, by the capitalist class. Stavenhagen's brief but apt historical survey illustrates how capitalism transformed the social structures of many of the Periphery nations in order to impose this type of relationship on the indigenous population and, in the process, created the basis for the present class structures. Whether it was the Agni of the Ivory Coast, the Indians of Guatemala and Mexico, or the Incas of Peru, after an initial phase of barbaric plunder, the Europeans were eventually forced to impose such foreign concepts as private ownership of the land and commercial cropping and wage labor in order to insure the flow of surplus. This exploitation, whether it occurred in direct form, such as with coffee, sugar cane, or cocoa, or more indirect form, as with the peasants' production of basic foodstuffs to supply the labors who extracted raw materials, eventually helped to serve as a basis for the industrialization of the Center powers and today directly contributes to their present artificially high and socially wasteful standard of living.

Perhaps the primary weakness with Stavenhagen's presentation, as with many scholars in this area, concerns his failure to fully explore the issue of class consciousness.

While he does note that class consciousness is the vital element necessary to transform a class "in itself" into a class "for itself", he spends little time exploring specifically how this consciousness may be attained by the peasant masses. His historical analysis clearly traces the bloody stream of capitalist oppression and the tragic consequences which followed in its wake. He does observe that, "It has been estimates in New Spain alone the population decreased from around 30 million at the beginning of the 15th century to 1 million a century and a half later; and in Peru the population declined by about 50% within 30 years of the conquest." Yet he does not trace the history of the resistance of the rural masses to this exploitation which made such overt control necessary and which was frequently much stronger than commonly acknowledged.

Stavenhagen also fails to explore why violent peasant movements such as the Mexican and Bolivian revolutions failed to change the structure of class relationships despite their military successes, nor what lessons this holds for the future. Although his discussion intentionally choses to focus on the internal dynamics of the Periphery nations, any meaningful change in the class structures of these nations will have international repercussions. Stavenhagen states that a complete understanding of social classes in agrarian societies cannot be based on the village or even the nation state level, but must be viewed in terms

of an international capitalistic framework. While this is implicit throughout his essay, he never fully explores the ripple effects that successful peasant movements would have on the Center nations themselves. After the tragic lesson of Chile, it remains a very real question whether the Center nations will permit internal shifts in the class structure even by peaceful democratic processes. It may well evolve that Nicaragua will be the next testing ground for this issue in Latin America.

OTHER REFRACTIONS FROM THE PRISM OF DEPENDENCY

Numerous other authors have viewed the prism of dependency from a variety of angles. Galtung (1971) perceives global inequalities as the result of the unequal structural relationship between the Center nations and the Periphery nations and between the Center and the Periphery within each nation. Although, as with many dependency theorists, Galtung occasionally operates at an excessively abstract and general level of analysis, he does manage to supply valueable insights into the international system often overlooked by both conventional and dependency theorists. He repeatedly emphasizes that although the Third World may have been undeveloped, it never was underdeveloped - this occurred as a direct result of imperialism.

Imperialism is not merely an international system of exploitation as "vulgar dependistas" so frequently assume, but is intra-national as well. The Center nation becomes able to pacify its own periphery or lower classes to a degree that would be otherwise impossible through expropriating the raw materials and surplus value of the vast periphery within the Periphery nations. Lenin (1929, 1939, 1968) originally expounded on this theme and maintained that this extortion of the surplus from the Peripheries allowed the capitalist countries to co-opt and pacify their own proletariat who in effect now sought a larger slice of the capitalist's pie instead of a radical redistribution of the wealth between the rich and the poor.

Through this strategy of divide and conquer, Galtung argues, the Center nations have developed a centralization of trade, commodities, and price regulation which provides an indirect but powerful system of control. Even more importantly, this system of exploitation and control has developed to such a degree that overt violence and force is often no longer necessary. While acknowledging the 3 most commonly discussed forms of imperialism - economic, political, and military - Galtung also discusses the equally effective but often overlooked types of control found in cultural and communication imperialism, especially as channeled through the guise of foreign aid and technical assistance as provided by organizations such as the World Bank

and the United States Agency for International Development.

THE "PROBLEM" OF SURPLUS

James O'Connor (1973) adopts Baran And Sweezy's concept of economic surplus (1966) and identifies the absorption and reinvestment of this surplus as a basic motivation behind imperialism. His analysis clearly demonstrates that imperialism must exist for capitalism to survive as we know it today. Ironically, however, this same system continues to generate the increasingly serious contradictions of capitalism. Instead of absorbing the surplus, the network of capitalistic relations between the Center and Periphery nations actually increases it. O'Connor also stresses the importance of the intranational forces behind imperialism. Rather than view the center of the Periphery as a group of passive actors as Jalee implies, or as a revolutionary force for change as Frank originally proposed, O'Connor accurately portrays them as active, willing partners in the exploitation of their own periphery.

Petras and LaPorte (1970) also maintain that it is impossible to achieve a true understanding of development in Latin America without first addressing the role of the United States, the major Center power in the Western Hemisphere. They observe that the official developmental policy of the United States since the time of Kennedy has been to emphasize increased production, improved technology and

cultivation practices, the protection of existing property rights, and the colonization of public lands. Not only has this "modernization from above" approach failed to significantly raise agricultural production to the level of reducing food imports, but it has actually increased the inequalities and misery of the rural masses. Practically every country in Latin America, after a brief rise in production in the mid-sixties, ended up producing less food per capita and importing more than when the decade began.

The United States has been successful, however, in achieving its primary objective of establishing and supporting counterrevolutionary alliances among the Periphery's elites and thus maintaining and expanding its degree of political and economic penetration. One of the leading Latin American dependency theorists has concluded that this trend will continue until the masses of Latin America become mobilized behind national values and ideals and develop a system of economic integration based on regional, not multinational, needs and interests (Celso, 1969).

THE PSYCHOLOGICAL CONSEQUENCES OF DEPENDENCY

Unlike most dependency theorists, George L. Beckford (1972) recognizes the deep psychological effects created by the heritage of dependency and the obstacles this erects against building an effective process of self-determination and development. He also is one of the few scholars in this

area who has acknowledged and explored the critical role of racism as a primary motivating force behind the development of underdevelopment. Although Beckford focuses on what he defines as the "plantation economies" in the Periphery, which encompass the American South, the Brazilian Northeast, and the Caribbean lowlands, much of his discussion can be extended to the Periphery as a whole. In a very real sense, the entire Third World can be viewed as a plantation system which is farmed for the benefit of the Center powers.

Beckford notes that despite "constitutional" as opposed to "political" independence and ambitious modernization programs, Periphery nations have failed to break out of the cycle of underdevelopment. One key reason for this failure are the restraints created by the psychological legacy of dependency on the minds of the Periphery's peoples. The history of the black people in the United States and Africa clearly demonstrates that legal independence or economic growth alone do not remove the psychological and social scars of the plantation system (Fanon, 1967, 1968).

Beckford also attacks many of the traditional schemes for modernizing the plantation system. He observes, for example, that one of the most frequently cited types of development under the plantation system is the taming of previously wild and uncultivated areas. This approach often receives widespread popularity with conventional theorists. Yet Beckford's own analysis concludes that the prime

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characteristic of plantations' land use is the underutilization of land rather than its development. Plantations claim large tracts of potential farm acreage not to cultivate it, but to prevent others from doing so. Feder (1971) utilized the same data source as Beckford, statistics published by the Inter-American Committee for Agricultural Development, to prove that fully 5/6 of all land owned by large landowners has never been transformed from its original state. Clearly such contradictory land use policies impede rather than facilitate development.

The most basic evil of the plantation system, however, is its tendency to use race as the basis for dividing society into class divisions. While other factors such as education, income, or occupation may slightly temper the overall effect of one's racial heritage, Beckford maintains that race itself remains one of the key determinants of class and caste in every plantation society in the world. It is this racism, backed by "the colonized condition of the minds of the people", which constitutes the most intractable problem of plantation societies. Eliminating this psychological heritage of dependency is the precondition of all preconditions for accomplishing revolutionary change and development.

SYNTHESIZING THE DEPENDENCY LITERATURE

Although dependency can be discussed from a variety of perspectives, there are a few strands of agreement which lace together many of the theorists in this area. Several years ago, Chilcote (1974) undertook a critical synthesis of the dependency literature. His discussion primarily focused on the contributions made by Latin American theorists such as Cardoso, Dos Santos, Vasconi, and Frank. Chilcote notes that each of these theorists, with the exception of Frank, believes that some type of limited autonomous capitalistic development is possible within the dependency framework. Each also maintains, however, that true development which reaches all segments of society is impossible until the present structure of relations between the Periphery and the Center nations is radically altered.

There are at least 3 basic propositions which all dependistas hold in common. First, that the poverty of the rural areas cannot be adequately explained through the traditional diffusion model which regards the "dualistic" character of the developing nations as the primary obstacle to development. Second, that the basic capitalistic relationship between the rural and urban areas is commerce between landowners and merchants and that this remains determined and controlled by the forces of national and international capitalism. Third, that the center's class interests are dependent on global imperialism as the primary source of their manufactured goods and capital, and

thus to dissolve this system of dependency is in direct conflict with their vested interests.

Chilcote also briefly summarizes the main propositions of several principle theorists in this area. Frank stresses that development remains impossible under the present system and that the development of underdevelopment will continue until the ties of dependency are cut. Dos Santos emphasizes that dependency is not static, but takes on different forms and methods of exploitation relative to various historical periods. The present dependency he labels "technological-industrial" dependency and is determined by the investments, exports, and sales of multinational corporations. Cardoso, on the other hand, feels that it is naive and oversimplifying the situation to say that no internal development or dynamism exists under imperialism. Yet he does agree that global capitalism severely restricts the developmental potential of the Periphery.

Since dependency theory remains at an infant stage, these and other competing perspectives and interpretations will continue to be debated for some time. Although it has become somewhat of a sociological cliché to say more research is needed, the fact remains that the most pressing task at hand for the present generation of sociologists is to undertake research and historical studies which will empirically test and verify or alter the theory. Hopefully the instant case study of a silo-building project in

Nicaragua represents another small step in this direction.

SUMMARY AND CRITIQUE OF DEPENDENCY THEORY

As with most valuable additions of knowledge in the social sciences, dependency theory raises as many questions as it answers. Many authors on the subject have successfully identified and documented the primary causes of underdevelopment. This in itself is a worthwhile insight often overlooked by more conventional theorists. Yet after identifying the causes, many dependency theorists fail to adequately address the problem of what to do about it.

It is completely naive to imply, as Frank did in his early writings, that development will automatically follow the severing of relations with the Center powers. Implicit in O'Connor's analysis is the idea that capitalism and imperialism contain the seeds of their own self-destruction. Resolving the inherent contradiction of surplus absorption within the framework of capitalism remains, according to him, the "herculean task" facing the capitalist countries in the future. Yet at the same time he notes that, "the surplus absorption capacity of satellite countries . . . is for practical purposes unlimited." O'Connor also perceives a much more militant expansive role for the United States in the future, but fails to fully discuss the distinct possibility that the indirect methods of control increas-

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ingly exercised by Center nations may well make such tactics unnecessary.

While admittedly providing many rich, specific hypotheses for future research, a major deficiency of many dependency theorists is their high level of generalization and abstraction. Their analyses often tend to be too speculative and unreliable when it comes down to the concrete problem of drawing up future strategies for aborting the present structural relationships. Galtung argues that democracy can be regarded as the structural condition behind those exercising control over the Periphery nations. In the tradition of Lenin, he reasons that, since a greater number of people in the Center nations benefit from the present structure, they will be less willing to change it and that, "this will make it even less likely that the periphery in the Center will really join with the periphery in the Periphery against the two centers." Unfortunately while this analysis makes sense in the abstract, Galtung presents no concrete data or specific information to support this contention.

It is highly debatable to what extent the tainted fruits of the poisonous tree of imperialism actually filter down to the Center's periphery. It appears even less likely that much of the Center's population actually realizes the true source of their relatively high standard of living. Furthermore, there have been numerous examples of at least

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attempts at forming alliances between the two peripheries. The opposition to the war in Vietnam and the black liberation movement of the 60's might be interpreted in this direction. The mass propaganda increasingly churned out by the Center reflects its interest in continually camouflaging the reality of the situation rather than an attempt to convince their periphery that imperialism also benefits them.

Other recommendations for change frequently tend to directly conflict with or inadequately address the reality of the present situation. Clearly, redistribution of the surplus is a necessary but not sufficient solution. This must also be accompanied by changes in both the international and intranational systems of relationships. Yet what remains to be resolved is what will serve as the impetus for this change and how it specifically will be carried out. Superior technology and more efficient means of global communication do, in fact, permit effective patterns of indirect control, and multinational corporations control these resources. Yet specifically how does the Periphery go about developing effective methods of appropriate technology or find the resources to develop a global system of news services and communications? International and intranational cooperation between the two levels of peripheries is a clear necessity, but to merely state the obvious adds little positive stimulus to the task at hand. If it is true

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that the center of the Peripheries has the most to lose in any real change in the structure, why should they choose the side of their own periphery against the Center? How does one correctly distinguish between programs which lay the groundwork for effective social change in this area and those which merely serve to reform and thus perpetuate the present system?

Beckford observes that there exists a "multiplier effect" inherent in the plantation system. In short, he believes that greater investment, production, and income should continue to generate more of the same and help create real economic growth in the developing countries in the future. Yet such economic abstractions bear disturbing similarity to myths such as Rostow's "stages of development" and also appear to contradict reality. This model assumes that the surplus remains within the Periphery nation, not expropriated as is the case under the present system of global capitalism. Historically both the relative and absolute incomes of the Center nations have multiplied. Barnett and Muller documented that the average income of a North American is 7 times that of a Latin American and grows 10 times as fast. There is little wonder that, according to United Nations' statistics, in 1900 the per capita income of the poorer nations was half that of the rich, but by 1970 had decreased to 1/20 of that of the rich.

As most dependency theorists repeatedly stress, the dependency relationship has existed for a long time and there are clear reasons for it. From a Marxian perspective, international expansion and exploitation are not simply evil, but are vitally necessary for the survival of a global system of capitalism. On the other hand, if one adopts the position of such authors as Frank and Johnson, that any Periphery country would be better off cutting all ties with the Center power, one then by implication assumes that a radical redistribution of the internal wealth will occur, which in turn implies that the ruling elites will either be changed or destroyed.

One crucial issue, as always, is can a country develop in isolation? What are Nicaragua's chances today of plowing a furrow towards development without becoming another Cuba? How unique and exceptional is the China experience? While development without outside influence appears at least theoretically possible, is it worth the sacrifice in terms of time and human suffering? These factors must be balanced against the reality that no foreign aid or technical assistance has arrived yet without some type of strings attached.

Cartels, regionalism, and isolation all present possible solutions. Yet more importantly, less emphasis needs to be placed on studying the leaders and programs of developing nations and more stress placed on the people and their

resistance to dependency. One must avoid seeing "the masses" as irrational, passive actors as Frank, Johnson, Galtung, and others tend to portray them. Historical analysis often reveals that the people, not their leaders, have been the primary force for change. People are not usually irrational, but often do what appears "irrational" based on another's perspective. Any solution must ultimately be reduced to a question of power. Power is not a sufficient condition for achieving development, but it is a necessary one.

Whether or not most sociologists admit or are aware of the fact, much of social science in general, and conventional theory in particular, has constituted an academic mask for the class interests of the Center nations. Dependency theorists, however, have also viewed the world through ideologically tinted glasses. Stavenhagen's discussion of class and race and Beckford's repeated references to Cuban model are clear examples of this. It is not necessary to ignore or underemphasize race in order to undertake a reliable analysis of class conflict. Social and cultural differences do exist independent of class; but race contradictions are often as basic as class contradictions. It is grossly naive to attempt to eliminate one type of oppression by ignoring the other. From a historical perspective, race or ethnic consciousness has frequently constituted the spearhead in these societies for initiating the farthest

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Thus, many of the perplexing questions generated by dependency theorists remain to be resolved. What do abstract terms such as "social development" and "revolutionary change" mean in the real world? How does this differ from concepts such as "modernization" and "growth without development"? What values and assumptions are implicit in all such generalizations? What is meant by the psychological heritage of dependency and how can vague concepts such as class consciousness become an effective tool at eliminating it?

Beckford was probably correct when he labeled the psychological heritage of dependency as the greatest obstacle towards achieving a process of true human development. Yet it must not be forgotten that the center of the Periphery has been the most infected with this psychological disorder, perhaps incurably so. As a result of "education", the upper classes of many countries have incorporated the values and norms of the dominant powers to such an extent that they are now "more British than the British". They often assume that the Center's way of life is vastly superior and begin to regard their own styles and traditions as backward and useless. The numerous expensive North American styled shopping malls built by the Somoza regime after the 1972 earthquake, while hundreds of thousands of Nicaraguans remained homeless, is but one blatant example

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At the same time, however, the dualistic description and interpretation of societies in the Periphery must clearly be rejected. The masses of Africa, Latin America, and Asia are by no means excluded from the global system of capitalism, but remain a vitally important part of it. Their subsistent level of existence and labor makes possible a significant percentage of the artificially high standard of living found in the Center nations. It is this oppression and inherent contradiction which continues to plant the seeds of future revolutionary change. Furthermore, as Beckford has again so eruditely observed, because of their lack of social mobility, "the least colonized minds are to be found among the lowest ranks of the social order. Therein lies the greatest potential for a revolutionary break with the existing system."

From a practical or strategical point of view then, dependency theory does not lay down a set blueprint of future tactical maneuvers. On the one hand, it appears somewhat elitist for social scientists to even consider it their task alone to proclaim such a strategy. On the other hand, to deliberately ignore the dilemma of addressing what steps are necessary for transforming the present structural relationship remains a clear vote in support of the status quo.

Obviously no one solution exists with regard to changing the status quo; there are no easy answers or predetermined "practical" solutions. Effort must continually be made at differentiating between simple economic growth and true social development. The effects of capitalism and dependency on the individual must continually be explored. Obviously, humans somehow manage to adapt to even the most wretched conditions of exploitation and oppression - but what are the long-run consequences of such adaptations? At the very least, what must be done is to study historically the roots of the exploitation in each unique set of social and economic conditions and then hopefully, through this greater understanding, to stimulate the inter-dynamics of this class conflict. Although everyone is not a guerilla, each of us must help to "grease the cotton" in our own occupations and personal lives so that a spark will ignite these conflicts and contradictions once they converge.

In the final analysis then, the system of relations which presently exists between the Center and the Periphery did not result simply from foreign policy positions freely adopted by the Center nations. Marx and others have demonstrated that expansion, accumulation, and exploitation are necessary for the very survival of capitalism. The budding system of state capitalism must continue to extract the Periphery's raw materials and consolidate its political control there. This is necessary, in part, in order to

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pacify their own populations through creation and perpetuation of their artificially high and grossly wasteful standard of living. In one sense then, the most difficult task of modern students of dependency is to convince the Center's people of the reality of this situation and to assist them in determining where their true human interests lie. From this perspective it is we who possess the greatest colonized, alienated minds and who represent the greatest obstacles to development.

CHAPTER III

STEPS TOWARD CREATING EFFECTIVE CHANGE: THE WORKS OF GORZ, FRIERE, AND NORMATIVE SPONSORSHIP THEORY

The works of Andre Gorz (1967) and Paulo Friere (1968, 1978) provide solutions to the dilemmas left unanswered by many dependency theorists. Gorz argues that modern capitalism, while creating a system of domination under which most individuals have no control over many facets of their lives, has also produced conditions, which under certain circumstances, can eventually lead to the transformation of the present structure of social and economic relationships. Friere provides even greater insight into these issues by specifically and concretely addressing the crucial concept of "consciousness". He attempts to define in practical terms what is meant by this abstraction and how the process of developing it can be undertaken. Furthermore, as the following pages will attempt to demonstrate, it is this writer's opinion that Normative Sponsorship Theory, the theoretical model used as the backbone to this research, provides at least one possible analytical tool for evaluating whether a developmental program does in fact supply the seeds of change or merely constitutes another of the frequently meaningless efforts at providing more of the same.

GORZ'S EFFORT AT IDENTIFYING
NON-REFORMIST REFORMS

Andre Gorz, a French economist and philosopher, has primarily directed his writings to the problems of the Western European working class. Yet his discussion of how change can occur in modern industrial societies also supplies valueable contributions to the analysis of many of the dilemmas faced by the Periphery. Like Cardoso, Gorz maintains that it is incorrect to maintain that no dynamism or development is possible within the framework of capitalism and that terrorism or violent revolution are the only practical alternatives. Gorz does not make specific predictions regarding the future of the capitalist system, but rather identifies tendencies which are open to change in response to shifting material and social relationships. To a certain extent, the oppressive restraints bemoaned by many dependistas are only as unchangeable or "institutionalized" as the nations of the Periphery continue to make them.

Gorz maintains that achieving a democratic socialist society in which individuals exercise control over their lives and labor remains a long-term process which must be attacked on various levels. He explores the tactics and strategy considerations necessary to begin the transition to democratic socialism by the modern working classes and argues that the motivations behind these tactics are the qualitative needs created by the advanced capitalism which

have blunted the more quantitative needs of the past. While there are clear and important differences between the tactical considerations of the unionized workers in industrialized nations and peasant movements in Latin America, to a certain extent the underlying blueprint remains the same. To have a successful socialist movement, individuals must often strive for "intermediate objectives" as part of the process for approximating the new alternative model of society. As the chapter discussing the history of Nicaragua will attempt to demonstrate, this was perhaps the central tactical consideration facing the Sandinistas in Nicaragua.

Gorz's discussion of reformist movements appears especially useful in this regard. He begins by distinguishing between "non-reformist" and "reformist" reforms. A reformist reform is one which "subordinates its objectives to the criteria of rationality and practicality of a given system and policy". It will oppose any change which threatens the existence of the present system. A main finding of this research is that the AID designed silo project in Nicaragua was in reality a reformist reform.

A non-reformist reform, on the other hand, is basically an anti-capitalistic reform. It is not restricted to the perimeters of the capitalistic system, but attempts to fulfill and respond to the full range of human needs and potentials. It asks, for example, not only what crops and

products are being cultivated and produced, but how the individuals involved with the labor process will produce them.

Demands for nonreformist reforms retain the potential for unifying the working class through the education and mobilization which the struggle for such reforms will entail. These are not simply more demands for a higher hourly wage or more fringe benefits, but radical efforts to increase class consciousness and permit worker control of the labor process and the social reasons for which it exists. This strategy repeatedly emphasizes that achieving class consciousness and worker control is a process involving many short-range goals and numerous future defeats, but the overall perspective remains unaltered. In the end an individual's labor, whether farmer or factory worker, would no longer be a mere commodity to be bought and sold on the market place according to capitalist manipulation of supply and demand. Instead, one's labor will become a vital part of human development; it will belong to the individual workers, and its social use will be determined and controlled by them alone.

Gorz's essay remains valuable because of the importance it places on delineating what specific tactics should be adopted in an effort to raise both individual and class consciousness. He does not provide ready-made answers on how to achieve an alternative model of society, but designs

a viable framework within which these issues can be debated. Serious questions remain regarding how to distinguish reformist from nonreformist reforms in a variety of concrete situations. What are the specific conditions necessary for implementation of non-reformist as opposed to reformist reforms? Who will define what is "socially necessary"; what specific criteria will govern the distribution of goods and services? Not only who decides what is grown or produced must be a major decision, but what will be the organizational process through which these decisions can be reached? Unfortunately once again these are questions which many dependency theorists fail to even explore.

PAULO FRIERE'S PEDAGOGY WITH THE PERIPHERY

Paulo Friere's practical and theoretical insight contains many of the strengths found in Gorz's work and few of its weaknesses. This is especially true of his later works. Friere's writings are clear testimony to his maxim that human education and development is an ongoing process of change. Thus he views humans and their physical world as existing in a dialectical relationship in which they are both constantly changing and being changed.

The germs of Friere's approach to development were contained in his doctoral dissertation written in 1959 at the University of Recife in Brazil. His method was

extensively used in the early '60's in northeastern Brazil as part of an effective literacy program. It met with such success that Friere was briefly imprisoned and then requested in 1964 to leave the country by the military junta. He then traveled to and worked in Chile where his method was adapted to the agrarian reform program until the overthrow of Allende. Friere was later invited by the leftist military junta in Peru to assist in developing and expanding a literacy program in that country as part of the Peruvian revolution's effort to "build a new man". He also worked extensively in Guinea-Bissau in an attempt to assist the Cabral government develop a widespread grass roots literacy campaign.

Each of these countries adapted and modified his approach to fit its own unique set of circumstances. Friere observed that this flexibility remains vital if the process of conscientization is to occur. "What our past and present experiences teach us is that they cannot ever be simply transplanted. They can and must be explained, discussed, and critically understood by those whose practice is in another context. In that new context they will be valid only to the degree that they are 'reinvented'." (Friere, 1978; 74)

One of Friere's central themes is the dialectic between action and reflection, between context and consciousness. His own experiences and writings clearly reflect this

process. Friere's earliest work in English, Pedagogy of the Oppressed, stressed his belief that every human being no matter how poor, uneducated, or oppressed, retains the potential for critically viewing and understanding his or her reality. Yet at the same time, Friere himself in this early work failed to critically examine and discuss the underlying structure of class relations in Brazilian society. This lack of depth in his analysis, as well as his tendency to imply that urbanization and industrialization interact to produce a richer environment for the conscientization process, has been cited by some of his critics as a major weakness. (Borndt, 1978; Martin, 1975)

In his most recent English work, however, Pedagogy in Process, Friere rectifies these earlier deficiencies. He repeatedly emphasizes that discovering and theorizing about reality is not the same as transforming it. He argues that the development of class consciousness must accompany individual consciousness, and without this union, true humanization remains impossible. Like Gorz, Aronowitz (1973), and others, he maintains that the working class must transform itself from a class in itself into a class for itself. He believes that this vital transition cannot occur simply through the conscientization of humans acting alone or through individual self-fulfillment, but must be grounded in a change in the political and economic system and by transforming the present mode of production.

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Friere has also removed from his later writings any taint of the modernization school of development. He now regards development on the local and rural community levels as more important and feels that this is where the most effective militants are to be found. He noted that,

"We have observed that the intellectual level, the teachers in a training seminar may accept totally our analysis of the literacy education of adults as a creative act . . . In actual practice, however, many of these teachers are conditioned by their class position and by the myths of their superiority in relation to the peasants and workers."

(1978; 80)

Friere goes on to observe that,

"Some of the best experiments I have seen were those in Chile where we had as educators young Chilean peasants who, when they were trained, revealed indisputable efficiency. They worked in rural areas, participating in production, which was not for them something vague. They were a group of people who were not dreaming of how they could be urbanized. Their dreams were fully identified with those of their community."

(Ibid., p. 82)

Friere is most strongly identified with the process of conscientization. I was first introduced to this concept in Nicaragua as a Peace Corps volunteer in 1972. At that time several radical priests had patterned community development programs after Friere's method in northeast

Brazil and had agreed to extend their efforts to the Peace Corps volunteers interested in giving it a try. The rationale behind the program with the volunteers was that we could scarcely help to develop the political, social, and economic consciousness of the Nicaraguan campesinos when our own critical consciousness was so grossly underdeveloped.

The majority of Peace Corps volunteers were white middle-class, recent college graduates, who firmly believed that they were there to help and enlighten the Nicaraguans and show them the "proper" way to live. Most of the volunteers, as well as many of the other international development specialists I met, failed to understand then as they still do now that:

"Authentic help means that all who are involved help each other mutually, growing together in the common effort to understand the reality which they seek to transform. Only through such praxis - in which those who helped and those who are being helped help each other simultaneously - can the act of helping become free from the distortion in which the helper dominates the helped. For this reason there can be no real help between dominating and dominated classes, nor between 'imperial' and so-called 'dependent' societies. These relationships can never be understood except in light of class analysis."

(Ibid)

It is significant that each of the priests who seriously attempted to implement Friere's work in Nicaragua were either ejected from the country by force by the Guardia or were not permitted to return once they had left on their own.

Friere states that literacy, education, health projects, and, for that matter, grain storage projects to be effective cannot be applied mechanically. It is not simply a process of rote memorizing the mechanics of reading and writing nor of building sophisticated grain drying and storage facilities. These actions are political acts which involve political decisions which must be based on consideration of the material conditions in society, the means of production, and a new concept of distribution based on people's needs rather than the profit motive. Friere repeatedly argues that the revolutionary activists or militants of the middle class must commit "class suicide" and be reborn as revolutionary workers if Periphery nations are to achieve national liberation.

Friere also maintains that there is a radical difference between the violence of the Center powers and the violence of the Periphery. The violence of the oppressor is necessary to maintain the exploitation and domination

implicit in a dependency relationship. The violence of the oppressed, however, is a means for eliminating violence through the revolutionary transformation of the oppressive reality.

Friere is obviously well aware of the harsh realities and difficult decisions facing many dependent nations. He realizes, for example, that capital accumulation is an indispensable part of any national developmental program. Yet he agrees with Cabral that a country which strives to achieve a democratic socialism must reject consumerism and be much more than simply a capitalist society without capitalists. In such a society, production must be determined by the well being of the entire society, not the narrower class interests of private or state capitalists. This way the surplus capital which is not paid to the individual workers is not unjustly expropriated from them, but becomes their contribution or quota to the collective good.

Frequently development must first germinate at a local level. Preparing for a restructuring and transforming of society consists of a critical understanding of the transformation which individuals actually experience. Friere emphasizes that revolutionary thought is cultivated through real, concrete experiences. Once people have actively participated in concrete solutions to everyday problems, whether it be building a school or a community grain silo,

problems that they can understand and relate to, they are much more likely to move on to regional and national issues. As Cabral observed, people normally will not fight for vague ideals or abstractions, but for concrete improvements in their daily lives.

The reality of this observation was driven home to me during my first year in Nicaragua. Murra, a small mountainous village about 3 hours horseback from Ciudad Sandino is the last town before the frontier with Honduras. Between Murra and the border sprawls a large rainforest which is practically inaccessible 6 months of the year. This jungle has been homesteaded the last 20 years primarily by young, energetic farmers who were forced to relocate because they owned no land or had their farms repossessed by the national bank. Living under these conditions was extremely difficult, to say the least. There were no schools, doctors, or stores closer than Murra, which was 12 hours away by mule; jeeps and even horses could not enter most farms because of the 3 feet deep mud trails.

This jungle area and its adventurous, dedicated inhabitants should have provided fertile soil for revolutionary activity. Yet prior to the recent war, at least 2 attempts were made to organize these individuals, once by Cuban and Nicaraguan guerillas and once by Nicaraguan Marxist university students. Both attempts met with dismal failure - not a single farmer from the area joined

their ranks. The guerillas were slaughtered by elite American-trained counter-insurgency units of the Nicaraguan Guardia and were forced to flee into Honduras. The university students were so badly beaten that when the Guardia paraded the survivors in chains through the streets of Ciudad Sandino, several of my friends said they saw swarms of maggots feeding off their raw backs.

When I visited these farmers in an attempt to assist them in their efforts to build a road through the area, I often asked different individuals why they personally had refused to take part in the movement or to assist the guerillas. Over and over the farmers gave the same basic response: they saw no point in fighting and likely dying for a worthless cause. They knew nothing of socialists other than "they did not believe in God" and saw little point in getting killed and ending up being damned to hell. These early forerunners of the present Sandanistas made no impact on the farmers in terms of their daily lives. The experience of these revolutionaries was not unlike that of Che Guevara in Bolivia who frequently mentioned in his diary the gap between the ideals of the guerillas and the reality of the campesinos. (James, 1968; 61)

Paulo Friere, perhaps as a result of his own extensive experiences in living and working at social change at a grass roots level, is well aware of the obstacles activists must face. He stresses that a false dichotomy has

developed in terms of action versus reflection as it relates to consciousness. Critical consciousness cannot result from pure action on either an individual or collective level, nor can it evolve from simple reflection. There must be a dynamic, ongoing interaction between action and reflection which paves the way to a critical understanding of the oppressive elements in reality. As Friere repeatedly emphasized, "action without critical reflection and even without gratuitous contemplation is disastrous activism." Yet at the same time, "theory or introspection in the absence of collective social action is escapist idealism and wishful thinking. Genuine theory can only be derived from some praxis rooted in historical struggles."

Unlike most theorists, Friere repeatedly addresses the concept of consciousness both actively and reflectively. He describes conscientization as "the deepening of the attitude of awareness characteristic of all emergence." It is a never-ending process of learning to perceive the social, political, and economic contradictions found in society and the taking of action against this reality. Borndt and others have correctly observed that many North Americans have misunderstood this term. They frequently view it as synonymous with individual "consciousness-raising", self-fulfillment, or self-actualization. These terms implicitly fail to incorporate Friere's emphasis on the necessity of collective action against oppressive

elements in reality. Such individuals often fail to realize that within the present structure of capitalism, the raising of one's consciousness or individual self-actualization is impossible without collective action. It is completely self serving and naive to believe that individuals can become liberated and self-fulfilled by "doing one's own thing" without also changing the underlying structure of domination and control.

For purposes of analysis, Friere originally described 3 basic levels or degrees of consciousness. "Magical consciousness" which tends to explain reality in terms of superior forces which dominate the situation and must be obeyed. "Naive consciousness", which assumes it understands and controls reality while in fact the individual often over-simplifies the problems and tends to create artificial solutions to it. Many officials connected with sociology departments and international developmental agencies tend to exhibit this type of consciousness. Finally, "critical consciousness" is that which perceives things as they exist in reality. Barndt observes that this stage or level of consciousness is characterized by "a deeper interpretation of problems as systematic, causal principles instead of magical explanations, willingness to test one's findings and review them, avoidance of preconceived notions, refusal to transfer responsibility, rejection of passive positions, sound argumentation,

dialogue, and a receptivity to the new."

Debra Barndt studied Friere's method of conscientization within the context of Peru. Through the use of a photonovella and indepth interviews, she explored the world view of 4 Peruvian women who had migrated to the coast from the Sierra and used their perspectives on education and their social experiences to explore the process of conscientization. Barndt's discussion of Friere is especially valuable for its emphasis of the various dimensions of conscientization which other analyses tend to either ignore or underemphasize. She identifies, solely for the purposes of analysis, 4 dimensions to the conscientization process: ideology, transformation, social identification, and behavioral change.

Ideology refers to reflection or theoretical understanding of the social, political, and economic structure of society. Transformation results from action upon these structures in an effort to create social change. Social identification evolves from reflection on one's psychological and sociological experiences during the conscientization process. Furthermore, behavioral change will result from concrete action taken on the psycho-social issues. Ideally, all 4 dimensions must interact throughout the process, and it is this dynamic interaction which gives conscientization its critical quality.

An overemphasis on one or more of these elements prevents the process of conscientization from flowing effectively. For example, the grain storage project which served as the focus of research in the instant case can be dissected in these terms. Transformation was attempted through the actions of building relatively sophisticated storage silos and grain drying units throughout the country in an effort to change the agricultural storage practices and increase the food supply and production. Unfortunately as later chapters of this thesis will demonstrate, many farmers were either effectively eliminated from this entire process or were treated as mere objects to be manipulated. There was no critical reflection on their part on the structure of the situation. There was no social identification generated through psycho-social experiences because there were none. As a result, as my data will clearly demonstrate, no behavioral change occurred on any of the farms in the Cuidad Sandino area.

Paulo Friere's real value then is not in providing a method which can be simply transplanted to any social situation at all times. But rather for his emphasis on developing a critical approach to the problem of development which is reflected in his method and which stresses the unique contradictions inherent in any particular context. It is out of this critical process that consciousness expands.

Friere constantly stresses that it is not possible to separate action from reflection, or theory from practice. One cannot segmentize the act of knowing existing knowledge from the act of creating new knowledge any more than one can separate teaching from learning or educating from being educated. My own experience in Nicaragua both as an agricultural extension agent and as a social researcher repeatedly affirmed the validity of these statements. Clearly the mere act of teaching farmers how to apply urea to their corn or phosphorous to their beans is meaningless without critical reflection on the political and economic context in which this activity occurs. Furthermore, there is no doubt that in over 2-1/2 years in Nicaragua, both my family and I learned much more from our Nicaraguan friends and the farmers of Ciudad Sandino and Murra than we ever taught. Despite the obstacles created by our own class biases, it was this praxis - "in which those who helped and those who are being helped, helped each other simultaneously", that most greatly assisted us in the process of critically understanding reality.

THE BASIC TENETS OF NORMATIVE SPONSORSHIP THEORY

Normative sponsorship provides a theoretical framework from which to analyze community action programs. Instead of simply providing another macro-sociological perspective

on how the ideal developmental program should proceed, it presents a microtheoretical window from which to view social reality. In somewhat simplistic terms, "normative sponsorship" means that innovations or technological changes related to any developmental scheme stand a better chance of being sponsored, supported, and adapted by the social systems and organizations involved with or affected by the program if they are contained within the norms and values of those groups. (Sower, Holland, Tiedke, and Freeman, 1957)

This model has been recognized as a useful tool for explaining the obsolescence and inefficiency of modern organizations and other social systems (see for example Holland, Tiedke, and Miller, 1966). Yet perhaps its even more valuable application is in providing a practical analytical framework from which to view developmental programs. Friere states that no effective social change can take place if the individuals affected by that social process are treated as mere objects. In tune with this theme, normative sponsorship theory predicts that any community action program which is controlled primarily by individuals or groups who have a vested interest in maintaining the status quo is doomed to fail. To a great extent, it is this basic proposition which this research tested with regard to the INCEI project.

This model appears superior to several other approaches to community development for a variety of reasons (Klein, 1968). As with Friere's analysis, it focuses on the interaction between those in a position of power and the public in general. With regard to the silo project, research based on normative sponsorship would explore the relationship between the individuals or groups which controlled the program and the campesinos in the surrounding area. It would ask whether there existed a relationship of domination and control or whether there was a dynamic interchange or give-and-take between the relevant social systems.

This approach also places a considerable amount of emphasis on understanding the goals, values, and norms of the local area in which the developmental program occurs. These considerations are just as important, if not more so, than the tactics and objectives of the group in power. Conflict and resistance, whether passive or active, is the normal, logical outcome of developmental schemes which either ignore or violate the values and beliefs of the individuals affected by the program. Thus if the INCEI project in Ciudad Sandino failed to take into account, either deliberately or unintentionally, the values and norms of the campesinos in the surrounding area, these farmers would be expected to oppose attainment of the program's objectives.

Finally, normative sponsorship theory appears particularly useful because its flexibility allows for its application in a variety of different social contexts. This is because in brief, the theory explains that one basic method in which social scientists can determine whether an action process tends to treat humans as passive objects rather than thinking subjects in a particular social situation is simply to ask them. This, in perhaps somewhat simplistic terms, is what my research attempted to accomplish in Nicaragua.

This theory has been successfully utilized in a number of different studies and research projects in the United States. Sower, Miller, and others initially demonstrated that normative sponsorship provides an effective analytical tool for enabling public health workers to achieve a greater understanding of complex patterns of interaction within communities and can assist them in isolating the most prominent obstacles to development in these specific locations. Logan (1972) has adapted the tenets of this model to the analysis of problems in Detroit's inner city to help explain why certain areas are more prone to erupt into violence, such as during the infamous riots of 1967. Trajanowitz (1974), Christian (1973), and my own research (Kirschenheiter, 1975), have demonstrated that the theory is especially applicable to research in the field of criminal justice. The research involved in the instant

case will present the first attempt at applying this theoretical framework in comparative developmental research; it will be a test of the "universality of generalization" of the theory.

It is important to state at the outset a few of the more basic assumptions behind this theory. Normative sponsorship assumes that the developmental process under analysis is a voluntary problem-oriented one which is controlled at least partially at the local level. Authority and power are assumed to be dispersed among several competing social groups. While the model assumes that consensus and cooperation among the various social systems involved - the "relevant systems" - can facilitate development, it by no means regards conflict as abnormal or necessarily undesirable. Power, as always, remains a crucial element. Power is not a sufficient factor in community action programs, but it is a necessary one.

Conflict can result, for example, if there is an exclusion of the least powerful or visible relevant systems from the program or from their neutralization. As noted previously, a major proposition of this theory states that if a relevant system vital to the success of the program becomes neutralized, through either ignoring or violating their basic norms or values, then the program will tend to fail. Furthermore, apparent or "official" success of the program, such as the erection of physical structures or

the paper construction of community organizations, must be distinguished from actual success which involves the active support and participation of the relevant systems or key groups in the community.

For general analytical purposes, the normative sponsorship model portrays the action process as occurring continuously. It tends to follow a natural history from convergence of interest to an initiation stage, through various crises or problem phases, on to either successful or unsuccessful resolution of these obstacles, and finally to either attainment or rejection of the desired goals. At the same time, however, these stages do not necessarily follow any set pattern, nor is it always possible to clearly isolate them. Each phase does tend to possess certain identifiable characteristics.

The first identifiable element of this model is convergence of interest. There must be present in the community some individuals interested enough in a problem to make a concerted effort at resolving it. The motivations of the group may be self-centered or altruistic, and it is not necessary that they have equal interests in eliminating the problem.

Thus interest in achieving the objectives of a particular program can originate from a number of individuals or groups. Frequently the interests of a group are obvious, but continue to be unstated because of the oppressed

conditions of the individuals within that group or because they see no realistic manner in which their needs can be met. Friere noted, for example, that many peasants in Chile saw no point in learning to read or write as part of the agrarian reform program because it had no relation to their previous experience. It was only once extensive cooperatives were set up and the farmers actually realized the advantages of literacy in their daily lives that the intensity of interest increased.

Similarly, when the United States Agency for International Development adopted and agreed to finance a Nicaraguan proposal for building drying units and silos across the country as part of an effort to improve storage practices and regulate grain prices, the agency was in one sense implicitly stating a desire to improve the lives of the rural population. Obviously this somewhat abstract objective would have been of interest to the farmers in the Ciudad Sandino area. Like the peasants of Chile, however, one would predict that, based on their prior life experiences, these farmers would be less than enthusiastic regarding the likelihood of the program meeting success. Whether these farmers cynicism and pessimism was in fact justified will be discussed later.

It must be stressed that convergence of interest does not mean that effective community action programs can be dictated from above. One simply cannot go to oppressed,

dominated individuals and give them food, technology, or "knowledge" as the answer to their problems. Such solutions, no matter how benign, constitute at best stop-gap emergency measures. Over and over again, developmental programs have failed because they refused to accept this basic sociological fact. The technicians and specialists behind such projects frequently design and implement them according to their own view of reality, ignoring the fact that people affected by the program possess a different world view and thus will perceive the situation differently. This is what is meant by development "from the top down". To be effective, however, such programs must start "from the bottom up". As Mao Tse Tung observed:

"All work done for the masses must start from their needs and not from the desire of any individual, however well-intended. It often happens objectively the masses need a certain change, but subjectively they are not yet conscious of the need, not yet willing or determined to make the change. In such cases, we should wait patiently. We should not make the change until, throughout our work, most of the masses have become conscious of the need and are willing to carry it out. Otherwise we shall isolate ourselves from the masses. . . There are two principles here: one is the actual needs of the masses rather than what we fancy they need, and the other is the wishes of the masses who must make up their own minds instead of our making up their minds for them."

(Cited in Friere, 1978; 83)

THE INITIATION SET

Following convergence of interest, the initiation set occurs which usually involves the formation of a group which will attempt to agree upon a common set of goals. These objectives can be broad or quite specific, and frequently a polling of the membership by the researcher is required in order to accurately determine to which each member actually supports these efforts. There also should exist general agreement within the group regarding the practical means for attaining these objectives. If the developmental process eventually reaches this point, legitimation and sponsorship becomes possible.

Under normative sponsorship then, the initiating set presents the problem and possible alternatives or solutions to the various relevant systems for their consideration and, in turn, must reconsider their initial suggestions in response to these groups. To an extent, many of the features identified by Friere as characteristic of "problem-posing education" can ideally be observed operating within the framework of the sponsorship model. In an effective community action program, individuals learn to critically view the world. In other words, they learn

to perceive how they exist, not as part of a passive reality, but as an active participant in transforming that reality. They are not treated as objects of assistance, but as critical thinkers and activists.

RELEVANT SYSTEMS

Relevant systems are individuals or groups who, although not necessarily a part of the initiating set, remain important to achievement of the desired goals. Since the initiating set must accumulate widespread support from the local communities, it must allow all groups who are either interested in the problem or will be affected by it to become an active part in the decision making process. This "problem stage" of the process frequently becomes characterized by conflict, cooptation, efforts at achieving consensus, and the neutralization of opposing groups. Here again, participation, observation, and interviews with the official and unofficial leaders and members of the relevant systems constitute basic research tools to determine how strongly these groups support the proposed tactics and objectives and whether some workable level of consensus can be achieved. It bears reemphasizing that if these objectives violate or ignore the norms and values of the relevant social systems involved, the theory then predicts that the program will not achieve actual as opposed

to apparent or "official" success. A key concern of this research was to determine what degree of legitimation and sponsorship actually took place with regard to the INCEI project. Specifically, this case study attempted to explore how much input and support the silo program received from campesinos in and around Ciudad Sandino. A variety of methods, including a survey of every fourth farmer in the valles surrounding Ciudad Sandino, intensive interviews with representatives from official agencies, analysis of published and unpublished documents, and participant observation were used to answer this question.

EXECUTIVE SET

While convergence of interest often broadly states the general objectives of a program, and legitimation and sponsorship addressed specifically how these goals will be achieved, the executive set determines whether they are in fact adopted and implemented. For example, officially the INCEI project was adopted and successfully implemented with the completion of the last silo in 1972. This model recognizes, however, that official implementation in no way assures resolution of the underlying problems addressed by a particular development strategy. Unfortunately, sponsorship theory fails to address certain key questions, such as the nature of the goals which the action process attempts to achieve and the type of strategies for

attaining them. It is this implied "neutrality" or artificial objectivity which makes the sponsorship model unacceptable without the important contributions of Gorz and Friere.

Gorz and Friere obviously recognize that adoption of their concepts and methods in no way guarantees successful resolution of any particular community problem. Both authors, however, do begin with the same fundamental assumption that the present system of social relations is basically unjust and oppressive and must be transformed in favor of a social structure which allows for more equality and a greater potential for human development and freedom. Gorz argues that action programs which maintain the present system, so-called reformist reforms, must be rejected from the start, whereas strategies which are not artificially confined to the perimeters of the present system, nonreformist reforms, must be actively pursued. In other words, Gorz does not lay out a specific blueprint for achieving a society based on an alternative form of social relations, but does construct a valuable framework in which these issues can be discussed.

Friere clearly goes beyond the contributions of both Gorz and normative sponsorship theory and explores the dilemmas of not only which objectives should be sought after, but also the strategies and tactics for achieving

them. Thus his approach would reject as inadequate programs designed solely to increase the general literacy rate or to merely provide modern, secure locations for drying and storing corn and beans. In short, for him how the final goal is achieved is as important as the goal itself. Friere's method stresses that the program must allow for a dynamic interaction of action and reflection by all individuals in order that the process of conscientization may begin. Specifically with regard to the INCEI program in Nicaragua, the actual design and construction of the silos is nowhere near as important as whether the campesinos played an active or passive role in the program's conception, implementation, and administration.

As with normative sponsorship theory, Friere's method is not simply another idealized paradigm of how community action programs should proceed. In many ways his model parallels the basic tenets of the sponsorship model. Countries which have adopted this approach in the real world, from Brazil to Chile to Peru to Guinea Bisseau, attest to its value as a realistic strategy for creating the conditions under which effective social change can occur. I have personally witnessed its successful implementation in both Nicaragua and Peru. On the other hand, the denial of these basic principles greatly diminishes the possibilities of achieving meaningful change. Students can be made to rotely memorize the alphabet, just as

foreign aid agencies can spend millions of dollars to finance and construct extensive grain storage facilities. Yet this does not change the underlying contradictions of an oppressive reality. If the individuals most oppressed by this reality do not come to understand and seriously attempt to change it, the present system of inequality will continue to resist the numerous superficial attempts at eliminating it.

SUMMARY

It may prove useful at this point to briefly summarize how the major concepts of normative sponsorship theory were adapted to the instant case. The entire INCEI project from its conception to the present was regarded as the action process. Clearly the United States Agency for International Development, in planning the project, and the Import-Export Bank, by providing the major source of funding, played central roles in this process. Logically then, AID must bear major responsibility for either the program's success or failure. The major focus of my research was not concerned with exploring how and why this program was conceived as much as it was with determining whether the project did in effect bring about effective social change, especially in the Ciudad Sandino area.

Representatives from AID, INCEI, Banco National, the Nicaraguan Department of Agriculture, and grain buyers in Ciudad Sandino were recognized as occupying official

positions of authority since it was they who controlled the funds and actually implemented the program. These individuals constituted the membership of the initiating set and the relevant systems. Furthermore, the "charter" of the program was defined as the objectives of the project as set forth in the official documents and as stated by official representatives of the relevant systems during the interviews.

Another key relevant system for purposes of this research were the campesinos of the Ciudad Sandino area. This is because, nominally at least, the silo project was designed and intended to effect and improve the lives of these individuals. Logically, of course, the entire rural population of Nicaragua could have been defined as a relevant system. Practical limitations of time and money, however, (as well as the fact that a war was about to break out), made the inclusion of these groups impossible. An effort was also made to identify and interview representatives from any group which either had input into the silo project or were affected by it. In order to ensure that no relevant system was unintentionally overlooked, each respondent was asked during the official interviews to identify individuals or groups whom he or she felt were most likely to be affected by the program. No groups other than those mentioned surfaced as a result of this process.

The questionnaire used in the survey and the official interviews, as well as my own knowledge based on 2-1/2 years as an agricultural extension agent in the Ciudad Sandino area, constituted the key instruments for identifying the norms and values of these groups, as well as the degree of consensus arrived at by the relevant systems. Moreover, it was possible to determine the extent to which the silos were being used simply through periodic visits to the graineries and by analyzing the records kept by INCEI'S field representative in Ciudad Sandino. It is significant that in my 2 years in Ciudad Sandino, 5 of the 6 silos were never utilized, except to store fertilizer, and that 5 years later this trend remained basically unchanged.

Specific questions during the survey were directed at exploring what degree of consensus existed. If a relevant system displayed ignorance of the goals of INCEI or refused to actively participate in the program, it was concluded that these goals did not reflect the norms, goals, or values of that relevant system. Thus for example, with regard to the number of farmers who have changed their storage practices in the last 5 years, the data speaks for itself: of the 122 farmers interviewed, only one has changed his practice of storing grain - and that one switched from storing his corn in a troja to using barrels!

Thus in conclusion, through this case study an effort was made to determine:

- A. What were the objectives, official and actual, of the INCEI silo program in the Ciudad Sandino area?
- B. Whether the campesinos from the area had an input into the planning, design, construction, control, and administration of the silo project in Ciudad Sandino.
- C. The extent to which the objectives of the project were actually achieved 5 years after INCEI had been in operation.
- D. Whether the behavior of the Ciudad Sandino campesinos had changed as a result of the INCEI; more specifically, whether this project had affected their practices of buying, selling, and storing corn and beans.

Galtung once observed that, "A theory should not only be evaluated according to its potential as a reservoir of hypothesis implications to be tested against present reality (data), but as much - or perhaps more - as a reservoir of policy implications to be tested against potential reality (goals, values)." Five years ago I first undertook research concerning the Management Task Force of the Michigan Commission on Criminal Justice Goals and Standards which I regarded as an empirical application of normative sponsorship theory rather than as a rigid test (Kirschenheiter (1975). I noted then that, "The continuing accumulation of such studies will indicate the differences and

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similarities of various action processes. Analysis of specific cases will make possible the postulating of further tentative generalizations and eventually lead to additional research and further modifications of this model." Hopefully the additions of the insights derived from the works of Gorz and Friere can be viewed as a positive step in this continuing process.

CHAPTER IV

METHODOLOGY

GENERAL APPROACHES AND OBJECTIVES OF THE STUDY

This research constituted an indepth analysis of the impact of INCEI's silo project on the rural Nicaraguan community of Ciudad Sandino. Following the advice of Warwick and Osherson (1973; VIII) that, "many of the difficulties encountered in comparative research could be greatly reduced by creative combinations of methods", numerous research techniques were utilized, including: the analysis of historical official and unofficial documents, participant observation, an extensive survey of farmers in the target area, and lengthy interviews with official representatives of the relevant systems.

As mentioned previously, the major thrust of the project in broad terms was: to isolate the relevant systems involved with the project and, through the use of formal and informal interviewing, to attempt to identify the norms and values of these groups; to explore the differences and contradictions within these social units; and to try and present a few possible practical alternatives to what, in the final analysis, turned out to be another attempt to artificially impose Western technology from above. This study hypothesized that rural developmental projects which reflect the norms and values of the groups to be affected by the project stand a much greater chance of attaining

success than a developmental process which ignores or excludes major segments of the campesino population. The questionnaire constituted a key instrument in this study for gauging both the values and opinions of the relevant systems and for attempting to estimate levels of consensus and conflict.

CIUDAD SANDINO (A.K.A. EL JICARO)

Perhaps a short comment is appropriate here with regard to my own biases. At the onset, I make no false claims to neutrality or objectivity. I agree with Beckford (1972; VII) that, "How human beings can engage in anything objective is really beyond my comprehension," especially in the study of human activity. Moreover, as Myrdal suggests, true objectivity in social research is achieved by stating the values on which the study is based.

This study focused on the INCEI unit situated in Ciudad Sandino, a small farming community located in northeastern Nicaragua. I chose this site because of my experience and interest in the area. Ciudad Sandino was also selected because its patterns of cultivation and levels of technology are representative of much of rural Nicaragua, as well as the rest of Latin America. I seriously doubt whether I could have successfully carried out this study in such a relatively short period of time in any other town in Nicaragua. I especially owe a great debt of

gratitude to the 4 individuals who so unselfishly agreed to assist me in interviewing the farmers in this area. I am certain that their service was much more a result of our "amista" than por dinero.

My biases against the INCEI program evolve out of my work for over 2 years in the area as an agricultural extension agent, planting demonstration plots with the farmers, and as a credit analyst with the local branch of Banco Nacional. This "participant observation" convinced me that, as of 1974, INCEI had no measurable impact on the storage practices of the farmers in the area. I returned 4 years later in order to determine whether this situation had changed, to hopefully get a more complete view of this development from the bottom up.

Like most campesinos in Nicaragua, Ciudad Sandino farmers plant primarily corn and beans and use relatively primitive levels of cultivation and storage. Approximately 70% of the planting is done through the use of a heavy wooden, homemade plow pulled by oxen and 30% through the use of an especque, an iron tipped wooden planting stick. Few farmers use either fertilizer or insecticide, and virtually all of them store their corn and beans in their homes. Storage practices range from piling the corn in rows inside the house, often with the youngest children using this as a bed, to sacks and barrels. Probably the most common method, however, is the troja, a raised hut

built out of sticks in which the corn is usually stored without removing the husks. The most important part of this research consisted of a random sample of the farmers in the Ciudad Sandino area. The questionnaire was intended to identify their values and norms covering a wide range of topics from living conditions, to farming practices, to attitudes towards the rural bank, and to analyze the system of interaction between these campesinos and the local INCEI unit.

As the major hypothesis of this study implies, ignorance on the part of officials from AID and INCEI of many of the small farmers' norms and values might well account for the program's apparent failure. Many campesinos, for example, do not understand the reasons and effects of mechanically drying grain before storage. They do know, however, that it reduces the weight, and therefore the price of their product by 8% to 12%. They harbor an inherent distrust of government agencies and prefer marketing their product with local merchants. Occasionally a significant percentage of campesinos must sell their harvest "de futuro" and therefore retain no control over the ultimate destination of the harvest. Many individuals also refuse to permit their grains to be mixed and stored with that of other farmers in a single location since this means the corn or beans they get back 9 months later is not their own and must therefore be "inferior".

PROBLEMS INHERENT IN CROSS-CULTURAL SURVEYS

Certain key obstacles arise in any comparative analysis involving sample surveys or participant observation. These include conceptual equivalence, equivalence of measurement, linguistic equivalence, and sampling (Warwick, 1973; 11). It was impossible, despite intensive preparation, for the study in the United States to adequately anticipate all the problems which arose during the field research. Certain safeguards, however, did increase the likelihood of success.

It was decided to use back translation and random probing in order to ensure linguistic and measurement equivalence. Back translation involved translating the original questionnaire from English to Spanish by a native speaker of Spanish, then back to English by a native speaker of English, then back to Spanish and so on until all discrepancies in the translation were either straightened out or removed (Warwick, 1973; 30). Random probes were also used during the interviews themselves as a second step in guaranteeing the validity and reliability of the responses (Schuman, 1973; 138). (Obviously this is but an indication of validity since it can never be measured directly.)

Each interviewer randomly selected a specific number of questions for each respondent and "probed" into them in order to compare the intended purposes of the question and

the selected response with its meaning as perceived and explained by the respondent. Nondirective inquiries by the interviewer, such as, "What do you mean by that; can you expand on your answer?" were also used in an effort to achieve this same result. Moreover, several inquiries throughout the questionnaire constituted the same basic questions as a means of providing another method to evaluate the consistency of responses. Yet without a doubt, the most reliable safeguard for ensuring the reliability of the responses given throughout the study was the knowledge and experience of the interviewers themselves.

Many authors have stressed the obstacles raised by having native interviewers of social classes different from that of their respondents. Obviously, interviewer effects can be lessened to some extent by having a group of well-trained individuals who closely follow the set of standardized instructions. As Warwick noted (1973; 196), developing and maintaining rapport with the respondents also remains crucial to achieving reliable, free-flowing interviews. In order to achieve this objective and in order to reduce the effects of class and cultural background, 4 of the 5 interviewers were themselves small farmers from the area. Each of these individuals were literate, intelligent men with whom this researcher had worked in the past in planting demonstration plots, school gardens, and a variety of community development programs. The fact that the other

farmers had once elected 2 of these men as officers of a now defunct marketing cooperative implied that they possessed a level of respect and knowledge of the community which facilitated the reliability of the response rate. Many observers argue that such methods constitute the only way of ensuring comprehensive, unbiased information (Mitchell, 1973; 221).

An intensive training period buttressed by administration of a pretest were also a vital part of the design. The writings of Frey (1973; 241) and Fink (1973; 21-34) provided several practical guidelines which were followed in the selection and training of these interviewers. These included completely familiarizing them with the objectives and instruments of the study, extensive role playing prior to the field in order to increase confidence and expose hidden pitfalls, and daily supervision on my part. The pretest served a variety of key functions, including an evaluation of the adequacy of the questions as well as the interviewers, a rough estimate of the rate of nonresponse and the reasons behind them, as well as a general sketch of the inevitable unanticipated obstacles such as selecting a proper random sample and finding respondents at their home when the interviewers arrived.

Furthermore, I believe that case studies such as this one cannot be justified merely on the grounds that it fulfills the requirement for an academic degree. Swantz

(1974), Vio (1975), and Hall (1977) among other, have argued that the research team should contribute to the productive work of the area. This goal was hopefully at least partially accomplished in the instant case since 4 of the 5 members of the research team were farmers who lived and worked in the local area.

Several advantages resulted from the use of community members rather than outsiders to conduct the interviews. Not only were these individuals and their families known, respected, and thus more likely to be trusted by the respondents (a factor of key importance in view of the fear many farmers had of Somoza's spies), but since the interviewers personally knew most of the farmers they interviewed, they were often able to detect if their responses were less than completely honest. In a small rural community, for example, it is common knowledge how much land each family or individual owns, especially with regard to the larger landowners. During the course of the survey, only 2 of the 121 respondents gave blatantly false estimates of their landholdings, and both of these readily corrected themselves when the interviewers probed into the response and pointed out the discrepancy.

Hall also correctly argues that it is important the community gains not just from the results of the research, but from the process itself. He points out that this means that as a result of the study, respondents should be able

to articulate their problems and ideally begin to initiate processes to find solutions. The questionnaire was partly constructed with this objective in mind. The fact that most of the campesinos welcomed the opportunity to express their opinions was reflected in the surprisingly high response rate - only 2 farmers out of 123 approached during the survey refused to be interviewed. In fact, several farmers voiced the hope that through their responses, the corruption of the Somoza regime would receive wider publicity in the United States.

THE QUESTIONNAIRE AND SELECTING THE RANDOM SAMPLE

The questionnaire was intentionally designed to be relatively short, specific, and primarily consist of closed-ended questions. As the first Peruvian national survey revealed, many uneducated rural inhabitants have difficulty comprehending in such a short time the idea behind ordering one's responses on a scale (Warwick, 1973; 15). Since many of the interviewees were illiterate, the multiple choice questions had a limited number of alternatives and were written as brief and simple as possible. The questionnaire intentionally began with several short, neutral queries, such as, "What do you plant premeria?; do you plant with a plow, an espeque, or both?", and then gradually move into the potentially more sensitive questions concerning the

rural bank and INCEI. Each interviewer repeatedly and strongly emphasized that this study was not officially connected with the Nicaraguan government in any way and would be kept in strict confidence.

Furthermore, as Eric Wolf (1969) has correctly observed, it is a serious mistake to simply refer to peasants or campesinos as one undifferentiated mass. It was possible that differences between tenants and landowners, laborers, coffee growers, and cattlemen, and between corn and bean farmers could have been as great as between urban and rural dwellers. For example, do large planters regard INCEI as more of a success than small farmers? Do they use the silos more frequently? What effect does the quantity of one's harvest have upon the assistance and selling price he receives? The data generated by these and similar questions provided valuable insight into which relevant systems exercised the greatest degrees of influence and helped to differentiate the actual, unofficial goals of INCEI from the officially proclaimed objectives.

Rural Nicaragua presents a unique problem for this type of cross-cultural research since the only experience most farmers have had with interviews was through the national census. Unfortunately, since no income tax exists in the country, this census provided the basis for taxation depending on the individual's farm size, harvest, and number of livestock. As a result, many campesinos regard

such interviews as a potential threat and lie notoriously on them.

Originally I had hoped to obtain access to census data and to use this information as a base from which to select a random sample. Unfortunately this proved impossible. The head supervisor of the national census office in Managua explained during an interview that the results of the last national census had been only partially published because it contained so many errors; mistakes which he promised "would not be made again". He noted that the government had spent over 6 million cordovas for three different national censuses, and none of them had produced very reliable data. The respondents repeatedly refused to reveal their true incomes and the amount of land they owned, and most women refused to reveal their actual age. This same official stated that no accurate census on the country's agricultural system had even been conducted, but that his office was then in the process of carrying out another more promising census of the rural population based on 380 interviews drawn from a national sample. This same census would also involve the use of detailed aerial photos taken by United States reconnaissance planes in an effort to verify the accuracy of the questions dealing with

landholdings.*

Since no reliable census data existed, an alternative means of securing a reliable sample had to be devised. The campo (rural area) surrounding Ciudad Sandino is divided into "valles" roughly similar to townships or districts in the United States. I had hoped to visit each juez local (local judge) and determine the number of farms in each valle and then interview every fourth or fifth residence. Thus in effect obtaining a two-stage cluster, systemic sample.

Unfortunately, this method also proved unreliable since apparently the judges themselves did not know the exact number of homes under their jurisdiction. The juez local from Muijuca, for example, one of the most advanced valles in terms of electricity and access to all-weather roads, stated that he believed there were approximately 180 houses in his district. An actual count revealed there to be 74. Finally, after discussing the situation with the various interviewers, it was agreed that each of them would survey the valles he knew best and draw a map containing the exact number of houses. Afterwards they used these maps as guides in interviewing approximately every fourth farm in the surrounding area.

*I was shown samples of these photos, and they are incredibly detailed. It was explained to me that the cameras on the U.S. planes were powerful enough to show the manufacturer's title on a golf ball from a distance of hundreds of thousands of feet. What this official did not state was that such pictures have also frequently been used by certain dictators in Latin America to detect and eliminate guerilla activity.

The survey also required the interviewers to spend considerable time revisiting farms. Due to time and financial restraints, the interviews were conducted during the planting season and accordingly many farmers when first visited were working in their fields, often a considerable distance from their houses. The situation became more complicated since the farmers typically head for their fields at 6:00 a.m. and return at dusk, and visiting them after dark would have violated a cultural norm. Moreover, because of increasing amounts of guerilla activity, the Guardia was suspicious of anyone traveling in the campo at night for whatever reason.

These factors also proved somewhat detrimental to the interviewers' morale. Since they were originally paid per interview, it was obviously uneconomical to spend their time repeatedly trying to interview the same individual. Eventually I agreed to pay the 2 most reliable interviewers a minimum of C\$50 per day, 3 times the current rate of a field hand, regardless of how many interviews were obtained. If their per interview rate was greater than C\$50 per day, they were paid the larger sum. As a result, we often had to fit the visits around both the interviewer's and the respondent's work schedules. It ended up taking over 5 weeks to conduct the pretest and 121 interviews.

Finally, various unobtrusive measures were used to test the accuracy of the responses from the campesinos.

Permission was obtained from the INCEI field representative in Ciudad Sandino to examine their records. This valuable data, although far from complete, did reveal which silos were used by which individuals at what time of year. The quantity of grain actually stored constituted an objective measure of the effect this program had on Ciudad Sandino. Moreover, visits and interviews with private grain buyers provided an insightful, if somewhat uncomprehensive, view of the spin-off effects of the project.

THE OFFICIAL INTERVIEWS

The campesinos surrounding Ciudad Sandino provided but one source of data. Other informative sources included numerous articles and documents published by INCEI, the loan proposal itself, as well as other documents provided by AID Managua and AID Washington, information provided by the Ciudad Sandino office of Banco Nacional, and general background information published in La Prensa. Furthermore, over 20 "official" interviews were conducted with representatives from the other relevant systems. Depending on the circumstances, these formal interviews were both prearranged and spontaneous. Included in these interviews were representatives from the AID mission in Managua, present and former employees of INCEI, and officials from Banco Nacional and the Department of Agriculture.

Originally I had hoped to obtain an interview with President Somoza. Although improbable, the fact that I had 2 such sessions with Somoza in the past, one of which took place in Ciudad Sandino, presented the hope that such an interview was not impossible. By the time of the actual field research, however, the political situation in the country had deteriorated to such an extent that attempts at this interview were abandoned.

Each official respondent was informed of the purpose of the study and the reasons for the interview. Each was promised strict confidentiality with regard to their responses. It was explained that the interview was intended to identify their values, norms, and official positions of the organizations rather than any one person. Although a list of questions was drawn up in advance, the actual interview was kept as open-ended as possible. Every effort was made to maximize the spontaneity of the responses and to probe the replies and opinions of the interviewees rather than to strictly adhere to the predetermined format. These interviews lasted between 1-1/2 to 5 hours in duration.

As mentioned previously, every effort was made during the course of the research to "get close to the data". Among other things, this involved making 4 separate trips from Ciudad Sandino to Managua, spending a total of 3 days at the American Embassy interviewing and pondering over

documents which I was allowed to read and take detailed, copious notes from but not allowed to xerox, and visiting the Banco Nacional and INCEI representatives in Ciudad Sandino on a semi-regular basis for months.

Because of the extremely precarious political situation at the time of the field research, unanticipated difficulties continued to crop up. Although I never feared for my family's safety while in Ciudad Sandino, travel to and from the capital was a different matter. The Guardia at this time was in a state of readiness against attacks by the Sandinistas, and searches of anyone traveling back and forth were commonplace. Many of the Guardia were young, inexperienced, poorly trained teenagers. (Both I and the average Nicaraguan feared encounters with the Guardia much more than with the guerillas.) The infamous, irrational murder of the North American reporter, Bill Stewart, for example, while on his knees at a roadblock was not an isolated incident. Fortunately, however, these conditions only interfered with the successful completion of one interview - an INCEI official in Managua who repeatedly cancelled appointments. For the most part, the respondents were extremely helpful and more than willing to both provide and expand upon their answers. My knowledge of the inner workings and official goals and values of these relevant systems benefitted considerably from their cooperation.

The interviews with these official respondents, all of which I conducted, presented very different problems than those with the campesinos. Equal emphasis was paid to what their organizations actually did as to what their representatives said; moreover, the prearranged questions were used as guidelines and not strictly followed. These associations by definition exist to serve the public interest, but they also must satisfy the needs of their own direct membership. Frequently these public and private interests are far reaching and conflict with each other.

Etzioni (1969), Perrow (1969), and others present a strong argument for separating the goals of all such organizations into categories such as "official" and "operative". Official goals constitute what the group actually strives to accomplish as reflected by their operating policies. Operative goals may support, conflict, or be irrelevant to official goals. They are established by the dominant members of the group and are strongly influenced by their class backgrounds and interests, professional competence, and career lines. Moreover, the primary sources of financial funding can often be traced to the dominant relevant system (in this case AID), which operates levers to achieve its own basic objectives. Thus, identifying the operative goals of each of the relevant systems constituted a major objective of this study. A broad spectrum of resources was

tapped in addition to the survey data in an effort to answer these and related questions. It is my conclusion that based on the data discussed in the following chapters, the INCEI silo project had no positive effect on the small farmer and was never designed to do so.

SURVEYING THE LARGER PICTURE

Richard Adams emphasized in his study of Guatemala (1970), that no community can be completely understood without also addressing the larger national and international pictures. The periphery of Ciudad Sandino then must be analyzed in relation to its center in Managua, and the Periphery nation of Nicaragua cannot be understood without examining its relationship with its Center power, the United States. This research then also involved a survey and analysis of the political-economic relationships between and among these systems.

Both Wolf's and Adams' research expounds on at least 3 common themes. First, that the collection of social groups or systems in a single nation can never portray a total description of the functioning of that country. "Rather, it was the interrelations that operated between the various sectors and groups that could provide the major guide for study." (Adams, 1970; 35). Second, that "brokers" provide a key role in connecting these systems. And third, that power will be one of the dominant

characteristics in all such interactions. The higher degrees of unity, organization, and resources within each relevant system in turn generates more power. Various groups in any action process will frequently compete for and conflict over power; this explains why some relevant systems triumphed, others were neutralized, and others were excluded. In short, true development "therefore implies destruction as well as expansion; not only the destruction of converting natural resources into waste, but also the destruction of one portion of a society by another." (Adams, 1970; 42).

Finally, a discussion of the methodology involved in this case study would not be complete without addressing the issue of funding. Many of the practical limitations in any cross-cultural study were greatly intensified in this case study because of funding difficulties. Although for 2 years I had hoped to finance this research through a research assistantship provided by the Comparative Committee in Sociology at Michigan State University, and had received written and verbal promises to this effect, in the end no support of any type was provided. I was informed by one of the committee members that my research would not be funded, in part, because it appeared to approach the problems of community development from a dependency

perspective and "there is no future in dependency theory."*

On the other hand, the people of Ciudad Sandino were as generous and helpful as the Comparative Committee at Michigan State was obstinate. It appears extremely doubtful whether this study would have been completed without the constant care and multifaceted assistance of our friends and neighbors in this small village. My wife, daughters, and I were provided with a modern, completely furnished house rent free for the entire time period necessary for completion of the field research. In addition to this and the never ending current of eggs, mangoes, tortillas, and other essentials which were funneled across our doorstep, numerous farmers willingly provided valuable insight into the local problems of the community. Doubtlessly a portion of this unexpected cooperation from people we had not seen in 4 years was a dividend of our Peace Corps experience. Yet to a much greater extent, this response simply reflects the warmth and kindness which would be offered by these beautiful townspeople to any outsider who was fortunate enough to take the time to get to know them.

*It never was explained if this meant that this theoretical approach held "no future" for North American sociologists accustomed to studying the issues related to dependency from the top down or for the members of the periphery intent on severing the bonds of dependency.

CHAPTER V

BACKGROUND TO THE RESEARCH

No community or developmental project can be studied completely without also addressing the large national and international picture and without placing them in a historical perspective. The periphery of Ciudad Sandino then must be analyzed in relation to its center in Managua; and the Periphery nation of Nicaragua cannot be understood without examining and understanding its historical relationship with its Center power, the United States.

Adams (1970) indepth analysis of Guatemala emphasized 3 major themes which were also given special consideration in my own research. First, that the collection of social groups or systems in a single country could never portray a total description of the functioning of that country. "Rather, it was the interrelations that operated between the various sectors and groups that could provide the major guide for study." (Adams, 1970; 35). Second, that "brokers" provide a key role in connecting these systems. And third, that power will be one of the dominant characteristics in all such interactions. The degrees of unity, organization, and resources within each relevant system is not static, but increases and decreases and in turn generates more or less power. Various groups in any action process will frequently compete for and conflict over the same degrees of power; this explains why some relevant systems triumphed, others were neutralized, and still

others excluded completely.

This chapter then will present an indepth historical analysis of the political and economic relationships of many key Nicaraguan social groups and systems. Recent events in Nicaragua clearly indicate that the process of development does in fact involve destruction as well as construction. It remains to be seen whether the incredible destruction and loss of lives in Nicaragua over the last 2 years will in fact prepare the country for a sincere developmental effort or simply lead to turmoil and eventually "Somosoism" without Somoza.

GEOGRAPHIC, SOCIAL, POLITICAL, AND ECONOMIC FACTORS

A variety of factors have been conducive to the political conditions which sprouted in Nicaragua. Heterogenity characterizes the country geographically, socially, politically, and economically. Known as "the land of lakes and volcanoes", the majority of Nicaraguans are sprinkled along a narrow strip of land 100 miles in length which borders on Lake Managua and Lake Nicaragua. Many large cities such as San Juan del Norte, Bluefields, and Puerto Cabazas have only recently become accessible by land.

The country is divided into a collage of different geographic zones such as: the Caribbean lowlands, swamps and jungle which occupy over half of the country; a range of rocky mountains and plateaus often pierced with acres

of pine trees similar to Northern Michigan; the lake regions and surrounding areas which are famous for possessing the only freshwater sharks in the world; the Pacific strip; and the plain areas punctured by a variety of active and dormant volcanoes (Carlson, 1946; 386-390). The capital of the country, Managua, lies only 198 feet above sea level and frequently experiences temperatures that run into a muggy 90° to 100° F.

Although the largest country in Central America, Nicaragua is actually a relatively small country about the size of Michigan. Its population of 2.3 million is comprised, in order of relative percentages, of Mestizos, Europeans, Blacks, and Indians. It has a population growth rate of 3% annually, with over half of the population living in the rural areas.

Almost half of the agricultural production is exported, and agriculture accounts for 70% to 80% of all exports and include, in order of importance, cotton, coffee, meat, and sugar (Ryan, 1970; 207-250). Three of these 4 products require seasonal employment, especially during the harvest season, and the unemployment statistics reflect this. Officially, the Minister of Economy stated in 1973 that 36% of the economically active population was unemployed, yet at least another third of the population must be regarded as underemployed (Jonas, 1976; 3). Other recent estimates have held the urban unemployment rate to be near 70%.

It remains impossible to obtain accurate social statistics on the country, not only because little information is available in reliable documented form, but because of the Somozan government's well known tendency to manufacture and mold data to fit its own purposes.* The inequalities of income and land distribution found in the country, however, doubtlessly parallel, if not exceed, those of any other country in Latin America. The bottom 50% of the population has a median income of \$90 a year, while the top 5% of the population enjoys a median income of over \$1800 a year. Almost half of the farms consist of 7 hectares or less and constitute 2% of all farm land, while the top 2% of the farms consisting of 350 or more hectares take up 48% of the farm land available. There is less than a 50% literacy rate, and the infant mortality rate stands at over 13%. Over 47% of the homes in the cities and 81% in the countryside have no sanitary facilities, and well over 80%

*I received first-hand knowledge of this practice during one of the interviews I conducted as part of my field research in Managua. After speaking with a high-ranking official from Banco Central, I was offered a position at over \$20,000 a year as a "resident sociologist". My job would entail publishing a study documenting that Nicaraguans enjoyed the highest standard of living of the 5 Central American republics. When I asked to see the data which was to be used to support this study, the official simply responded that it would be produced from various governmental sources. When I asked why she didn't retain a Nicaraguan sociologist for the task, this official explained that they were all too "leftist" and critical of the government. Thus in short, it was made clear that my acceptance of the position hinged on my agreeing to reach conclusions favorable to the Somoza regime before even being allowed to see the data.

in both areas do not have safe drinking water.

Nicaragua's mineral wealth, especially its gold, as well as its geographic position, have played key roles in its "development of underdevelopment". The Spanish founded Granada in 1524 as a key link to dominate the large Indian population and force them to work in the mines throughout the Americas. As late as 1955, Nicaragua remained the second largest producer of gold in Latin America. After a while, rivalries and conflicts developed between the "peninsulares" from Spain and the younger American-born Spanish, the "oriollos" (Levene, 1940; 99). Eventually this led to independence from Spain in 1821, and the country passed under the British sphere of influence.

THE "NICARAGUAN ROUTE"

By 1850, the discovery of gold in California caused the United States to become interested in Nicaragua primarily as a close overland bridge between the Atlantic and Pacific Oceans. Political conditions inside the country remained ripe for outside exploitation because of the ongoing internal dispute between the 2 key factions of the ruling class, the Conservatives and the Liberals (Davies, 1972; 608-611). The Conservatives, whose center of power was in Granada, reflected the interests of the older wealth, the merchant class, and the cattle raisers. The Liberals advocated the interests of the newer wealth, especially the

coffee growers and artisans from Leon. The armed conflicts between these 2 factions inside Nicaragua were part of a larger struggle between these same 2 interest groups throughout Central America.

Cornelius Vanderbilt, the infamous American robber baron, believed at this time that conditions appeared ripe in Nicaragua and the United States to accomplish the age-old dream of a water passage to India. Like Louis Napoleon Bonaparte and many other foreigners before him, Vanderbilt believed that the San Juan River, which flowed from the Atlantic into Lake Nicaragua, offered an ideal location for fast, relatively cheap transportation between the 2 oceans. He believed that the establishment of such a route would not only win him international acclaim, but once he connected this natural waterway with a man-made canal, "the lucrative California and India trade would fall into his lap." (Folkman, 1972; 16). In time the railroad baron did establish and operate such a transit company for several years until war forced the Nicaraguan location to shut down. This route was later discarded in favor of the Panama site.

THE WILLIAM WALKER AFFAIR

During this period, another infamous American left his mark on the pages of Nicaraguan history. William Walker was an American doctor, lawyer, and self-proclaimed

general who had previously attempted to conquer the Mexican Territory of Lower California and Sonora and declare it an independent republic. Although he failed in Mexico and barely escaped with his life, Walker met with much greater success in Nicaragua.

In May of 1855, he was invited by the Liberal faction in Nicaragua to intervene on their side against the Conservatives. Williams and 56 of his followers, armed with a new model rifle, accepted the invitation. In a short period of time, after commandeering a steamer on Lake Nicaragua owned by Vanderbilt, they captured Granada. Walker then took over Vanderbilt's entire company and transferred it to friends who had financially backed his venture.

Originally Walker apparently hoped to have Nicaragua become a state of the United States. With this in mind, in 1854 he established a new government with himself as President and suspended Nicaragua's laws against slavery. He also declared English to be the official language and forced the Spanish-speaking Nicaraguan Congress to vote for the new Constitution which was written entirely in English. The United States formally recognized this new government in 1856.

Walker's exploits forced the "trans Nicaraguan Route" to close down and caused Vanderbilt to lose hundreds of thousands of dollars. This, in turn, led Vanderbilt to

support the Central American countries in their efforts to dispose Walker. El Salvador, Guatemala, Honduras, and Costa Rica correctly feared that Walker's eventual goal was to create a strong federation of these 5 republics based on military rule with himself as dictator (Folkman, 1972; 85). Their combined efforts forced him from power in 1857 when he surrendered to the United States Navy in order to avoid capture. He later launched 2 other unsuccessful attempts to retake Nicaragua, was finally captured by the British, and turned over to Honduras officials and was executed on September 12, 1860.

Several scholars believe that Walker, rather than financial or geographic considerations, prevented Nicaragua from becoming the vital link between east and west presently enjoyed by Panama. "If Walker had not come to Nicaragua, there is little doubt that the route would have continued and probably even surpassed the popularity of Panama. Of all that Walker is remember for, the most important result of his filibustering activities was the closing of inter-oceanic communication across the isthmus of Nicaragua." (Ibid., p. 92).

At the same time, however, many Nicaraguans saw the closing of this interoceanic bridge as a blessing in disguise. Just as with many modern "dependistas", they regarded the much acclaimed technological advances brought by the U.S. to be little more than a tool of American

imperialism. As Mirabeau B. Lamar, the United States minister to Nicaragua bemoaned in 1858, "There is in all this country a deep-seated terror, that, when the Americans are admitted into it, the natives will be thrust aside - their nationality lost -- their religion destroyed - and the common classes be converted into hewers of wood and drawers of water." (Ibid., p. 99).

THE RISE OF SANDINO

The Conservatives managed to control the government for 30 years following the fall of Walker. In 1893, the Liberals took power under Jose Santos Zelaya, who ruled until 1909. Zelaya instituted numerous "modernization" policies which led to a basic consolidation of political and economic power. He also helped to establish coffee as a key export product and to assist the new rising "coffee bourgeoisie" in their efforts to expand their plantations at the expense of the campesinos.

But the dream of building a canal across Nicaragua was yet to play another key role in this country's history. Although the U.S. had obtained from Panama exclusive rights to build a canal there in 1903, her interests demanded that she retain a monopoly over the right to any transoceanic canal in Central America. Zelaya made the "mistake" of thinking that Nicaraguans had the right to determine what was best for Nicaragua independent of the United States.

In 1909 he began negotiating with the Japanese over the possibility of their constructing a canal in Nicaragua. This proved to be the final impetus behind a Conservative insurrection backed by the U.S. against Zelaya (Jonas, 1976; 2). The Conservatives and the Liberals once again plunged Nicaragua into civil war for the next 3 years.

In 1912, under the pretense of preventing more bloodshed between the 2 factions, the United States committed troops to Nicaragua for the first time. Over 2700 Marines landed at the invitation of Conservative President Diaz to suppress a revolt by the Liberals. From 1912 to 1925, a smaller number of Marines remained in the country under the facade of maintaining law and order. When the Marines were finally withdrawn in 1925, fighting again broke out. The Marines immediately reinvaded and this time remained until 1933.

Augusto Caesar Sandino, a bright, idealistic mine worker at the time, refused to accept the presence of U.S. Marines on his country's soil. He also refused to accept the periodic political compromises imposed by the United States. As a result, from 1927 to 1933, he successfully fought the Marines to a standstill in a guerilla war that has since come to be labeled our "first Vietnam".

Sandino and his followers were considered bandits by the United States and heroes and freedom-fighters by many Nicaraguans. He was the only Nicaraguan leader who had the

nerve to resist American imperialism in spite of the overwhelming odds against him. Sandino's resistance originated and spread from the same area from which most of the interviews for this study were obtained - the rural area surrounding Ciudad Sandino. In fact, the recent changing of the name of El Jicaro to Ciudad Sandino reflects the townspeople's pride in this fact. Moreover, many of the older farmers can remember fighting either for or against Sandino and the tremendous hardships of that period. Don Abraham, the 88-year-old farmer who provided us with a house rent free during my field research, enjoyed telling and retelling stories of the Sandino era, including how he frequently cut up cow hides into soft ball shaped objects and filled them with gun powder and nails in order to have effective homemade hand grenades to throw at the Gringos. Don Abraham worked with Sandino at the San Albino gold mine and joined his movement not because he hated the United States, but because "Sandino was a friend of mine who was in trouble and needed help."

The war against Sandino did have many striking similarities to the war in Vietnam. For example, the U.S. feared the influence that leftist foreign governments - in this case Mexico - might have had on Nicaragua as a result of their efforts to support the conservative cause there. The typical U.S. response to the successes of the guerillas was to commit more troops and send more modern

equipment (Macauley, 1971; 48-134). This was also constituted the first time U.S. aircraft supported ground troops through extensive and coordinated strafing and bombing. In fact, many of the towns surrounding Ciudad Sandino, such as Murra, Quilali, and San Fernando, were either destroyed by the U.S. Air Force or had their main streets taken over, bulldozed, and expanded to serve as makeshift runways. Just as in Vietnam, however, these bombings produced more civilian victims than guerilla casualties and tended to strengthen the resistance movement.

The Marines also faced the dilemma of often having to destroy property and homes in order to "save" them and of fighting a war in which most of the weapons used by their opponents were supplied by the U.S. Moreover, public opinion in the United States, which never supported the commitment of troops in Nicaragua in the first place, turned strongly anti-interventionistic once coffins filled with young Marines began to be flown home. It eventually became clear that the war against Sandino could not be won either militarily or politically.

The Marines and their host government also largely failed in their propaganda efforts to mold Nicaraguan public opinion against Sandino. "Like any guerilla force, the peoples' army was dependent on material support (food, supplies, information) from the local residents and shared its resources with them." (Jonas, 1976; 6). At the same

time, however, based on my discussions with several individuals who actually lived and worked in the area during the insurrection, it appears that the support among many Nicaraguans was lacking with regard to both Sandino and the Americans.

One respondent after another voiced the same conflicts: if they remained working on their farms, guerillas or, more frequently, bandits who called themselves Sandinistas would steal their crops and animals, rape their wives and daughters, and burn their huts. On the other hand, if they sought refuge in the towns, the occupying Marines, most of whom could not even speak Spanish or communicate effectively with the people, regarded them as spies and either imprisoned, tortured, or shot them. Rape, murder, and pillage became such common occurrences during the war that thousands of Nicaraguans from the northern areas fled their homes and sought refuge in Honduras.

The United States finally accepted the reality of this "no win, possible loss" situation and decided to withdraw her troops in 1933 - but not before it orchestrated a "Nicaraguanization" of the conflict. The U.S. left in place of the Marines the Guardia Nacional, a military-police force trained and equipped by the Americans and headed by an English-speaking Nicaraguan named Anastasio Somoza Garcia.

During the truce that followed the Marines' withdrawal, Sandino agreed to travel to Managua and meet with President Sacasa to discuss the disarmament. On February 21, 1934, after an official dinner in which photographs show Sacasa and Sandino hugging each other and promising no further retaliations, Sandino and several of his followers were taken prisoner. They were executed the next morning by machine guns fired by National Guardsmen acting under direct orders from Somoza. The next day the Guard attacked and massacred hundreds of Sandino's followers in the north. Their actions effectively destroyed his movement - for the moment anyway - at the same time that it created the Sandino legend.

Sandino, despite intensive U.S. propaganda to the contrary, was not a communist, but an anti-imperialist nationalist who exposed many socialistic ideas (Selser, 1974). His efforts constituted the first military defeat for the United States in Latin America. Although betrayed and murdered in the end, he soon became one of the most popular heroes, not just in Nicaragua, but in all Latin America. Fidel Castro and the Che Guevara studies his tactics, imitated his successes, and learned from his errors. Over 45 years later, when Somoza's son, "Tachito", fled to Florida from Managua, the Sandinistas stated that "the last Marine" had finally been defeated and proclaimed their victory as the final triumph of Sandino. Thus Sandino's famous

prediction that, "Same day the Yankees will have to be completely defeated, and if by chance I am not able to see this finale, the ants in the ground will come and tell me about it in my grave," became a reality.

THE RISE OF THE SOMOZA DYNASTY

The first Somoza remained in charge of the Guardia Nacional until his own assassination in 1956. In 1936 he overthrew Sacasa outright and had himself "officially elected" President. He later changed the Constitution to allow himself to remain as President until 1946. After World War II, outside pressures forced Somoza to step down and his handpicked successor, Leonardo Arguello, took over the official reins of power.

Arguello, however, failed to distinguish between the appearance of power and actual power. After assuming the Presidency, he refused to play by Somoza's rules of the game and attempted to replace Tacho as head of the Guardia Nacional. In less than a month, Somoza responded by overthrowing Arguello as President and replaced him with his uncle. In 1951 Somoza again had himself elected President. After his assassination in 1956 by a deranged poet, the mantle of power passed to his sons, Luis and Anastasio Jr. (Tachito).

Luis reigned as President from 1957 to 1963 when outside pressure, this time from President Kennedy and the

Alliance for Progress, again forced the Somozas to step aside in favor of Rene Schick, another hand-picked successor. Real power, of course, remained in the hands of Anastasio Jr., who headed the Guardia Nacional from 1957 until his departure in 1979. Anastasio took his own turn at the Presidency in 1967 and again changed the Nicaraguan Constitution to permit his "reelection" in 1974.

THE SOMOZA ERA

Despite the ups and downs typical of any long-standing dictatorship, Somoza remained firmly entrenched in power until his control started to dwindle following the devastating earthquake in December 1972. In many ways, his response to this tragedy, rather than the event itself, set the forces in motion which eventually helped to lead to his overthrow despite efforts to the contrary by the United States.

Anastasio Somoza was an expert politician even by U.S. standards. Somoza attended LaSalle Military Academy in Oakland, Louisiana, for his high school education from 1936 to 1942 and then moved to West Point. He graduated from West Point in 1946 and returned to Nicaragua and was immediately promoted to major and appointed inspector-general of the Guardia Nacional.

While in Nicaragua as Peace Corps Volunteers, my wife and I had the opportunity to meet with "El Hombre" on 2

different occasions, in 1971 and again in 1973. On the first occasion, I naively asked Somoza if he cared to speculate as to his political career. His response, in perfect English tinged with a Southern accent, was a model example of political double-talk. He responded that no "speculation" was necessary. He stated that he had never wanted the Presidency in the first place, but had been "forced" to run by his party. Furthermore, when his term was over in 1974, his only desire was to abandon politics once and for all and return to his career as a professional military officer, following and enforcing the laws of Nicaragua.

It is highly doubtful that the Somoza family could ever have ascended to power, let alone remain there for over 45 years, without the constant military and financial support of the United States. As Franklin Deleanor Roosevelt once observed of Tachito's father, "sure Somoza's a son-of-a-bitch, but he's our son-of-a-bitch".

Somoza constantly did his best to live up to his reputation. For example, he allowed the C.I.A.-backed and trained Guatemalans to use Nicaragua as a base for their successful invasion in 1956 and overthrow of the constitutionally elected President Jacobo Arbenz (Matthews, 1971; 262-264). The blotched Bay of Pigs invasion of Cuba was also launched from the islands off the coast of Nicaragua, and Somoza offered to send his own troops to fight with the United States in Korea in 1950 and again in South Vietnam

in 1967. Occasionally Somoza's and the Nicaraguan government's efforts to please the United States bordered on the absurd, such as the time the Nicaraguan treasury issued 20 cordova bills with U.S. Ambassador Sheldon Turner's face on the front. Yet the U.S. rewarded the Somoza family well for his loyalty.

During the Somoza era, U.S. assistance, of which the INCEI project was but a small part, flowed in a never-ending current. Since the 1940's, over \$500 in international loans and grants have streamed to the Somozan government from AID, the World Bank, and the Inter-American Development Bank. In 1975 and 1976, Nicaragua, one of the smallest countries in Latin America, has received more direct U.S. economic aid than any other country in the region. Since 1973, the U.S. has provided over 76.7 million dollars for earthquake relief and reconstruction alone (Jonas, 1976; 22).

THE WORLD'S "GREEDIEST DICTATOR"

Much of this foreign assistance has been consistently used by the Somoza family for their own personal benefit. In 1933, the Somoza's wealth consisted of a single small coffee plantation. By the time of Anastacio senior's assassination in 1956, the family's estimated worth was over 60 million. By 1975, the syndicated columnists Jack Anderson and Les Whitten, after months of research,

concluded that Somoza ranked as one of the world's richest and "greediest dictators".

A partial listing of the property and industry owned outright or directly controlled by the Somoza family included: 50% of the private property in Nicaragua, including 30% of the most fertile farmland. As a result, he was a leading exporter of cotton, cattle, and coffee, while hundreds of thousands of his people suffered from malnutrition. He owned the cement factory which made the highways and the Mercedes-Benz franchise which sold the cars that drove on them. Most wealthy Nicaraguans drove Mercedes-Benz vehicles, as did the Guardia, a few bus drivers, and even some garbage collectors; the majority of vehicles bought by the government were Mercedes. It was impossible to drink a beer, smoke a cigarette, buy shoes, wash clothes at a laundromat, or even strike a Nicaraguan match without funneling money into the Somoza family coffers.

His family owned the national airline, one of the 2 major newspapers, television and radio stations, and the largest shipping fleet in the country. His farms, factories, and companies produced instant coffee, lumber, sugar, boots, clothes, salt, and oil. In fact, Somoza literally bled his people to death through one of his company's known as Plasmaferesis. This firm, run by Cuban exiles hostile to Castro, paid poverty-stricken Nicaraguans \$5 for a half

liter of blood and then sold it in Miami and other European cities for \$30 and up. La Prensa (October 21, 1975), the major opposition newspaper, documented that hepatitis broke out among the workers there on several occasions and that numerous deaths had been reported. This list only includes some of Somoza's holdings in Nicaragua.

He is also one of the largest landowners in neighboring Costa Rica, with estimates of his estate there running between \$10 and \$12 million. In the United States, Somoza owns a 1 million dollar mansion in Miami, 2 luxurious condominiums in Coconut Grove through his estranged wife, and a plush apartment complex in the name of his mistress, Dinorah Simpson. He also owns at least 6 companies in Miami (that imported over \$30 million in beef in 1978 alone), various coal and gold mines throughout Latin America, and controlling interest in Vision, a popular conservative news magazine which is the Latin American equivalent to U.S. News and World Report.

In addition to his private wealth, while in power Somoza collected no fewer than 4 different salaries from the Nicaraguan government itself. His monthly salary consisted of: \$C9,900 as President of the Republic; \$C7,986 as Chief Director of the National Guard; \$C3,993 as "General de Division"; and \$C7,000 as "Senador Vitalicio", for a total salary of \$C28,879 per month. This salary, although small in comparison with his private income, was the

highest of any president in Latin America (La Prensa, June 5, 1978).

Both officially and unofficially, the U.S. response to this tremendous accumulation of wealth by Somoza is that he deserved it since he maintained order and stability in an otherwise volatile area of the world. The State Department's 1970 analysis of the situation in Nicaragua concluded that:

"The current political system has given political stability since its inception in the 1930's. During this period, administrations formed by the National Liberal Party (Partido Liberal Nacionalista - PLN) headed by the Somoza family, have provided on the whole an orderly domestic scene and a number of economic and social accomplishments. The relationship between the government and the people in Nicaragua has traditionally tended to be a paternal one. The people see the state as a source of protection, welfare, and socioeconomic satisfaction; the government expects loyalty in return.

The imperatives of dealing with a limited resource base and a challenging climate, and a revulsion from the disorders of 200 years of civil conflict, have probably led the electorate to prize stability and peace more than political theory, to value the practical necessities of building the economy over ideological concerns."

(Ryan et al, 1970; 201)

William Buckley, a leading defender of U.S. interests abroad, has strongly endorsed this analysis. Buckley maintained that attacking or criticizing Somoza promotes communism in Central America. He argued that Somoza, as a model capitalist, richly deserved the aforementioned catalogue of financial rewards since he took the risk of investing millions of dollars in an underdeveloped country.

Nor is Buckley and the State Department alone in their praise for somoza. In June of 1976, the Subcommittee on International Organizations of the House of Representatives conducted hearings on the possibility of human rights violations in Nicaragua and explored what implications this had for U.S. policy there. The distinguished Congressman Jack Murphy from New York provided the members of the subcommittee with his analysis of the situation. Murphy, as Chair of Panama Committee and a member of the House committee assigned the task of finding an interocean level canal through Central America, is considered one of the leading experts on the area in Congress. He has traveled extensively throughout the region over the last 14 years and attended grammar and high school with Somoza in the United States.

In his testimony before the subcommittee, Murphy attempted to distinguish between various "facts" and "myths" with regard to Nicaragua. He asserted that Somoza was not a military dictator, but a civilian leader, "respected and admired by most other leaders in Latin America to the exclusion of Fidel Castro and his faltering and sometimes murderous handmaidens in Nicaragua, the Sandinista National Liberation Front," (Hearings, 1976; 3). He argued that conditions regarding political expression and the functioning of all democratic processes in Nicaragua were "excellent" until 1974 when the Sandinistas conducted "a murderously successful criminal act" which forced Somoza to impose martial law.

Murphy supported the State Department's claim that Pedro Joaquin Chamorro has "run amuck" and "run wild" with La Prensa, but that since 1948, Somoza's tolerance of Chamorro has constituted "a living testament to the freedom of political expression" in Nicaragua. He maintained that although there might exist "isolated incidents of such violations (of human rights) as can be found in even the most advanced societies", that neither U.S. investigators nor the State Department have found "a shred of evidence" to support the charge that Somoza's government has instituted a pattern of such abuse (Ibid., p. 4).

The distinguished Congressman went on to observe that: according to the U.S. Government's own evaluation, the

Sandinistas "remain relatively ineffective and without wide, solid popular base", that the FSLN "cannot do on a large scale what they achieved on a small" (i.e. successfully confront Somoza's military machine); that Somoza took "great pride" in the fact that there were no political prisoners in Nicaragua, and that the State Department confirmed "that an impressive and virtually ironclad case can be made to substantiate this." Furthermore, there have been "no executions, no torture, and no disappearances" of Nicaraguan citizens.

Finally, Murphy argued that Castro, not Somoza, must be regarded as the culprit in Nicaragua. He alleged that Castro gave paramilitary training and "ideological" support to the guerillas, as well as promises of financial and military aid should they prove successful in their efforts to overthrow Somoza. Murphy concluded that:

"The Castro regime has taken dead aim at Nicaragua since 1962 and is bent on turning it from a strong U.S. ally into a pro-Communist satellite in the Caribbean. I am joined in this assessment by our U.S. intelligence people who state, and I quote from our people on the scene, that our 'Country Nicaraguan team in unanimous in believing that possibility is genuine.'

Finally I urge this subcommittee to look at the facts as they exist, and not at a fabrication by those who would destroy an ally.

We have a strong friend in Nicaragua in a part of the world we need them. Uncritical acceptance of unjust accusations and their dissemination would constitute not only a denigration of the U.S. Congress, but an injustice of great magnitude and inestimable harm to a country, a people,

and a government that are a strong friend to the United States." (Ibid., p. 5-6).

Despite the "impressive and virtually ironclad case" constructed by our experienced and insightful State Department officials on the scene that no systematic, officially sanctioned violations of human rights existed in Nicaragua, other witnesses and sources of information presented a convincing case to the contrary. Father Fernando Cardenal, the noted author, poet, and professor of philosophy at the National University of Nicaragua, testified after Congressman Murphy.

Father Cardenal could also be considered something of an expert on the Somoza regime. Although he did not attend grade school or high school with Tacho, he did have years of personal experience living and working with the poor of the country. He founded the famous lay monastery on Solentiname, an archipelago of 38 islands on Lake Nicaragua. Solentiname achieved worldwide fame for the primitive paintings and beautiful poetry produced by the peasants there and was the subject of several movies, including one by the BBC. The islanders also manufactured a variety of handicrafts made from wood, leather, copper, bronze, and silver, while maintaining a successful agricultural cooperative based on Christian principles. On November 13, 1978, Cardenal went into exile and later turned up as a leader in the FSLN. Shortly afterwards, the Guardia invaded the islands and, after failing to capture Cardenal,

destroyed the settlement and forced the majority of occupants to flee for their lives.

Father Cardenal informed the subcommittee that instead of contributing to Nicaragua's peace and domestic stability, the aid given by the United States to the Somoza regime "has stimulated a constant state of agitation" and directly caused armed resistance by all sectors of the social structure. Cardenal provided a detailed list of Nicaraguans murdered by the National Guard and the names of hundreds of peasants who had simply "disappeared" from many departments in the country, including Neuvo Segovia (the department where Ciudad Sandino is located), Matagalpa, Zelaya, and Esteli. He documented that Somoza had constructed numerous concentration camps throughout the country as an effective tactic at terrorizing and attempting to subdue the rural population. Incarcerated in these camps were not just suspected guerillas, but hundreds of women, children, and elderly people whose only "crime" was their refusal to sell or cede their small plots of land to Guardia officials.

Cardenal also described in detail the systematic torture conducted at these camps:

"The most refined type of torture is practiced against prisoners in both the rural concentration camps and the urban prisons.

When a prisoner is captured, his head is immediately covered by a sort of 'sack' made of strong, black material, and tied at the neck with a cord. This 'sack' hardly allows the person to breathe.

In this fashion, the questioning starts. The prisoner is insulted, threatened, beaten, especially in the stomach, chest, and head. Simulations of hangings and executions are frequently practiced.

The testicles of prisoners are stuck with needles. The prisoner is left in a refrigerated room for several days still hooded and with no nourishment but salted water.

Electric shocks are also applied, especially in the genital area. Other forms of torture practiced include hanging the prisoner from the thumbs, clubbing him or her on the head, and submerging them in pits of filthy water until the prisoner loses consciousness.

Women are raped and they are stripped naked for interrogation.

Many prisoners, when brought before the military court, show signs of beatings and great physical exhaustion. In giving their testimony, several prisoners, disregarding the pressure and threats they have received, have testified that they were tortured." (Ibid., p. 12)

The poet-priest noted that since the imposition of martial law in 1974, Nicaragua has been governed by military authorities. They follow "poor translations" of rules and regulations laid down by the U.S. Marine Corps during their second occupation from 1926 to 1933. Unions were also prosecuted and freedom of the press was nonexistent. Cardenal further documented that, "What has created the most harm to Nicaragua is, without a doubt, the constant military aid given out by the U.S. Government to the regime of the Somoza family." This has allowed Somoza to transform the Guardia Nacional into his own personal army. Over 5,000 members of the Guard have received training under the

auspices of the U.S. military stationed in the Canal Zone in Panama. On a per capita basis, not other country in Latin America has received more training of this type.

Finally, Cardenal stated that several U.S. ambassadors have intentionally deceived the American Congress and people regarding the situation in Nicaragua. He stressed that, "There does not exist a single loan or grant of funds from the U.S. Government sources or its agencies that the family does not take advantage of for its personal benefit."

Amnesty International confirmed many of the accusations made by Padre Fernando. In a 75-page report released in 1977, the highly respected human rights organization concluded that it was "highly probable" that the majority of prisoners in Nicaragua were tortured while in captivity. The Guardia adopted many of the more infamous methods of controlling the rural population utilized by South Vietnam and the United States during the Vietnam War. The report observed that the populations of entire villages had been exterminated or taken away as prisoners by the Guard and that widespread killing of campesinos and their frequent "disappearance" after arrest constituted the most serious violations of human rights in Nicaragua. Yet despite these facts and Carter's widely publicized portrayal of the United States as the guardian of human rights, the House of Representatives voted 225 to 180 the same year that this report was released to extend over 3 million dollars in

military aid alone to Somoza.

THE TIDE SHIFTS

How did an inexperienced, rag-tag band of unknown, militarily naive individuals known as the "Sandinistas" accomplish in 16 years the overthrow of the most firmly entrenched dictatorship in Latin America? The Sandinistas' amazing victory is a product of a kaleidoscope of political, economic, social, geographic, and international factors which will be discussed in the remaining pages of this chapter.

In the early stages of their development, the Sandinistas committed one error after another. They failed to run after hit-and-run attacks, robbed rural banks which had no significant amounts of money in their vaults, and fought with the U.S. trained and well-equipped Guardia Nacional with antiquated rifles and hunting knives. Many of the first members of the movement came from wealthy upper class Nicaraguan families and had little knowledge of living, let alone surviving, in the campo and jungle areas. For example, one group of volunteers active in the Ciudad Sandino area in the late 1960's were almost totally wiped out by the Guardia before they completed a single operation. The few remaining survivors of the group were dragged through the streets of town like animals with ropes around their necks. Several first-hand observers

remembered that these young guerillas, mostly college students from the urban areas, were in such poor shape physically that the areas of their backs where their backpack straps rubbed were raw and completely covered with maggots.

Yet amazingly the Sandinistas survived long enough to learn from their mistakes. Although originally formed as a small Marxist-Leninist guerilla movement, their efforts expanded to include a hodge-podge of capitalists, workers, farmers, and religious leaders. Few Nicaraguans today do not either consider themselves "Sandinistas" or, at the very least, praise the accomplishments of the movement.

As mentioned previously, many of Somoza's problems increased during the aftermath of the 1972 earthquake. The terrible destruction and human suffering of this disaster was awesome. I had left for Christmas vacation in the States 3 days prior to the quake and returned 10 days later. In these short 2 weeks, the bustling capital of Managua became transformed into a wasteland.

Practically every major building, as well as most of the homes, were either destroyed or severely damaged. There were no significant amounts of food, water, or medical supplies available. Every Nicaraguan who survived the quake had his or her personal nightmare to relate. A close friend of mine, for example, a medical doctor, told of operating on and treating the victims in makeshift field hospitals during workshifts that lasted over 30 hours at a

time. His nurse was forced to unravel the threads on the victim's clothing in order to obtain temporary stitches with which to close their wounds.

The relief aid from the United States and the rest of the world quickly began pouring in at an astounding rate - a total of \$250 million overall. Almost immediately, rumors and evidence of the theft of this aid by Somoza and other high officials began to surface. For example, USAID made an emergency grant of 3 million dollars to Nicaragua which was personally delivered to Somoza by the American Ambassador, Sheldon Turner. These funds were earmarked for the relocation of Nicaraguan families rendered homeless by the quake. Three days before receiving the grant, Somoza had purchased land used for the cultivation of cotton outside Managua for approximately \$30,000. This land was later sold to the government through the Nicaraguan Housing Institute for the same \$3 million donated by AID. Despite his profit of over \$2,970,000, Somoza never built any homes for the earthquake victims on this land (Hearings, 27-28). AID's own investigation exposed the Managua Public Register verified the above transaction.

Yet the abuses continued. The theft reached such proportions that the Spanish ambassador returned assistance sent from Spain to the International Red Cross back to Madrid rather than turn it over to Somoza's son, who was in charge of relief efforts at the airport. Clothes and

food, including canned meats, cheeses, and cookies suddenly turned up at several of the elite private schools throughout the country attended by the children of Guardia officials and Liberal Party politicians. Many of these enterprising students began selling the items on their own internal black market in imitation of their parents.

The immediate profits obtained by Somoza were small, however, in comparison with those generated by the reconstruction effort. Since this disaster constituted the third time in less than 100 years that Managua had been leveled by a quake, it was decided to rebuild on the outskirts of the city, away from the main fault lines. By coincidence, these lands were either owned by the Somoza family or were immediately purchased by them and a small clique of privileged insiders.

Foreign assistance financed the majority of water and sewer pipes, electrical lines, and roads (paved, of course, with bricks manufactured by Somoza's brick factory) to these areas. Somoza also constructed several large shopping malls which the travel brochures proudly proclaimed "were more like those in the United States than the shopping malls found in any other Central American country." Visits to these malls during my field research revealed that 40% to 50% of the merchandise in many of them was imported from the United States. The supermarkets advertised U.S. canned fruits and refried beans bearing labels

which had not even been translated from the original English to Spanish. The prices of most products appeared more than 3 or 4 times that found in the United States. For example, beans sold for almost 50 cents a pound at a time when most Nicaraguans earned \$1 to \$2 per day.

The new design of the city made getting around on foot almost impossible. Taxis were tremendously expensive. Practically all the buses, the major source of transportation, were rickety, retired U.S. school buses, many of which still had the name of the American school or county lettered on the side. As a result, many Nicaraguans began moving back into the earthquake zone. They either inhabited the few buildings which remained standing, most of which were structurally dangerous and near collapse, or built makeshift homes of tin, cardboard, and other discarded material.

The business community remained powerless and increasingly bitter over Somoza's new near total control of the economy. Although bribes and fraud had long constituted an accepted cost of doing business in Nicaragua, the extent of corruption in the years following the quake reached unprecedented heights. "In short, the general was changing the rules and the independent sector was being denied a piece of the action." (New York Times, 1978; 42).

Nevertheless Somoza, after another "free election" assumed the Presidency for a new 6-year term on December

1, 1974. Within a month, however, the tide of events shifted dramatically.

On December 24, 1974, members of the FSLN burst into a Christmas party of a high-ranking government official and narrowly missed capturing the American ambassador. They held numerous Liberal Party politicians hostage until Somoza met their demands, including release of several key FSLN leaders, a ransom, publication of their objectives, and a plane to Cuba. (Ironically, one of the demands which Somoza was forced to meet was a 100% raise in the salaries of all noncommissioned members of the Guardia Nacional below the rank of sergeant.)

In response to this successful guerilla attack, Somoza declared martial law in an effort to wipe out the Sandinistas and their bases of popular support. By 1977, Somoza again bragged that the FSLN had been effectively crushed. The U.S. Embassy, as usual, echoed his optimism when it observed in early 1977 that "Nicaragua should continue to enjoy political stability for some time to come. . . During 1976, the government inflicted heavy blows on the local guerilla organization and now faces no serious threat from that quarter." (Bendana, 1978; 23).

Novedades (circulation 10,000), the paper owned and operated by the Somoza family, ran daily articles which condemned the guerillas as "terrorists", "los seguidores of comunismo internacional", and Marxists whose key

objective was to dispurse "panic and death" among the population (Novedades, July 12, 1978; 40). La Prensa (circulation 30,000), the opposition press, on the other hand, continued to document the poverty and oppression in the country and to make martyrs of the many Nicaraguans slain daily by the Guardia (see for example, La Prensa, July 8, 10, 15, 1978). La Prensa's own office was attacked and machine gunned by "unknown assailants" in an apparent attempt to silence its strong criticism of the Somoza regime.

La Prensa, however, continued its offensive and made it clear that the United States was directly responsible for what had taken place in Nicaragua. (Ibid., June 6, 1978; 2). Although ordinarily a conservative newspaper in many respects, La Prensa helped to maintain the revolutionary fervor of the country by running frequent articles on revolutionary martyrs such as Che Guevarra and Sandino and by keeping the activities of "El Frente" in the peoples' minds, even while many leaders of the movement were incarcerated (Ibid., May 25, 1978; 4; October 27, 1977; 4).

Pedro Joaquin Chamorro was much more than just the owner and editor of La Prensa. He was internationally recognized for his reporting, had run for President against Somoza, and more than any single individual, symbolized the democratic opposition to Somoza. Although the head of the

Conservative Party, he had also extended this movement to include the Independent Liberal and Social Christian Parties, as well as many dissidents from Somoza's Liberal Party. All of these groups united under an umbrella group known as the Union Democratica de Liberacion (UDEL).

On January 10, 1978, Chamorro was killed by "unknown assailants" while on his way to work. His death caused the passions and pent-up frustrations of hundreds of thousands of Nicaraguans to boil over. A hostile, revenge-seeking mob carried his body through the streets of Managua burning cars, stores, and factories, many of which belonged to Somoza.

Whether Somoza in fact ordered the assassination of Chamorro will probably never be known. Most Nicaraguans remain convinced that he either ordered the publisher's death or else knows who did. As for Somoza, he denies any part in the incident. He informed the press that "killing him would have been a stupid thing for me to do because I could have predicted what would happen. It was the worse crisis of my career."

Although it is unknown to this day who actually assassinated Chamorro, 5 employees of Plasmaferesis (the company selling the blood of poor Nicaraguans to the U.S.), did confess to Guardia officials. They allegedly committed the murder in revenge for Chamorro's numerous strong attacks on their company. What is certain is that the

editor's death constituted the spark which led to a series of general strikes calling for Somoza's resignation, which shut down 70% to 90% of all commerce in the country for weeks at a time.

The unexpected effectiveness of these strikes again exposed Somoza as vulnerable and convinced many Nicaraguans that he could, in fact, be forced from office. General Somoza, however, did not see it this way. He observed in an interview that, "We have dominated the strike and will dominate any future attempts," and that, in fact, the strike had assisted the public since they did not have to bother spending their money on "superfluous things".

(Washington Post, February 23, 1978; 27)

These general strikes, the first of which lasted 17 days at a cost of over \$50 million to the business community, also assisted the guerilla movement by demonstrating that Somoza would not be removed from power by peaceful, democratic means. The bourgeoisie obviously resented being effectively cut out of the financial picture after the 1972 earthquake. Furthermore, the lack of significant investment by U.S. multinationals bothered many businessmen. Although there was an estimated \$125 million in total foreign investment in Nicaragua, at least 75% of which was from U.S. multinationals, and U.S. banks had an estimated \$350 million loan exposure, very little private outside capital flowed into the country after the earthquake. It

appeared obvious to even the more adventurous investors that the political climate in Nicaragua, in addition to Tacho's customary 10% to 20% off-the-top, meant the country was less than desirable as an investment opportunity.

The public in general also responded to Chamorro's death by boycotting the municipal elections held in February 1978. Less than 1/3 of the eligible voters bothered to turn out to cast a ballot; at best 136,000 voters out of 700,000 eligible cast their ballots for the Liberal Party, and even this official figure is considered inflated. At least 52 of the 132 Conservative Party candidates voluntarily withdrew from the various local races, leaving the Liberal candidates to run unopposed.

Hundreds of middle-class women and children conducted their own noisy protests against Somoza in Managua, Diriamba, and other cities night after night by turning out in the streets to beat pots, pans, and buckets. The Guardia responded to these protests with tear gas, beatings and arrests.

Another significant event which fertilized this groundswell of opposition was the return of "Las Doce" (The Twelve). Las Doce was a group of middle-class businessmen, priests, and intellectuals who came from all parts of the country. They consisted of: Father Miguel D'Escota, a Maryknoll priest; Father Fernando Cardenal Martinez, a Jesuit and brother of the poet-priest Father Ernesto

Cardenal; Carlos Gutierrez, a dentist; Carlos Tunnerman Bernheim, rector of the National University; Joaquin Cuadra Chamorro, a lawyer; Arturo Cruz, an economist; Casimira Satelo Rodriguez, an architect; Ricardo Cortonel Kautz, an agronomist; Sergio Ramirez Mercado, a writer; Ernesto Castillo Martinez, a lawyer and founder of a legal aid clinic in Managua; and Emilio Baltodano Pallias, an industrialist. These 12 prominent Nicaraguans were convicted in 1977 of inciting rebellion because they signed an anti-Somoza document. They were all forced to flee into exile in Costa Rica.

From exile they formed a broad coalition against Somoza, the Broad Opposition Front, which consisted of at least 15 different organizations, including political parties and labor unions. On July 5, 1978, they decided to call Somoza's bluff to arrest them on sight and returned to Managua. Although the government cut off public transportation to the airport located 12 miles outside Managua, over 150,000 cheering supporters, the largest demonstration in Nicaraguan history, turned out to welcome them (National Catholic Reporter, August 18, 1978; 13-16).

Somoza, apparently fearing an all-out rebellion, backed down at the last second and did not arrest them. Los Dos then began a 7-week tour of every major city to solidify the opposition. In city after city, they were met by enthusiastic crowds repeatedly demanding the ouster of

Somoza. The middle class, conservative backgrounds of these individuals and many of their supporters helped expose the myth that the primary opponents to Somoza were a small group of radical, Marxist guerillas trained and indoctrinated in Cuba.

Meanwhile, the Sandinistas were experiencing their own internal problems as well. By the mid-1970's, the FSLN had split into 3 groups as a result of disagreement concerning the best tactics for overthrowing Somoza. One faction argued that a lengthy guerilla war, or a "Guerra Popular Prolongada", offered the only alternative. Another group abandoned seeking immediate military objectives and advocated focusing on the urban areas and the formation of a revolutionary party of workers. The third group, the "Terceristas", at first tried to reconcile these 3 groups' differences and then developed their own strategy (NACLA, 1978; 43-45).

The Terceristas maintained that the time was now right for a successful insurrection, as long as support came from all sectors of the country opposed to Somoza. They advocated a broad-based coalition, spearheaded militarily by the Sandinistas, but backed economically by the bourgeoisie and the working class (Bendana, 1978; 22). It was not until March 20, 1979, that the FSLN reunified under a single national leadership which basically adopted this strategy of the Terceristas (Bendana, 1979; 41).

THE BEGINNING OF THE END

On August 22, 1978, the Terceristas proved their point by striking again militarily. This time, in an even more daring and spectacular raid than the December 24th incident, commandos from the FSLN dressed in Guardia Nacional uniforms smartly marched into the Palacia Nacional, the Nicaraguan Congress, and took almost the entire Senate and House of Representatives prisoner. Over 1,500 persons were taken hostage, including many of Somoza's cohorts and relatives; he had no alternative but to agree to the Sandinistas' demands. The guerillas obtained the release of 59 political prisoners, \$500,000 in cash, safe passage out of the country, and made a national hero out of "Commander Zero", the leader of the operation.

The Palace take-over significantly weakened Somoza's support among right-wing Guardia officials who felt humiliated by the Sandinistas' success. More importantly, however, it achieved several key objectives for the FSLN, including the freeing of many important leaders, widespread national and international dissemination of their plan to launch "the final offensive", and how they expected the population to cooperate.

On September 9, 1978, the Sandinistas launched successful coordinated attacks on Masaya, Leon, Chinandego, and Esteli. Within hours the local Guardia forces were either captured or bottled up in their own garrisons. The guerillas were soon joined by thousands of supporters from

the general population, especially high school students of both sexes.

But the guerillas proved no match for the heavily armed Guardia reinforced by Cuban exiles and American mercenaries and military personnel from Brazil and Argentina (La Prensa, July 5, 1978; July 12, 1978; 1). The Guardia simply surrounded each city one at a time and indiscriminately bombed the rebels into submission. The attack was quashed in a matter of weeks at an incredible loss of civilian lives and property. Although July 1978 again saw numerous lengthy general strikes appear in practically every Nicaraguan city, Somoza felt more in control than ever (La Prensa, July 20, 1978; 16).

Somoza now was blaming not only Castro, but the human rights policies of the Carter administration as one of the primary impetuses behind his troubles. Somoza stated in one interview (given during the September insurrection) that, "I have stated time and time again that the human rights policy of this administration has given the opposition in many countries the idea that they can overthrow their government by force. And the Nicaraguans, very sorry for me to say, were elated by this policy, and they took on to make public demonstrations in the streets, provoked the authorities, and finally delivered an armed attack against my government - things that have been very difficult for me because we've been at this for months, with a

great deal of tolerance and a great deal of patience."

(MacNeil and Lehrer, 1978; 5).

In order to polish his image with the American press, Somoza hired the New York public relations firm of Lawrence, Patterson, and Farrell, Inc. Somoza paid public relations executive Norman Wolfson \$84,000 a year plus expenses and fees of over \$1,000 a day to "present Nicaragua as it is, not as a biased people see it."

Somoza might have his doubts whether Wolfson earned his pay. By February of 1979, even the Carter administration was severing its most visible ties with Somoza. The Carter administration cut off all further military aid, withdrew its 4-man military advisory team, withdrew the 21 remaining Peace Corps volunteers, and reduced by half the number of AID and embassy personnel in Managua. As a result of U.S. pressure, the World Bank refused to consider \$66 million in economic aid requested by Somoza. The U.S. also refused to consider any new AID economic aid programs until Somoza agreed to mediate the crisis.

The United States, however, refused to sever all ties with the Somoza regime. The U.S. Ambassador, Mauricio Solaum, was not recalled, and the embassy remained open. More importantly, \$30 million in economic aid previously promised the Nicaraguan government was not cut off, allegedly because it was to alleviate "the needs of the poor". In fact, much of this money was diverted to buy arms from

Israel and Argentina.

Semana Santa (Holy Week) of 1979 presented an omen of things to come. While Somoza vacationed with his children in Florida, approximately a hundred guerillas retook the northern city of Esteli. Only a few weeks earlier, rebels had wiped out the Guardia post stationed in Ciudad Sandino. The Guardia again managed to retake Esteli with the help of Sherman tanks and rocket-firing airplanes, but only after the town itself was totally destroyed (Time, April 23, 1979; 38).

THE FINAL OFFENSIVE

On June 1, 1979, the Sandinista guerilla movement opened its long-awaited "final offensive" with coordinated attacks on most major cities and the entry of 300 men from Costa Rica. At the time of this final push, the Sandinistas had grown from 1500 to an estimated 5000 men versus a National Guard that expanded in less than a year from 7500 to 15,000 men.

Since many of the Guard's recruits were poorly trained and motivated youngsters, Somoza attempted to augment his troops with as many as 2500 mercenaries, including United States veterans from Vietnam and South Koreans. The military governments of El Salvador and Guatemala also sent troops and arms to assist Tacho. The General estimated that this time it would take "2 or more weeks" to defeat

the guerillas (New York Times, June 2, 1979; 1-2).

Two weeks later, Somoza's forces had fared so poorly that he reassessed the situation and stated that because "the will of the people had weakened", the war could go either way. By now the Andean Group countries of Ecuador, Peru, Bolivia, Columbia, and Venezuela recognized the Sandinistas as a "legitimate army" and began funneling arms to them via Panama and Costa Rica. Somoza's threat to invade Costa Rica, thereby escalating the conflict into a regional war, was met by Venezuela and Panama. Both these countries sent bombers and crews to Costa Rica and promised to retaliate against Nicaragua if Costa Rica, a country which has no army or air force of its own, was invaded.

The strategy of the Sandinistas was to pin down the Guard in various sections of the country, to control highways, and allow the cities to be seized by popular insurrection similar to that of the previous summer. These tactics, which met with success in 7 short weeks, obviously would have failed without the widespread support of the general population.

Somoza's response was to allow the guerillas to temporarily take control of the major cities and towns throughout the country, "using up their ammunition first", and then launch a counterattack city by city. The Guardia intended to again encircle each city individually and then indiscriminately bomb with artillery and aircraft the

individuals trapped inside their circle of death.

Ironically, the results of this same tactic which had proven so successful only the year before ultimately led to Somoza's defeat. So many innocent men, women, and children had been slaughtered in the previous uprising that thousands of bitter Nicaraguans who had not yet taken part joined the revolution. Thousands of unemployed, urban, and rural teenagers of both sexes took to the streets and built barricades of overturned cars, buses, sandbags, and cement blocks produced by Somoza's own factory. The Sandinistas slogan of "every house a fortress" became a reality in town after town.

By June, the United States was trying frantically to get Somoza to resign in hopes of establishing an "interim government of national reconciliation" which would include members of the Liberal Party and once again be backed by a peace-keeping force composed, in part, by U.S. Marines. Since the Sandinistas refused to even discuss this proposal, Somoza had no choice but to also refuse.

The United States later tried to starve-off defeat through a proposal for a peace-keeping force under the sponsorship of the Organization of American States (OAS). The U.S. intended this force to be composed of military troops from several Latin American countries - again including U.S. Marines. Not one of the 26 Latin American countries backed the proposal, although several of them did severely

criticize the suggestion.

The United States also attempted to divert some of the criticism away from Somoza and towards Cuba. State Department officials asserted that Cubans were heavily involved in the training and supplying of the Nicaraguan rebels and that dozens, "perhaps scores", of Cubans were taking part in the fighting. These allegations, however, received little support at home or abroad.

In fact, the viciousness and cruelty of the Guardia became blatantly clear to millions of Americans in June of 1979 as they watched Bill Stewart, an ABC-TV correspondent, shot and killed in cold blood on the nightly news report. The film showed that Stewart had obediently stopped for a routine roadblock, was ordered to lie face down, kicked in the ribs, and then shot in the back of his head for no reason whatsoever. The soldiers then brought his body back to his crew, who had filmed the entire incident and allowed them to drive off (New York Times, June 23, 1979; 1).

By July 9, 1979, Somoza was telling the Nicaraguan Congress that he intended to draft 50,000 more men for the National Guard. He was disgusted with the performance of most of his recruits, many of whom were illiterate men from the eastern coast where the Sandinista influence was least strongly felt. He repeatedly bemoaned the fact that the Carter administration was not being realistic in seeking a "moderate solution", since the only real choice was

between himself and a Cuban-styled government led by the Sandinistas.

Once Somoza finally accepted the reality of his inevitable resignation, he further complicated the situation by attempting to impose preconditions on his departure. He insisted that the Liberal Party be allowed to continue as a force in Nicaraguan politics, that the Guardia Nacional be preserved intact, and that none of his subordinates, either civilian or military, be imprisoned or executed. It appears that these demands were motivated as much by his own self-interests as those of his followers since, as one observer noted, "Somoza is watching out for himself. If he doesn't get those guarantees for his Guard, he might not get out alive." The Sandinistas promised to be merciful in victory, but refused to negotiate terms with Somoza.

Somoza finally resigned anyway on July 17, 1979, and flew to his luxurious retreat on Miami Beach's Sunset Island. Before departing, Somoza and other high Guardia and Liberal Party officials removed all but \$3.5 million of the country's foreign reserves (which were valued at \$150 million as of 1977). Somoza's son, backed by National Guardsmen with tanks, had raided every major bank in Managua and removed any remaining foreign currencies.

After his departure, Somoza's successor, Francisco Urcuzo, shocked both the United States and Nicaragua by

announcing he intended to remain as the constitutionally elected President until his term expired in 1981. (He had been elected at a midnight session of the Nicaraguan legislature just before many of the members hastily fled the country.) Urcuzo only agreed to step down after the United States informed Somoza that he would be deported back to Nicaragua unless his successor left immediately. Somoza now resides in Paraguay under the protection of the dictator Alfredo Stroessner, the same individual who has given sanctuary to infamous Nazis for the last 35 years.

THE WAVE OF THE FUTURE

On July 19, 1979, the Sandinista army victoriously marched into Managua and were swamped by a cheering crowd of over 50,000 people in the newly renamed Plaza of the Revolution. Once in power, the Sandinistas were true to their word that there would be no mass trials or executions of former Guardia and government officials. Roberto Arguello Hurtado, the newly appointed Chief Justice of the Nicaraguan Supreme Court, whose brother was jailed and killed by the National Guard, explained that, "The Sandinista National Liberation Front is hard in war but generous in victory."

The Sandinistas set up 3-man courts consisting of one Sandinista, one civilian, and one lawyer and began conducting trials of Guardsmen. Their punishment rarely

resulted in jail terms of over 10 days. Higher Guardia officials were turned over to the Red Cross; there was only one documented officially sanctioned execution of a Guardia official.

This response stood in stark contrast to that of the Somoza government in the waning days of the war. The Guardia had captured and summarily executed hundreds of Nicaraguan youth for the "crime" of being between the ages of 12 and 25. When the Sandinistas entered Managua, they found the shores of Lake Managua littered with the corpses of these youths with their hands bound behind their backs and sacks tied around their necks.

Somoza's departure came at the end of the final 7-week offensive of the guerillas which saw practically the entire population rise up against him in a "national mutiny". The Sandinistas had taken control of every major town except Managua, where it had infiltrated 2,000 guerillas, and controlled all major highways. The war produced an estimated 20,000 dead and 650,000 refugees out of a population of 2.2 million - many of whom fled across the borders into neighboring Honduras and Costa Rica.

Well in advance of Somoza's departure, the FSLN had set up a 5-member junta to replace him. Only one of these 5 individuals, Daniel Ortega Saavedra, is an avowed Marxist. Ortega was born to a middle-class Managuan family and was one of the original participants of the Sandinista movement.

He took part in various guerilla activities, was eventually captured, and served a lengthy jail term.

The other 4 members of the junta presently ruling Nicaragua are: Alfanso Robelo Calejas, a politically conservative chemical engineer who comes from a wealthy family. He was president of the Nicaraguan Chamber of Commerce and other powerful business organizations and an ardent opponent of Somoza.

Violeta Barrios de Chamorro is the widow of Pedro Joaquin Chamorro, the hero of the Conservative Party who became a hero of the revolution when he was assassinated on January 10, 1978. Like her husband, Violeta de Chamorra is wealthy, conservative, and has a long history of opposing Somoza.

Moises Hassan Morales, although a leftist and a guerilla leader in the Sandinista movement, disavows the Marxist label and regards himself as a moderate. Hassan was born in Managua of humble origins, but became a civil engineer and professor of mathematics at the University of Managua.

Sergio Ramirez Mercado, the remaining member of the junta, is also a "non-Marxist leftist". He was born to a poor family in southern Nicaragua, became a lawyer, and taught law at the University of Nicaragua until 1974. In 1977, he helped to found "Los Doce", the group of 12 influential Nicaraguan businessmen, intellectuals, priests,

and professionals who played a crucial role in undermining the Somoza government.

The new government faces problems as great, if not greater, than the Somoza regime itself. Somoza left physical damage of over half a billion dollars, in addition to a foreign debt of over 1.3 billion (Burbach and Flynn, 1979; 40-44). In addition to the immediate problem of feeding the population, since the war prevented most farmers from planting, the new government must address the awesome problems of rebuilding a devastated economy and generating social justice while combatting "Somocismo without Somoza". Moreover, there is the clear and ever present danger of a counter-revolution, especially in view of the fact that there are approximately 3,000 armed ex-Guardsmen in Honduras under the direction of Somoza's son, many of whom have vowed to return.

Immediately after the junta took power, a new spirit of hope and rebuilding infected the land. The junta has cancelled the country's \$5.1 million debt to Israel and Argentina for military arms purchased by Somoza in the last days of his dictatorship. They have promised free elections, a non-aligned foreign policy, a redistribution of Somoza's holdings, and a "mixed economy" based on respect for private property and social justice. Only time will tell if the deaths, suffering, ideals, and love of the revolution will make a just and equitable Nicaragua a reality.

CHAPTER VI
PRESENTATION AND DISCUSSION OF DATA
THE AGRICULTURAL PICTURE IN GENERAL

Without a doubt, agriculture is the key to the Nicaraguan economy. It contributes 40% of the gross national product, employs approximately 60% of the labor force, and produces over 75% of the country's exports. From 1960 to 1968, Nicaragua had one of the highest annual growth rates in Latin America. The 8% annual increase in agricultural production, most of which took place in the production of export crops, especially cotton, constituted the primary impetus behind this upsurge.

Although reliable data on agricultural production is practically nonexistent, the figures which do exist indicate that the production of the basic food crops during the 1950's and 1960's barely kept pace with the 3.4% annual population increase. Nicaragua, while exporting millions of dollars worth of cotton, coffee, and beef annually to the United States and Europe, has yet to gain self-sufficiency in the basic grains. Although the country manages to export a minimal amount of beans and sorghum to neighboring countries, she doubled her imports of corn and rice from 1963 to 1968. This trend has continued unabated through the 1970's and will doubtlessly worsen in the years immediately following the revolution.

Export crops account for over 50% of all agricultural production, livestock accounts for 31.8%, and the basic food crops for 18.8% of the total. Yet 75% of the farms in Nicaragua plant corn, and this crops occupies 36% of the total planted land. The second ranked crop, coffee, occupies less than half as much land area. Beans rank a distant third, are grown on 37% of the farms, and occupy 9% of the total planted area (Warnken, 1975; 24-26).

In terms of production per manzana, Nicaragua ranks behind the other 5 Central American countries in corn and third in bean production. In comparison with the United States, which produces approximately 78.6% (in hundred weight per manzana) of corn and 21.6% of beans, Nicaragua produces 14.0% of corn and 12.6% of beans (Ibid., p. 14). With regard to cotton, however, Nicaragua outproduces the U.S. 10.6 to 7.6. As a result, cotton is the mainstay of the export sector of the economy. This one crop alone accounts for almost half of all exports. Despite the obvious dangers of dependency on a single crop, the cultivation of cotton has always received the benefits of modern technology. In 1966, for example, 85% of all mechanical power, 96% of pesticides, and 53% of the fertilizer were devoted exclusively to cotton.

Thus one of the most blatant and consistent contradictions facing Nicaragua in recent years has been this ability to export huge quantities of cotton, coffee, and

beef while remaining unable to feed her own population. The United States has instituted a variety of rural development projects over the years in an effort to assist the rural population with this dilemma. At the same time, these programs have helped to support the Somoza regime, thereby protecting U.S. interests in the area.

Between 1951 and 1967, for example, Nicaragua received 13 different loans from the World Bank totaling \$43,100,000 (Ryan, 1970; 307). These developmental programs encompassed everything from electric power and irrigation projects to construction of highways and port facilities to the purchase of agricultural machinery. From 1961 to 1967, Nicaragua also received 15 loans from the Inter-American Development Bank totaling \$50,625,000. These loans were used for agriculture and cattle raising (approximately 50% of the total), housing (30%), industry (15%), highways (5%), and education (less than 1%). AID by the end of 1967 had provided Nicaragua with at least 19 different loans under the Alliance for Progress program totaling over \$49,000,000 (Ibid., p. 308). This figure does not include outright grants by AID to the Somoza regime.

Some of AID's most concerted efforts to assist the campesinos included highway construction and financial assistance to Banco Nacional and I.A.N. (the Agrarian Reform Ministry). With regard to road construction and maintenance, the Nicaraguan government has invested \$12

million in domestic and foreign expenditures between 1961 and 1967 and double this amount between 1967 and 1973. The country increased its total miles of roads from 601 in 1953 to 4,216 in 1967. Banco Nacional received funding which allowed them to provide short-term financing for small and medium-sized farmers and to supply them with insecticide, fertilizer, and technical assistance. The purpose of these loans was to increase the production of corn, beans, rice, sorghum, and sesame and to permit the purchase of livestock, primarily pigs and cattle. This rural credit agency, in addition to its main office in downtown Managua, maintained 50 branch offices and a permanent staff of 217 employees, 95 special technicians, and 47 American Peace Corps volunteers.

Agrarian reform in Nicaragua operated under the auspices of I.A.N., in part with the assistance of a \$2 million loan from AID. An AID loan assistance study recognized that "King Cotton" had forced many small farmers to move into the jungle areas controlled by I.A.N. because, "Land which was formerly devoted to the production of corn and other food crops raised primarily by small farmers had been taken over for the production of cotton on an industrial basis, forcing these farmers to become seasonal laborers in the cotton field." (United States Department of State Agency for International Development, 1965; 20). These small farmers had an abundance of land to which to

migrate, since almost two-thirds of the land in Nicaragua is uncolonized jungle.

Originally I.A.N. inherited a small group of colonies throughout this area and faced the challenge of improving them with roads, schools, health centers, and modern agricultural practices. This institution, however, eventually faced the unenviable task of organizing the thousands of spontaneous settlers and issuing them land titles. In 1967, for example, over 3,000 titles were issued, and by 1970, this annual rate had doubled.

HISTORY OF THE INCEI PROGRAM

Like many other countries in Latin America, Nicaragua experiences a 6-month rainy season followed by a 6-month dry season. Wild price fluctuations traditionally follow the agricultural cycle even in normal times. At the end of each harvest, the availability of large quantities of grain drives the price down to as low as \$C 10 per arroba (25 U.S. pounds) for corn and \$C 25 per arroba for beans. Six to nine months after the harvest, however, the shortage of these same grains will often cause the price to rise by 50% to 200%.

Many campesinos, because of poverty and inadequate storage facilities, will sell their product at the low harvest price and will be forced to purchase either domestic or imported grain 9 months later at a greatly inflated

price in order to feed their families. Large landowners and investors who possess the necessary capital are able to maintain an extremely high standard of living by buying grain when the price is deflated, storing it, and then reselling the product once the price rose.

Moreover, perhaps as much as 50% of the nation's harvest is lost each year because of poor transportation and storage facilities. The farmers traditionally store their corn either in their homes or in a troja stacked in rows without removing the husks or shell it and pour the grain into large wooden boxes called "buques". Both of these methods provide inadequate protection against the ravages of mice, rats, insects, and mildew.

In order to eliminate this waste, in 1968 the Nicaraguan government established INCEI, Instituto Nacional de Comercio Exterior y Interior. This institution faced the task of eliminating the necessity for importing basic foodstuffs and of controlling the wild price fluctuations associated with the planting and harvesting seasons.

Under a program developed by specialists from the United States Agency for International Development (USAID) and eventually financed by a loan from the Import-Export Bank, the method by which INCEI hoped to accomplish this task appeared relatively simple. The Bank, under the Alliance for Progress, agreed to advance Nicaragua a loan for \$4,512,100 on March 12, 1968. This money was to be

used for the construction of 5 huge regional grain storage centers and for the purchase in the United States of approximately 100 local storage units which were to be located throughout the country's corn and bean producing regions. AID agreed to supply technical advisors to instruct the Nicaraguan operators as to the care and operation of the facilities.

Each unit consisted of 6 large silos and a drying machine manufactured in the United States which allowed farmers to dry and store their grains for a nominal fee. INCEI intended to buy these grains at a set minimum price at the harvest and to resell them at a slightly higher price once the demand of the market increased. Whether the campesino chose to store his harvest in the silos or sell it to INCEI remained his own choice.

INCEI was to be a semi-autonomous institution which operated directly under the authority of the executive branch of government. President Somoza, as might be expected, appointed the 3-member board of directors. By law, at least 1 of these individuals had to come from the opposition, Conservative Party.

Originally the centers were also to provide the farmers with tractors, plows, discs, and trained equipment operators. Grain drying and cleaning equipment were available at each local unit since the AID agricultural specialists had concluded that, "grains now cannot be properly

conserved by the farmers as there is no drying equipment available in the rural areas." INCEI was also supposed to greatly improve the marketing processes for small and medium farmers and provide them with technical assistance. According to the AID analysis, "the foreign specialist (i.e., AID employees) is a key individual in the project," because it was to be his task to train the Nicaraguans in the use and upkeep of this array of modern agricultural equipment.

The selection of the centers allegedly received careful attention after a detailed investigation based on "close visual observation and discussion of some depth with the various community and agricultural leaders and a sampling of representative farmers to gain first-hand information regarding their service needs and probable response to the services and type of center organization contemplated." (Ibid., p. 24). The main criteria for location of the centers was: the availability of services anticipated under the prevailing conditions, the present and potential grain production levels, the availability of rural credit, "ecological conditions", a sufficiently large population base, community interest, and "overall need in terms of economic and social characteristics".

USAID deserves much of the credit for the original design and implementation of the project, although the actual purchase and construction of the first stage of the

project was financed by a loan from the Import-Export Bank. According to official government documents, representatives from Banco Nacional approached the USAID Director in Nicaragua and discussed the possibilities for developing such a program for serving the needs of small farmers. Since "the expensive farm machinery, drying equipment, storage sheds, and marketing facilities that are essential to profitable grain production are not feasibly within the reach of individual small or medium producers," (Ibid., p. ii) AID agreed to supply these modern "essentials" on both the regional and local levels.

INCEI'S OBJECTIVES

Although at first AID projected the construction of only 47 centers, 10 the first year, 15 the second, and 22 the third year, this projection was later increased to 100 local units. AID estimated direct benefits to 7,000 families by the second year of operation and over 17,000 families by the fifth year.

The official goals of the INCEI program according to the AID loan proposal were:

- (1) A 22% increase in total national grain production by the fifth year of operation with a total value in

excess of \$5 million based on current prices.*

- (2) To increase agricultural production and the small farmer's family income and nutritional levels.
- (3) To make Nicaragua self-sufficient in the basic food grains.
- (4) And to "develop democratic institutions at the grass roots level through self-help and community improvement." (Ibid., p. IV-V).

Although these were the official goals of the program, AID documents expanded on other objectives they believed would be reached once INCEI had been in operation for a period of years. Their intensive review estimated that:

"Analysis of the economic impact of this project is difficult because the benefits are not wholly within the project itself, but also from other programs that can be reached through use of the centers. Nevertheless, the BNN-AID working group has sought to estimate the minimum direct impact this program can have on grain production, not through incentives for farmers to go into or expand grain production, but by merely increasing productivity on land now planted in grains through use of center tractors and farm supply goods.

First, a hypothetical 'center user' population was defined and a level of current and

*These production objectives seemed modest in comparison with claims made by AID for other programs assisting farmers. For example, AID's loan proposal for the INCEI project noted that a recent rural credit program financed by the International Development Bank had assisted over 20,000 farmers in 5 short years and stated that, "A recent evaluation of the program indicates that participating farmers have increased their income by an average of 160% and doubled their capital assets." (Ibid., p. 3).

future production was established assuming no-use of center facilities. This was done by calculating an estimated number of center users (2-300 per center in first years, gradually increasing later); estimating that the average user will have 8.4 acres planted in grain (he will probably have more); assuming he is currently producing about 10 CWT per manzana (manzana is 1.7 acres) and is selling that grain at \$2.70 per CWT . . . the center services should account for an added production of 23 per cent in the first year and reach 50 per cent by the third year and almost double by the tenth year. This increase, it should again be stressed, is only that attributable to center-provided services applied to acreage already in cultivation. The effect of the center's storage, drying, and marketing services on farmers' incentives to produce grains should be even greater and result in production increases far in excess of those projected above." (Ibid., p. 32-33).

The loan proposal then went on to observe that,

"Gross income from production of grains can be assumed to grow by the amount that production is increased, so it can be anticipated that the previously mentioned minimum production increases would also apply to income increases as well. That is gross income could grow by 50% the third year and almost double the tenth year. In reality the increases should be much greater for several reasons. . ." (Ibid., p. 36).

The reasons offered to further explain predicted increases much greater than 50% or 100% included the fact that farmers could sell their grain to INCEI at a guaranteed price. Spoilage and grain losses would be greatly reduced through INCEI's "proper" drying and cleaning of the corn and beans. Finally, the farmers would ideally be able to increase their production through another AID assistance program to the Banco Nacional which focused on rural credit

and technical assistance.

This later AID project became possible once the Import-Export Bank retracted their earlier rejection and agreed to finance the INCEI project.* As a result, in fiscal year 1978, AID provided loan assistance to Nicaragua through 3 projects: a \$9.4 million loan for Basic Food Crops (a significant percentage of which was to supplement the INCEI project); \$2.2 million for Health Centers and Rural Health Units; and \$10.2 million for Rural Electric Cooperatives. This total package of \$21.8 million constituted a significant increase over the level of fiscal assistance provided in previous years by AID. For example, Nicaragua received \$14.2 million in fiscal year 1965, \$14.3 million in fiscal year 1966, and \$9.2 million in fiscal year 1967 (Department of State Agency for International Development, 1968).

The terms of these loans, on the surface, were extremely favorable to Nicaragua. Each loan's repayment period stretched out over 40 years after the first

*Although AID designed the INCEI program and, according to unclassified documents, originally intended to finance it, this shift by the Import-Export Bank prevented this. Under the Foreign Assistance Act of 1961, as amended by the Foreign Assistance Act of 1967 § .251(b), AID is effectively prohibited from authorizing developmental loans if financing is available from other free world sources (usually either the World Bank, the International Development Bank, or the Import-Export Bank) or private sources within the U.S.

disbursement, with a 10-year grace period. The interest rate during this grace period was 2% per year and 2-1/2% thereafter.

On the other hand, as usual, this foreign aid package appeared to benefit the United States. \$20.83 million of this \$21.8 million had to be used "to finance U.S. goods and services which are in addition to normal Nicaraguan procurement and only \$975,000 (was) used in local cost financing." The loan proposal further blatantly observed that, "This project as envisioned will have no adverse effect on the U.S. economy or balance-of-payments situation and may provide some amount of direct economic benefit to the U.S. The loan will be utilized to finance the purchase of U.S. manufactured equipment and provide U.S. technical assistance. Increased production through the use of the center will generate new income and serve to expand the effective demand for U.S. capital and consumer goods." (Ibid., p. 39). AID went on to note that while Nicaraguan exports to the U.S. from 1960 to 1966 only increased from \$26.9 million to \$35.9 million, imports from the U.S. to Nicaragua during the same period increased from \$37.7 million to \$75.7 million.

FOCUS OF THE RESEARCH: CIUDAD SANDINO

This study focused on the INCEI unit located in Ciudad Sandino, Nicaragua. This location was selected because of my own familiarity with many of the farmers in the area, (I doubt whether I could have conducted these interviews in such a relatively short timeframe under such tense conditions in any other rural area in Nicaragua), and because the agricultural traditions and levels of technology reflect a pattern representative of much of rural Nicaragua and Latin America in general.

At the time of this research, Ciudad Sandino had a population of approximately 1,500 people and consisted of 257 houses and 143 stores. (The front room of every third house typically offered a small potporri of items for sale, including sugar, corn, soft drinks, and cigarettes - available individually or by the pack.) The grade school consisted of 6 grades with 300 students and 8 teachers; there was no high school. The town had branch offices of the Ministry of Agriculture and Banco Nacional available to assist the farmers from the surrounding rural areas. The town had running water but no electricity except for a small generator. This generator was located in a shed behind the church and primarily provided power for periodic fund-raising events. Although the town had no doctor, it did have a health center staffed by a registered nurse.

Ciudad Sandino had no industry other than a small hat factory, and depended on the agricultural community for its

economic support. Politically the town, at least on the surface, reflected an admiration for and imitation of the Somoza style of government. Almost every major political figure in local government was a member of Somoza's Liberal Party and a member of the same family, including the mayor, the Congresswoman, the town's secretary and subtreasurer, the school's director, and several teachers (LaPrensa, 5/20/78).

THE INTERVIEWS WITH THE "OFFICIAL RELEVANT SYSTEMS"

As mentioned previously, the major thrust of my research constituted a concerted effort to identify the relevant systems involved with the INCEI project and, through the process of formal and informal interviewing, to discover the norms and values of these groups and to investigate the levels of consensus and conflicts between and among these social groups. This study hypothesized that a rural development project which understands and reflects the norms and values of the social systems effected by the program stand a greater chance of success and attaining its goals than one which ignores or excludes major segments of the population which it intends to assist.

During the field research, interviews were conducted with 21 individuals representing a variety of official relevant systems. Although the interviews were based on a prearranged set of questions (see Appendices C and D),

this format was not strictly adhered to; instead the interviews were kept informal and spontaneous in order to obtain as much information as possible. The respondents included several large grain buyers, employees of Banco Nacional, INCEI and the Ministry of Agriculture in Ciudad Sandino, AID personnel in Managua, and Nicaraguan census officials. These interviews, in addition to the AID documents cited previously, helped to identify the official and unofficial goals of the project and to estimate the extent to which these goals were actually attained.

According to INCEI officials, the 100 local INCEI units have a capacity of 24,000 quintales each. Each site has 6 silos with a capacity for storing approximately 4,000 quintales. There are also 3 regional centers located in Managua, Chinandega, and Matagalpa with an additional storage potential of over 3 million quintales. In addition to the cleaning, drying, and storage of grains, each center sells hybrid seeds, insecticides, fertilizer, and basic farm implements such as shovels, hoes, and machettes.

One of INCEI's main functions is to establish a minimum price for the basic grains. For example, in 1976-1977, the prices established by INCEI per quintale were C\$ 45 for white corn, C\$ 40 for yellow or mixed corn, C\$ 105 for black or red beans, C\$ 35 for red or yellow sorghum, C\$ 40 for white sorghum, and C\$ 40 for rice.

Although in theory INCEI establishes a minimum price level for the campesinos' produce, in the words of INCEI's director,

"This does not mean that they have an obligation to sell their harvest to INCEI. They have the freedom to sell their produce to whoever pays the highest price. Under the policies of the Liberal Party our policy is clear: the land must be the property of the farmer, and under our system of private enterprise so is the harvest. . ."

(Bojorge, 1977)

Bojorge emphasized that another key task of INCEI was to "guarantee a normal supply of food for the population", in case of crop failure. For example, although 1975-1976 was a poor agricultural year due to drought, INCEI had stored by January a total of 1,332,700 quintales of grain. In that same year, INCEI had purchased a total of 1,785,800 quintales of grain comprised of 766,000 quintales of corn, 147,800 quintales of beans, 209,100 quintales of rice, and 662,900 quintales of sorghum.

The INCEI representative in charge of the unit at Ciudad Sandino was interviewed numerous times throughout the course of this study. His responses and records provided independent verification of the survey findings discussed later in this chapter. Surprisingly no records existed with regard to the amount of grain, if any, stored at the unit in 1974 and 1975; in 1976 his records revealed that no significant amounts of grain had been stored at this unit. In 1977, a mere 165 quintales of corn and no

beans whatsoever were purchased by the INCEI unit in Ciudad Sandino and less than 1,000 quintales of corn were stored there by 8 local farmers. Although no official records for 1978 were available at the time of my field research, the pattern of usage appeared to be consistent with that of previous years.

Perhaps one of the key reasons for the INCEI program's apparent failure can be attributed to the institution's policy of drying and cleaning the farmers' grains. The Ciudad Sandino representative explained that, on the average, a farmer bringing 100 pounds of corn or beans to INCEI could only be paid for 86.4 pounds since the drying process, elimination of foreign material (rocks, dirt, sticks, etc.) and the subtraction of bad or cracked grains constituted an average of 13.6% of the total grain weight. He insisted that even this policy was lenient since INCEI only subtracted 3% of the grain's weight for foreign material and 6% for poor grains, when in fact the corn purchased in Ciudad Sandino over the last 2 years contained an average of 12% to 22% foreign matter and defective grains.

Unfortunately, few farmers understand such technical estimates or calculations or the necessity for these mechanical drying and cleaning processes. They feel that if they sell or store their corn or beans at INCEI, they will be unfairly denied a significant percentage of their harvest and thus prefer selling their product to local buyers who

simply buy their grain in its present state.

Several other individuals interviewed, including present and former employees of INCEI, stated that INCEI's internal policies were riddled with mismanagement and corruption. It was not uncommon, for example, for large quantities of grain to simply "disappear" from the silos and then reappear on the open market (LaPrensa, 7/23/78). Moreover, frequently the local silo units lacked the necessary capital to purchase the grains when the farmers did want to sell them. In numerous cases, however, INCEI supervisors were accused of utilizing INCEI trucks and storage facilities for their own personal buying of grains. Several high Guardia officials also allegedly obtained large loans from Banco Nacional in order to purchase large quantities of corn to store at the silos and sell at a later date.

The interviews with various AID officials in Managua provided a very different view of INCEI from that held by the campesinos. These officials stated that the price stabilization program had been in the planning stages for 4 years prior to implementation. They added that they received extensive assistance during this period from Banco Nacional. AID had fully intended to finance the program with a 40-year loan to the Bank as well as to lend technical assistance, and only scrapped the idea when the Export-Import Bank finally agreed to be responsible for

the financing.

They stated that the original idea for the project came from Banco Nacional officials who hoped to imitate the successful grain storage programs of their neighbors to the north and the south, Honduras and Costa Rica. The Nicaraguan government decided where to locate the units and, although factors such as transportation facilities and development of the local areas were key considerations, political motives remained the most important. One official observed that after the 100 silo units were tentatively located, Somoza relocated many of them to areas where he felt he needed more political support.

These officials admitted, however, that in several sites the silos were in fact rotting from lack of use and that the study erred in not discovering that there was not sufficient demand for the INCEI units in these areas. They reasoned that this was a "very technical project and some mistakes were bound to occur." One of those interviewed maintained that the vast majority of small farmers were not using the silos simply because they did not produce enough of a surplus crop.

The AID personnel in Managua repeatedly stressed that the small farmers were included in every stage of the planning of the program, primarily through personal interviews and public opinion surveys (although unfortunately they were not able to produce the results of these surveys).

In their words, they were certain that, "a lot of time was spent talking with all of them." They also felt that INCEI had been tremendously successful and had achieved many of its original objectives, especially with regard to marketing and price stabilization. Moreover, the program had introduced hybrid seed such as Hondurean 46, fertilizer, and insecticide to many farmers for the first time. They did admit, however, that "much remained to be done" in terms of eliminating traditional agricultural practices.

These officials appeared uncertain as to how the actual decision was reached to build the specific silo design finally adopted, but here again noted that "various studies were conducted considering all aspects of the problem." They explained that the idea of constructing small silos on individual farms was considered but rejected because, "the campesinos weren't ready for this yet." York, an American-based firm manufactured the silos and began actual construction, but a firm controlled by Somoza ended up finishing the task. Only 1 of the 5 AID officials interviewed believed that INCEI had had no impact on the rural areas, although he felt the organization had managed to establish a floor on the price fluctuations of the basic grains. This individual recognized that INCEI was not a profit making entity, but stated that the institution was spending too much time trying to make up for the hundreds of thousands of dollars lost in the first 3 or 4 years of

operation as a result of mismanagement, corruption, and outright theft. He insisted that the construction of such large units was foolish and that credit should have been extended to the campesinos for the construction of small individual units. He pointed out that 5 years ago he had approached the Ministry of Agriculture with a plan to build a small unit with local materials for approximately \$50.00. Technicians studied the design and actually drew up plans for implementation, but then finally rejected the entire scheme as too impractical.

The majority of AID respondents maintained that not only were small farmers repeatedly contacted in the early stages of the program, but that ongoing dialogue had been established with them in order to properly set the basic grain prices which must be readjusted each year. They stated that an intelligent decision could not be made with regard to pricing and export-import policies without accurate information regarding production figures, credit availability, amount of rainfall, and "a million other factors."

They recognized that most farmers still stored their corn and beans in the same manner as they did 5 years ago, but they also insisted that almost all farmers in Nicaragua understood what INCEI's functions were. In fact, one respondent stated that, "Whenever there's a silo, the farmers always know about INCEI and the work it is doing." They

also believed that price stabilization appeared both possible and probable within the near future, especially with sufficient funding and proper management.

Furthermore, a general consensus existed among AID officials that INCEI, except for the large rice farmers, primarily benefitted the small and poor farmers. The prime obstacle preventing the campesinos' further development, as they saw it, was the farmers' own resistance to change. One respondent pointed out that, "It took over 20 years for the Ministry of Agriculture to get them to just dust their corn (with insecticide), and this saved them 20% of their crop."

They concluded that little chance existed at the present time for convincing the farmers to provide their own funds for the construction of communal silos in cooperation with their neighbors because, "the campesinos just don't have any community spirit." They also admitted, however, that INCEI and other institutions of the Nicaraguan government under Somoza had done very little to change these tendencies.

RESULTS OF THE CIUDAD SANDINO SURVEY

The survey conducted during my field research generated an abundance of information with regard to the norms, values, living conditions, and agricultural practices of the small farmers in and around the Ciudad Sandino area

(see Appendices A and B). As the following discussion will demonstrate, much of this data supports the major proposition of Normative Sponsorship Theory that community action or developmental programs which ignore, violate, or fail to effectively neutralize relevant systems essential to the action process will more often than not fail to attain their proclaimed objectives. It is worth reemphasizing at this point that an important distinction exists between official attainment of a program's goals, as defined by the relatively more powerful social groups and the social reality of the situation. In other words, the success of INCEI cannot be measured by the physical construction of over 600 silos, but must be evaluated by the degree to which the farmers actually participate in the INCEI program. According to this criteria, the major conclusion of this research was that by 1978, over 6 years after completion of the last silo, INCEI had yet to have a lasting or measureable impact on the rural population in the Ciudad Sandino area.

LIVING CONDITIONS

The respondents of this survey were comprised of individuals who had moved to Ciudad Sandino from many parts of Nicaragua, including Leon (30%), Esteli (29%), Trinidad (14%), and Puerto Cabaza (2%). Although more than half of the farmers (54%) were born in the Ciudad Sandino area,

75% of those interviewed stated that, if possible, "they would like to go" to a different area.* Other background questions revealed that: 59% of the farmers had 4 or more children, 76% of them owned their own radios (a sign of relative affluence), and well over half stated that they could not read (60%) nor write (63%).

Farmers were interviewed from the 15 surrounding viajes (districts) with 20% of the survey coming from Muyuca, the largest viaje, and 16% from San Albino, the home of Sandino and the famous San Albino gold mine. The typical farmer lived in either an adobe (58%) or wood (22%) house and had either one (57%) or two (31%) rooms. The floor was usually earthen (89%), and 74% of the homes had no electricity, 91% had no running water, and 53% lacked a latrine.

The vast majority of the homes obtained their drinking water from a stream (61%) or a "water hole" (25%). Both of these practices are extremely unhealthy since few Nicaraguans in the campo boil their water before drinking it, and often the rivers and streams are infested with a

*This question, "If you could, would you like to go to a different area?" (Question #85) was one of the few poorly worded questions to make it through the pretest without detection. It was originally intended as an indication of the farmers' satisfaction with their current living conditions. It is impossible to determine, however, whether the farmers interpreted it to ask whether they actually wished to move to another area or simply wanted to visit other places, to get to know them.



variety of parasites. Only 10% of the survey stated that they obtained their water from a well, and less than 1% actually had running water.

The farmers were also surprisingly open in responding to the wide range of questions concerning the number of animals they owned and the amount of land they planted.* Of the farmers interviewed, 51% owned their own land, 43% rented their farmland from others, and 6% obtained land free from their families, but did not own it. The typical amount of land cultivated by a single farmer was rather small; only 8% of the farmers planted more than seven manzanas of corn primeria, and 62% planted three manzanas or less. Many of the farmers planted at least some beans primeria; 23% planted less than a manzana, and another 23% planted approximately one manzana.

As a result of the heavier rainfall, beans produce less in the primeria planting season than in the postrera, and farmers who do plant at this time usually only plant in order to obtain seed. None of the farmers planted corn in the postrera; 3% of the farmers did not plant beans in

*As mentioned in Chapter IV, these questions were particularly sensitive because at the time of the survey, Nicaragua had no income tax and the government used questions similar to these in determining the farmers' taxes. As a result, the farmers frequently attempt to disguise or underestimate their assets. The honest and high response rate is clearly a credit to the interviewing skills of my four research assistants.

the postrera, and another 4% planted less than a manzana. This significant minority of farmers planting little or no beans primarily resulted from an onslaught of diseases in the area which attack beans postrera. "El lippe", a worm-like creature with an amazing appetite, is especially damaging since it is capable of devouring several acres of beans in a single night. Moreover, 24% of the farmers plant 1 manzana of beans postrera and 43% plant 2 manzanas. This appears to represent the maximum area of beans which can be cultivated by a single individual without the necessity of employing mozos (outside laborers).

Other significant indicators of living standards involve the number of livestock owned by the farmers, especially vacas paridas (cows with 1 or more calves) and bueys (oxen). Vacas paridas are the primary source of creme, milk, and cheese for the farmers and their families. As a general rule, if a farmer does not own these animals, their diet will not contain this essential food group since there are few stores and practically no refrigeration available in the campo. Bueys not only serve as draft animals for hauling firewood and grain, but, more importantly, allow a farmer to plow his land rather than plant by espeque (an iron-tipped digging stick which has remained basically unchanged since the days of the Mayans). Since both corn and beans grow much better after the land has been plowed, a farmer's harvest and income remains tied to

his ability to either purchase or rent bueys. Of those interviewed, 58% did not own vacas paridas; of the 26% who did own such animals, 26% owned 1 cow, 26% owned 2 cows, and 20% owned 3 cows. 53% of the farmers did not own oxen, and of the 47% who did own oxen, 88% owned 2 animals or less.

With regard to the remaining types of animals found in the rural area surrounding Ciudad Sandino, 42% of the farmers owned no pigs, and 42% owned 2 pigs or less. Chickens, a daily source of eggs, meat, and protein, were more common, with 11% of the farmers owning no chickens, 17% owning 1 to 5 chickens, 21% owning 6 to 10, 17% owning 11 to 15, and 34% of the farmers possessing 16 or more chickens. Horses in Nicaragua remain somewhat of a luxury, since they serve few functions outside of transportation. Plowing with horses, a common practice in the frontier days of the United States, is a practically unknown pattern of cultivation in Nicaragua. This may explain why 59% of the farmers owned no horses, and another 25% owned only 1. The domestication of goats and sheep is not practiced in northern Nicaragua.

Four questions on the survey (numbers 99 to 102) were designed as an indication of the farmers' belief in superstitions or the supernatural. Most of the farmers (86%) believed the moon is important in planting. The vast majority of farmers in Nicaragua believe that corn, beans,

and any other crop must be planted under a full moon or they simply will not grow.

On the other hand, the belief in "monogente", monkey-like creatures who possess the unique ability to transform themselves into humans and back again into monkeys, appears almost nonexistent. 95% of the farmers responded that they did not believe in monogente, 98% said that they did not know anyone who had corn, beans, or chickens stolen by monkey people, and 96% did not even know anyone who claimed to have seen such a creature. Generally most of the farmers found it amusing that I even asked such questions.

Perhaps one of the most interesting questions in terms of responses was question number 98 which asked, "More or less, how many quintales of beans and corn do you need to harvest each year for a comfortable life?" Although almost all the farmers eventually responded to this question, this inquiry appeared the most difficult for many of them to understand and answer. The interviewers often had to repeatedly explain what was meant by this question before obtaining a response. Answers such as "quien sabe" (who knows), "Que Dios quiere," (whatever God wants), and "no matter how much one harvests, it is never enough" were fairly common.

The ideal harvest for corn ranged from less than 100 arrobas (8%) to 100 arrobas (17%) to 150 arrobas (8%) to 200 arrobas (33%) to 250 arrobas (3%) to 300 arrobas (10%)

to over 300 arrobas (22%). The range with regard to beans covered a spectrum from less than 50 arrobas (23%) to 50 arrobas (29%) to 100 arrobas (28%) to over 100 arrobas (23%). These relatively low ideal levels of income, especially compared to U.S. standards, possibly reflect the harsh reality of life in the campo, as well as the fact that many farmers do not think in such hypothetical terms nor anticipate a considerable improvement in their standard of living in the foreseeable future. It would be interesting to explore whether these aspiration levels have risen in the aftermath of the successful revolution.

PATTERNS OF CORN CULTIVATION

This research found that the agricultural patterns of cultivation in the Ciudad Sandino area, while generally "primitive" in comparison with the United States and Western Europe, encompass a wide range of technological practices. All of the farmers surveyed planted corn primaria, with many (30%) planting both corn and beans. The majority (69%) plant with a plow, 17% use only an espeque, and 14% utilize both methods. 59% of the farmers weed their corn only once, while 40% clean it twice; no one weeds more than 3 times. Most of the farmers (70%) have diseases which attack their corn, yet 59% do not use any type of pesticide to combat them. Of the insecticides utilized, malathion and DDT are the most frequently used.

74% of the farmers plant 4 manzanas or less of corn, about the maximum amount of land which can be cultivated by an individual farmer with a minimum amount of hired help.

Although 77% of the farmers responded that they knew what fertilizer was, only 24% have used fertilizer in the past, and less than a third presently apply it. Of those respondents utilizing fertilizer, the vast majority (88%) apply it to corn. The responses most frequently given for not applying fertilizer included: "too expensive" (60%), the farmer did not know how to apply it (12%), the application was not worth the additional effort (4%), and "other" explanations such as, "The soil does not need it," (1%), "The ground is too hilly," (2%), and "Because I plant at the will of God." (1%).

The range of arrobas of corn harvested per manzana (1 arroba equals 25 U.S. pounds) ranged from less than 20 arrobas per manzana to over 500 arrobas, with an average harvest of 99 arrobas. The majority of farmers (68%) produced between 40 and 100 arrobas per manzana. Slightly more than half of the farmers used field hands at some part of the cultivation process, usually during either the planting or weeding period. When paid, these workers usually earned between \$1.00 and \$2.00 per day. Frequently, however, small farmers assisted either their neighbors or family members in return for assistance on their own plots at a later date.

Surprisingly none of the farmers responded that they sold their harvest "de future" (prior to the harvest). A small minority (3%) sell their entire crop at harvest time. The vast majority, however, either sell part at the harvest and store the rest (73%) or keep all their corn for personal consumption (23%).

Despite the repeated claims of numerous representatives from the other relevant systems such as AID and INCEI, every farmer interviewed agreed that the price of corn still continued to fluctuate between the planting season and the harvest. Moreover, their estimates of these price changes appeared to be substantial. Many farmers stated that an increase of 50% from C\$ 10 to C\$ 15 per arroba was typical, and other estimates ranged from price increases of 33% to over 300%. These key responses indicate that, at least in the Ciudad Sandino area, one of the key official objectives of the silo project had not been accomplished over 6 years after construction of the silos.

Furthermore, although the results of my research are not necessarily representative of other parts of Nicaragua in all respects, it does appear likely that these responses regarding price fluctuations do indicate that the national program of price stabilization has also failed to a considerable extent. Although Ciudad Sandino is located a considerable distance from the capital of Managua, it is by no means isolated from the national and international

markets. Price changes throughout the country affect Ciudad Sandino and vice versa. In short, the results of this survey, although not conclusive, are in fact a reflection of the success of INCEI nationwide.

CORN STORAGE PRACTICES

Of the farmers who sell all or part of their corn harvest, 80% sell it at their farms. This practice appears to reflect an attempt to eliminate costly transportation charges, since 65% of the farmers stated that they must rent their means of transporting grains. As the interviews with other relevant systems indicated, representatives from INCEI rarely if ever venture into the campo to visit the farmers or purchase grains at their homes. Thus in effect, at least in the Ciudad Sandino area, INCEI has effectively eliminated itself from 80% of the direct market in grains. It is exactly this type of ignorance or misunderstanding of local cultural practices which Normative Sponsorship Theory predicts will tend to prevent successful completion of a community action or developmental process.

Another of the most significant questions concerned whether the farmers had changed their methods of storing grain in the last 5 years. Almost all the respondents (98%) stated that they continued to store their corn in the same manner as they did 5 years earlier. The remaining 2% either could not explain how they had changed

or shifted from the use of trojas to barrels. 66% of the farmers interviewed continue to store their grain in trojas, 22% keep it in rows inside their houses without removing the husks, and the rest use either barrels (6%), storage boxes (2%), or sacks (2%). The INCEI program has obviously had no impact whatsoever on the storage practices of the farmers included in this survey.

Furthermore, 71% of the sample stated that they treated their corn with insecticide before storage. The majority (64%) use DDT, an insecticide prohibited in the United States because of its deadly residual effects. Yet the same multinational corporations prohibited from manufacturing and selling this insecticide in the U.S. reap millions of dollars in profits from selling it to Third World countries. Ironically, the vast majority of the nearly 1 billion pounds of insecticide applied annually in the Third World is used on crops such as coffee, cotton, and bananas that are then exported back to the United States (Dowie, 1979; 43). Other treatments applied prior to storage included phostoxin (2%), gorgohicida (10%), salt (12%), ashes (1%), and "the hand of God," (1%).

The problems most commonly faced by the farmers during storage were rats and "el gorgoho" (an insect which bores into the kernel, deposits her egg inside, and covers the opening with a gelatin-like fluid; the larvae are legless and feed on the inside of the grain, change to pupae, and

eventually emerge as adult weevils over a four week period). Losses as a result of inadequate treatment and storage facilities ranged from "nada" (13%) to half of all the grain stored (30%).

It is nothing short of tragic in a country with such high rates of malnutrition that over 77% of the farmers estimated that they lose on the average of 20% to 50% of their harvest after storing it. If INCEI had reduced these levels to any significant degree on a national scale, this action alone would have enabled Nicaragua to attain self-sufficiency in the basic grains and converted the country from a net importer to exporter of these crops.

On the other hand, 74% of the farmers did believe it was possible to store their corn at home until the price reached the highest possible level without losing any. Unfortunately, as many farmers (28%) believed that this would only occur "si Dios quiere" (if God wants it), as put their faith in gorgohicida, the most common, safe, and effective insecticide available in Nicaragua.

PATTERNS OF BEAN CULTIVATION

Bean cultivation practices in the area surrounding Ciudad Sandino tend to mirror those of corn in many respects. Since beans require less rain than corn (too much rain causes the beans to germinate on the vine), they are usually planted in the postrera. None of the farmers

planted corn in the postrera, while 98% of them planted beans during this period.

The beans are either planted by espeque at the base of the corn (33%) (in order to conserve on space and allow the vines to grow around the corn stalks), by plow (32%), or else by espeque in rows (28%). Of the farmers interviewed, 84% treat their beans before planting them and use a variety of colorful, if somewhat ineffective, methods, including gorgohicida, keroscene, ashes, baking soda, and cow manure. Most of the farmers weed their beans once or twice, and 89% of them plant 4 manzanas or less.

Although 66% of the farmers stated that they knew what insecticide was, only 28% use it on a regular basis during their bean cultivation. This often seriously limits the bean harvest since 95% of the farmers admitted that various diseases or insects frequently attacked their beans. The most commonly mentioned "plagas" included the lippe, maya, and picuda. La maya are small, light green triangular shaped insects with piercing, sucking mouthparts which often spread viruses among the beans, severely lowering yields. La picuda, which also has a variety of other local names, is a leaf aphid about the size of a pinhead. They also suck sap from the plant's leaves and then secrete a honey dew that allows a black mold to form which stunts and deforms the beans' normal growth (Leonard, 1969).

Often the onslaught of these insects and worms reach such proportions that a farmer who does not take specific steps to combat them loses almost his entire harvest in a matter of weeks if not days. Controlling these pests in the viajes surrounding Ciudad Sandino is especially difficult since most farmers do not spray or dust their crop. As a result, those few individuals who do take action must usually face the disappointing prospect of eliminating the problem from their own fields, only to see the insects return in a matter of days because their neighbors failed to take similar action.

Few farmers in the area plant anything other than corn or beans. Of the 27% of the respondents who stated they did plant other crops, only 2 farmers planted more than 2 manzanas of any other type of cultivation. The most popular alternative cultivations in order of frequency were coffee, sorghum, rice, and chili peppers.

The farmers estimated that they harvested anywhere from 15 to 100 arrobas of beans per manzana. Most of them (63%) harvested between 40 and 60 arrobas per manzana, with an average yield of 49.85 for the entire sample.

Significantly, a full 97% of the farmers interviewed provided responses which support the contention that INCEI had failed to stabilize bean marketing conditions. The price of beans continued to fluctuate between the harvest and planting seasons. The price did not appear to change,

however, to the same extent as with corn. Estimates of the price fluctuations ranged from a harvest/planting ratio of 25 to 50 cordovas (3%) to 30 to 50 (37%) to 35 to 50 (42%) to an increase of 48 to 75 cordovas (less than 1%). Thus these key responses again clearly indicate INCEI had not achieved one of its foremost objectives years after construction of the last silo.

BEAN STORAGE PRACTICES

The results of the survey questions which explored the farmers' bean storage practices also paralleled in many respects the responses dealing with corn. None of the farmers stated that they sold their harvest "future". Only 2% of the farmers sold their entire crop at the harvest, 6% kept all the beans solely for their family's consumption, and 92% responded that they sold part of their harvest and stored the remaining portion.

The actual percentage of the bean harvest stored also varied greatly. 28% of the sample estimated that they sold half of their crop and stored the other half. Other estimates by the farmers concerning the ratio of sold to stored beans varied from 60/40 (10%) to 67/33 (6%) to 70/30 (16%) to 75/25 (20%) to 80/20 (20%). To a certain extent, these ratios reflect the tendency of the Nicaraguan campesino to view his bean crop in the same way a middle-class American regards his savings account. In effect, for the farmer,

these beans are "money in the bank" which accumulates interest (i.e., increases in value because of price fluctuations) and can be "withdrawn" or sold whenever circumstances require it.

Unfortunately, other cultural practices tend to seriously undermine their investment. Most of the farmers (70%) store their beans either in sacks or wooden boxes known as "buques". Less than 1 out of every 3 farmers use barrels for bean storage. These differences in storage practices are significant since the type of barrels used most frequently - metal containers with airtight lids - constitute an inexpensive but effective mini-silo which permits little or no loss to insects and rats. Sacks and buques, on the other hand, offer no protection against these elements.

The loss of beans as a result of poor storage practices is further aggravated by the fact that 44% of the farmers do not treat their beans prior to storage.* Of those who do treat their beans, only 77% use an effective insecticide such as phostoxin or gorgohicida. The other 23% use a variety of original concoctions including ashes (3%), ground chile (2%), DDT (2%), bisfuro (8%), and "alconfor" (6%), an inexpensive children's cold medicine.

*This fact means little to the farmers utilizing barrels, however, since the lack of air in the barrel tends to eliminate many insects without the necessity of insecticide.

With regard to beans, again one of the most significant findings of this study revealed that INCEI has had no impact whatsoever on changing these storage and treatment practices. Not a single farmer in the entire sample stated that he had changed his bean storage practices in the last 5 years. According to Normative Sponsorship Theory, this failure reflects an ignorance, misunderstanding, or indifference on the part of INCEI officials regarding the cultural norms and values of the campesinos.

Yet the survey also indicated that the farmers clearly realized both the importance of drying their beans prior to storage and the possibility of reducing post-harvest losses. 89% of those interviewed stated that they dried their beans prior to storing them, and 97% of these farmers dried their beans in the sun for 2 or more days. The majority of the farmers (78%) also stated that, under the proper conditions, it would be possible for someone to store beans in their house without losing any until the price reached the highest level possible.

On the other hand, 75% of those surveyed stated that there were insects or diseases which attacked their beans which did not attack their corn. The most frequently identified culprit was "el gorgoho de frijole" (a type of weevil); 89% of the farmers had problems with this insect. Although 36% of the farmers stated that they usually did not lose any significant amount of beans during storage

(usually those fortunate enough to have sufficient numbers of barrels at their disposal), the remaining 64% of those surveyed experienced serious losses. These losses ranged from less than 10% of the beans stored to up to 50% of the entire crop kept at home.

As repeatedly stressed throughout this dissertation, Normative Sponsorship Theory proposes that developmental programs imposed from "the top down" will tend to fail if they violate or take into account the norms and values of the social groups affected by the program. The total failure of the INCEI project to change the storage and treatment practices of the campesinos supports this proposition. Ironically, it appears likely that if INCEI had adopted the basic tenets of normative sponsorship, it could have in fact achieved its primary objectives of price stabilization and improved storage practices. These goals became unrealistic, however, without allowing the campesinos an effective voice in the planning and implementation of the program.

The responses indicated that many, if not most, of the farmers realized the advantages of storing their beans in barrels. Usually, however, they simply could not afford to purchase and transport barrels to their farms. Yet for a percentage of the cost it took to build and maintain the 6 silos located in Ciudad Sandino, silos which only a small minority of the farmers have ever bothered using, INCEI

could have purchased enough barrels for all the interested farmers in the area. The farmers could have then repaid INCEI with the money earned as a result of the reduction in grain losses and spoilage. Whether or not the farmers themselves would have proposed or agreed to such an alternative strategy will never be known; as the second part of the survey demonstrated, no one ever asked them.

THE FARMERS' ATTITUDES TOWARDS INCEI

The second part of the survey attempted to discover the opinions of the campesinos in the Ciudad Sandino area with regard to governmental institutions such as INCEI and Banco Nacional. An effort was also made to explore whether their values, norms, and opinions could theoretically have facilitated an effective community action program. As the following discussion indicates, it appears likely that the obstacles facing INCEI were not as great as AID officials and other representatives from various relevant systems assumed.

Implicit in the basic tenets of Normative Sponsorship Theory and in the works of Gorz and Friere is the reoccurring theme that any developmental project to be successful must appeal to the immediate needs and concerns of the target population. Even more importantly, the individuals affected by the program must be conscious of their needs and be willing to take action to meet them. The validity

of these propositions is reflected in the farmers' responses with regard to Banco Nacional and INCEI. Many of them had willingly worked with the Bank in the past and hoped to do so again in the future. The representatives from INCEI, however well-intended, attempted to dictate to the campesinos what problems they had and how these problems should be resolved. As a result, INCEI in many ways became effectively isolated from the rural community.

The primary function of the Banco Nacional branch office located in Ciudad Sandino is the disbursal and collection of loans to local farmers. Interviews with bank employees and a lengthy detailed investigation of the bank's records revealed the information contained in Table I.

TABLE I

<u>Type of Crop</u>	<u>Amount Loaned in 1976</u> (in cordovas)	<u>Amount Loaned in 1978</u> (in cordovas)
Coffee	219,850 for 245 mzs.	244,500 for 137 mzs.
Corn	413,488 for 1,211 mzs.	561,570 for 579 mzs.
Beans	195,240 for 535 mzs.	274,800 for 305 mzs.
Sorghum	19,700 for 5 mzs.	1,200 for 2 mzs.
Sugar Cane	5,700 for 11 mzs.	(no data available)

The increase between 1976 and 1978 in the amount of cordovas lent per manzana reflects a change in bank policy and a greater emphasis on the application of fertilizer. The farmers were often not allowed to borrow money unless they first agreed to buy and apply fertilizer. These loans

were for "corto plaza" (18 months) at 16% interest.

Table II contains the information with regard to loans for "largo plaza" (six years) at 18% interest

TABLE II

<u>Type of Animal</u>	<u>Amount Loaned 1976</u> (in cordovas)	<u>Amount Loaned in 1978</u> (in cordovas)
Novio	67,500 for 89 animals	0
Terrereros	89,000 for 178 animals	0
Vacas		
Paridas	87,200 for 59 animals	7,500 for 3 animals
Vacquios	112,500 for 115 animals	0
Toros	54,200 for 18 animals	3,000 for 1 animal
Bueys	184,780 for 124 animals	5,000 for 3 animals
Cerdos	1,650 for 11 animals	0

As of June 29, 1978, the farmers of the Ciudad Sandino area were overdue half a million cordovas to Banco Nacional. \$C 317,697 of this was due in short-term loans and \$C 160,129 in long-term loans. While these totals included approximately 30% of the Bank's clients, according to the Bank's records, only 7% of the farmers failed to pay off their loans in the long run. The majority of those overdue on their loans were paying "poco a poco" (little by little).

The results of the survey revealed that 46% of the farmers had borrowed money from Banco Nacional. The farmers borrowed for the following purposes: agriculture (66%), oxen (14%), cow with a calf (5%), cattle (4%), agriculture

and oxen (7%), oxen and cattle (2%). The loans for agriculture were divided accordingly: corn with fertilizer (51%), corn without fertilizer (24%), beans with fertilizer (2%), beans without fertilizer (2%), corn and beans with fertilizer (20%).

Although 51% of the farmers believed the Bank helped the rich farmers more than the small farmers, 30% felt they both benefitted equally, and 9% believed the small farmers gained the most. Even more significant perhaps was the fact that 83% of the farmers interviewed stated they would work with the Bank in the future if given an opportunity. The farmers preferred to borrow for the following purposes: agriculture (64%), cattle (21%), cattle and agriculture (5%), agriculture and oxen (2%), cows with calves (3%), milk cows (1%), coffee (1%), and business loans (2%).

These statistics clearly indicate that the Cuidad Sandino campesinos can and will work with government agencies if they view it in their self-interest to do so. This is true even though the majority of these farmers believe the Bank is biased in favor of the rich. This data not only exposes the myth that small farmers in Nicaragua are unwilling to change or work with government agencies, but also, for the purposes of this study, makes the following responses regarding INCEI all the more significant.

Despite the fact that INCEI had been in operation in Cuidad Sandino for more than 6 years by the time of this

study (in fact many of the farmers had to pass the large silo complex every time they came to town), 79% of the farmers admitted that they did not know what INCEI's job was. Even more significantly, 95% of the farmers had never been visited by an INCEI representative, and 89% had not sold corn nor beans to INCEI.

With regard to the few farmers who had sold their corn or beans to INCEI, no one had worked with this institution 3 times, and 58% of these farmers had dealt with them only once. The explanations most often given for not working with INCEI were that: "The price INCEI pays is too low," (14%), it was too difficult to transport the grains there (12%), "The harvest was too small," (28%), the farmer sold his entire crop at home (24%), and INCEI does not accurately weigh the grains (6%).

Other responses by the farmers tended to indicate less of a bias against INCEI than a lack of knowledge concerning the objectives of the organization. In terms of Sponsorship Theory, these replies constituted a logical response by the campesinos to INCEI's either intentional or inadvertent decision to attempt to neutralize the Ciudad Sandino campesinos as a relevant system. Fewer farmers believed that INCEI favored the rich farmers than felt that Banco Nacional favored the wealthy. 39% of those interviewed believed the rich gained the most from INCEI, 9% believed the poor gained more, 24% felt both the rich and poor

benefitted equally, and 28% responded that they just did not know which group INCEI helped the most. Another 70% of the farmers did not know anyone who had either sold or stored grains at INCEI. With regard to drying the grains, 66% of the farmers did not know if INCEI was drying the grains too much, and 71% did not even know why INCEI was drying the grains in the first place.*

Despite this seemingly widespread unfamiliarity with the work and objectives of INCEI, many farmers did agree with these objectives in the abstract, or at least were not opposed to them. For example, 46% of the farmers believed it was possible to control the price of corn and beans year round, while another 41% stated that they did not know whether or not this was a realistic objective. In a related question, a majority of the farmers (54%) stated that it would be good if the price of grain stopped fluctuating, while another 33% were undecided whether they desired price stabilization.

Although relatively backward in their patterns of cultivation, the survey also demonstrated that most farmers were not distrusting of the parties to whom they sold their grains, nor were they biased against selling their grains in the local area. 84% of the farmers responded that they

*It may be worth noting here that many farmers did not perceive INCEI's process of mechanically drying and cleaning the corn and beans as the equivalent of their own "sunning" of their harvest.

had never been cheated while selling their corn and beans, and 59% stated that they preferred selling their crops to buyers from the Ciudad Sandino area. Another 17% responded that it did not matter to them to whom they sold their harvest, and 13% said they merely wanted to get the best price possible.

Finally, two other key questions appeared to indicate that the majority of farmers were in fact ready to consider changing their present storage practices, if it was in their interest to do so. 54% of the farmers were willing to spend their own money to construct individual silos on their farms if it was likely that their post-harvest losses would be eliminated. Moreover, if this type of individualistic program proved too expensive, even more of the farmers (68%) stated that they would donate their own money to help build a communal storage area with their neighbors if it provided sufficient protection from the ravages of insects, mice, rats, and other pests. Thus not only were most of the farmers willing to invest their own hard-earned cordovas into a properly organized silo program, but they were also willing to cooperate with others if it became necessary. Unfortunately the INCEI program failed on both accounts.

SUMMARY ANALYSIS OF THE DATA

This case study can be regarded as an attempt at applying the analytical tools provided by Normative Sponsorship Theory to a rural development project in Nicaragua. The insights provided by Paulo Friere and Andre Gorz were also important aids in the analysis of the INCEI program in Ciudad Sandino. In terms of this analysis, there appears to be little doubt that although the INCEI program had the potential for responding to the needs and capabilities of the small farmers, it totally failed to do so. While INCEI at one time might have mobilized the campesinos in a serious effort at increasing their class consciousness and control over their own work processes and products, in the final analysis, the program amounted to little more than a reformist reform. The remaining pages of this chapter will briefly attempt to summarize why, in my opinion, the INCEI program went astray.

Friere, Marx, and others have repeatedly emphasized that human education and development are a never ending process of changing and being changed. In the process of modifying the physical and social worlds through their work efforts, human beings themselves become transformed. This ongoing dialectical relationship between action and reflection, between context and consciousness can supply the basis for transforming a class in itself into a class for itself. In other words, true development cannot be imposed from above, no matter how altruistic the intentions

of the international and national agencies or the individuals responsible for promoting the program. In order to effectively change the storage practices of farmers in Ciudad Sandino, for example the dictates and solutions cannot come from "experts" in Washington or Managua, but must come from the farmers themselves. Although community action programs generated at the local level will inevitably produce numerous false starts and failures, these experiences will in turn provide the groundwork for the successes of the future.

Normative Sponsorship Theory asserts that the people and relevant systems involved in and affected by the process of change must themselves recognize, participate in, and control the solutions to their own problems. It is not for outside experts, no matter how well trained technically they might be, to decide whether the farmers are or are not ready to adopt a particular technological innovation or other improvement. The people themselves must make this decision.

As stressed in Chapter IV of this dissertation, the dynamic process of conscientization involves various dimensions, including: ideology, transformation, social identification, and behavioral change. It simply is not possible to fragment or divide this process without destroying it. Lasting behavioral change does not result from the million dollar construction of modern drying and

storage units, but through critical reflection by the farmers concerning the social, political, and economic structure of their environment. They must critically reflect on their own psychological and sociological experiences at transforming these structures, and as a result of this analysis, determine what actions should be taken to further improve the situation. One general conclusion of this study then is that AID, INCEI, and the other relevant systems committed a serious fundamental error as a result of their efforts to separate action from reflection, to divide theory from practice.

The theoretical model which served as the basis for this research places heavy emphasis on the dynamic interchange or "give and take" between and among social systems involved in the developmental process. It repeatedly focuses on the goals, values, and norms of these various social units and the importance of not violating these characteristics while attempting to implement change. The variety of research methods utilized throughout this study, including the analysis of the documents of official organizations, formal and informal interviewing, and participant observation consistently supported the key findings of the survey conducted among the campesinos. INCEI's program, at least in the Ciudad Sandino area, did not involve a dynamic interchange of ideas between the various relevant systems; there was no give-and-take between the

farmers and INCEI or AID officials. This is clearly supported by the fact that the overwhelming majority of farmers had never even been visited by INCEI officials, did not understand why INCEI was drying the grain, nor even what the work of this institution was, and as a result, the farmers rarely sold or stored their grains there.

Furthermore, the planning stages and operational policies of INCEI repeatedly either misunderstood or ignored many of the most basic values, norms, and cultural practices of the farmers. It makes little sense, for example, to devise a storage, marketing, and price control system at a single centralized location while most farmers either store their harvest at home or sell their produce on the farm. This decision alone effectively eliminates INCEI from 80% of the market in corn and beans in the Ciudad Sandino area and relegated the organization to the position of buying and selling to middlemen.

Normative Sponsorship would predict that under these social conditions, the logical outcome of this action process would be conflict and resistance from the campesinos and rejection of INCEI's goals. This appears to have been the result of the silo project in the Ciudad Sandino area as reflected in the numerous responses by the farmers. The survey demonstrated that none of the farmers have changed their practices of treating and storing their corn and beans as a result of INCEI, and the price fluctuations

of these products, although possibly reduced somewhat, continue to range from 33% to 200%. Thus in brief, INCEI did not treat the farmers as critical thinkers and activists, but as objects of assistance - and, in the words of the campesinos of the area, they simply responded, "No gracias, Senor."

CHAPTER VII

CONCLUSION

At this point, a few concluding comments seem appropriate concerning dependency theory, the future of Nicaragua, and the limitations of my research. Hopefully this case study constitutes more than just another effort at demonstrating how a well-financed developmental program went astray. In addition to explaining why such "development from the top down" simply cannot work, an attempt was made to analyze the norms and values of the relevant organizations related to and affected by the INCEI program, to isolate many of the rural communities' problems and needs in the Ciudad Sandino area, and to achieve a greater understanding of the complex patterns of interactions within this community. Ideally this study should provide insightful information of social processes which also may be utilized in future research projects.

Studies such as this one which explain why a specific action process failed to achieve its objectives do not merely restate the obvious as attested to by many of the AID programs currently under consideration in other areas. Fortunately the present government in Nicaragua, for the time being at least, does not appear to be repeating these same mistakes. Although the immediate future of the revolution remains open to debate, one prediction appears certain. While there will doubtlessly in the future be many failures and frustrations, there presently exists little

likelihood of the new junta repeating the numerous errors of the INCEI program.

The junta, although willing to accept and in desperate need of foreign aid, insists that it arrive "with no strings attached". As a result, the \$75 million aid package requested by the new government remains stalled in Congress. Tomas Borge, the only avowed Marxist member of the FSLN Directorate has emphatically stated, "We prefer to die of hunger rather than accept aid with strings attached." It appears that at least for the moment, some of the strands of dependency have finally begun to unravel.

LIMITATIONS TO THE STUDY

This research attempted to evaluate the impact of the INCEI grain drying and storage project in Ciudad Sandino, Nicaragua. Perhaps one of the most obvious limitations of the research is that the specific findings of this study cannot necessarily be extended beyond the Ciudad Sandino area. Time and financial limitations, plus the imminent outbreak of the war, made an extension of the survey to a random sample of the entire rural population in Nicaragua impossible. These same limitations prevented me from addressing other crucial issues such as what effect a successful INCEI program would have had on the middlemen in the domestic grain market and what ripple effects, if any, it would have had on the international market, especially with regards to the world market price of corn, beans, cotton and coffee.

These same restraints also limited to a degree my access to other relevant documentary evidence. Fortunately

AID officials in Washington agreed to xerox and mail such valuable information as the original AID loan request for the project, and the official authorization for three subsequent related projects. This data proved useful in helping to identify the official goals of the project. Additional material, however, presently stored in cardboard boxes at the AID warehouse in New Orleans was left unexamined.*

This study did not begin until six years after the completion of the final silo. Although this time lag did provide the advantage of allowing the project sufficient time in which to accomplish its objectives, it also made interviews with several members of various relevant systems somewhat difficult. Only two of the AID officials interviewed in Managua were present during the planning stages of the INCEI program, and several other participants had long since been assigned to other parts of the world.

Moreover, I would have preferred to obtain a month-by-month accounting of the price fluctuations of corn, beans, rice, sesame, and sorghum for an extended period of time for both Ciudad Sandino and Nicaragua as a whole. Many officials continue to insist that INCEI has in fact successfully reduced the most radical price changes with

*Although I remain indebted to the AID officials in Washington for this assistance, I perhaps should note that originally they informed me on numerous occasions that no material whatsoever relating to the INCEI project was available, either in Washington or elsewhere. It was only after I finally made several desperate phone calls to Senator Riegle and Congressman Carr explaining my plight that the documents were xeroxed and mailed to me.

regard to these crops. Independent verification of these statements was not possible during the relatively short period of time in which the field research was conducted.

Finally, I also would have liked to explore to a much greater extent what alternatives to the INCEI program existed in terms of appropriate technology, since any country that seriously attempts to attain any significant degree of political, economic, and psychological independence must primarily rely on its own human and physical resources. As noted in Chapter VI, storage barrels and smaller community silos do provide 2 possible alternatives. Both of these objects, however, would have to be imported in large quantities to allow sufficient distribution to the rural population. A more viable option from Friere's and a Normative Sponsorship perspective would be to allow the farmers themselves to confront the problems of effectively drying and storing their grains and to arrive at a solution through the utilization of local materials and talent.

Hall's discussion of a community development silo project in Tanzania, for example, provides an analysis of the successful application of these principles. The Tanzanian farmers, after an unusually large harvest, faced a serious problem of grain spoilage and waste. Traditionally, government officials handled this type of problem by conducting basic experiments at the agricultural research station and transferring this technology to the

farmers. This type of approach to the problem had met with relatively minor success in the past.

In June of 1976, the Community Development Trust Fund adopted an alternative "Friereian approach" to the situation. They began by assuming that the problem of grain storage was not new and that the local farmers already possessed a grain storage science and minimum level of technology. Committees were then formed in each village comprised of local builders, farmers, artists, and outside technical experts and were assigned the task of resolving the grain storage problem. The outside experts were chosen for political as well as technical awareness.

Hall notes that some of the first discoveries made by the committees were that not everyone had a storage problem and that various silo designs were required depending on the size and needs of the different farmers. The local farmers also decided to reject the silo design advocated by the outside technical experts (the so-called "Nigeria" model in this case) in favor of a modified design of what they already had. Hall concludes by noting that:

"At the end of the 6-week period of analysis, 4 or 5 substantially improved silos or methods were constructed. Visits were made to other villages nearby to discuss the findings of the research, and the villagers presented a seminar to the Faculty of Agriculture staff at the University of Morogoro. These farmers were aware that they were experts in low cost grain storage. They had created knowledge without the benefit of university degrees." (Hall, 1977; 15).

Perhaps one of the most promising directions for future research generated by this study would be to observe how the new INCEI administration deals with the problems so successfully resolved by the Tanzanian farmers. Whether the deploreable widespread grain spoilage in Nicaragua can be prevented and the price of the basic grains stabilized remains to be seen. Any new or modified attack on these problems must begin by incorporating the norms and values of the Nicaraguan campesinos, thereby utilizing their existing knowledge and expertise.

THE FUTURE COURSE OF THE REVOLUTION

There is little doubt that Nicaragua presently faces an awesome challenge in attempting to rebuild its war-torn society. Recent reports by the United Nations Economic Commission for Latin America estimate that the physical damage of the war alone, including housing, health centers, and transportation facilities amounts to more than \$86 million. The agricultural and industrial sectors suffered losses of over \$480 million. In addition to this, the new Government has inherited a public debt of over \$1.5 billion from Somoza.

Internally the war brought the economy to a virtual standstill. Coffee rust has ravished the coffee crop while thousands of farmers did not plant corn, beans, rice, or

cotton. By nationalizing the holdings of the Somoza family, the Government has become the controlling factor in the economy overnight. Somoza, however, extracted payment for his vast financial empire prior to his departure by mortgaging many of his holdings for 2 or 3 times their worth during his last years in power. Because of these obstacles, many international observers predict that the country will need 2 to 3 times the United Nations' estimates in order to rebuild (Morales, 1979; 172).

Agrarian reform must remain a major concern of the new administration since agriculture has played such a central role in the economy and will continue to do so in the future. Expropriation of Somoza's land has given the recently formed agrarian reform ministry direct control over 51% of the arable land. This ministry also has the authority to expropriate large fincas which are not formed efficiently by their present owners. However, Jaime Wheelock, the Marxist Agrarian Reform Minister, has stated that, "For now we are going to limit ourselves to the Somoza lands because we don't need anymore."

Under the program of the Provisional Government of National Reconstruction, the large agro-industrial complexes (usually those producing cotton, coffee, and beef) will remain intact, but the workers will take an active part in the administration of these estates. Smaller farms of 200 to 300 manzanas will be converted into cooperatives,

while the smallest plots of land owned by the campesinos will remain untouched. The state also intends to distribute land and technical assistance to the landless campesinos.

These land reform policies must be regarded as a serious attempt at redistributing power, wealth, and social status from Nicaragua's center to its periphery. This fact has caused the United States and the remaining landed elites much apprehension. One of the most severe tests of the new Government, in my opinion, will occur if and when it attempts to expropriate the property of the remaining privileged groups. In the past, opponents to land reform have tended to ignore the social justice and political factors inherent in the land reform process and to emphasize purely quantitative considerations such as technology levels and production rates. A comprehensive land reform program may well result in a quantitative reduction of export crops such as coffee or cotton, but would inevitably produce a higher qualitative outcome in terms of feeding the hundreds of thousands of individuals who actually cultivate the land.

Moreover, an effective land reform program retains the potential for combining the best features of both the large and the small estates. Nicaragua's coffee and cotton fincas have traditionally been characterized by the employment of few permanent workers, an over-abundance of land,

and relative to the smaller farms, extremely high levels of technology. The minifundias possess many underemployed workers, little land, and low levels of technology. Feder (1971) has demonstrated that radical land reform policies would allow the larger holdings to become as labor intensive as the smaller plots and also enable them to produce at the same rate per acre. In many cases, advanced technology and mechanization would neither be necessary nor desirable since there is an overabundance of labor available. This might well be considered a blessing in disguise since mechanization often involves immense outlays of capital which Nicaragua simply does not have.

Dependistas repeatedly emphasize that each Periphery nation must write its own script as determined by its unique climate, agricultural, cultural, and social characteristics. Although there exist no guarantees for most Nicaraguans with regard to immediate quantitative leaps in their standard of living, land reform can help to establish a solid base for further development. For example, a combination of increased production and diversification will lead to a cheaper, more abundant food supply, an indispensable condition for industrialization and social stability. Agrarian reform also retains the potential for creating a vast redistribution of present wealth and future income. This in turn will create a greater domestic market and further impetus to industrialization. If this base is

supplemented with strict restraints on foreign corporations, which the Provisional Government has promised to do, the potential expansion of national industries becomes greatly enhanced. Finally, as the Cuban experience has demonstrated, land reform relieves the pressure on the urban populations and allows for the development of both the rural and urban sectors.

Thus a radical, rapid, comprehensive land reform program is a basic precondition to achieving economic, social, and political development in Nicaragua. While it is not a sufficient condition for such development, it is a necessary one. The possibilities for development are greatly enhanced when redistributed in the working hands of the many, rather than retained in the viselike grips of a few. Moreover, as this case study has clearly demonstrated, the application of modern technology and foreign aid to the present system usually produces greater growth without development, further inequality, and more oppression.

THE CONTINUING DILEMMA OF FOREIGN AID

Petras (1979; 20) has stressed that, "Bourgeois writers and spokespeople (who) emphasize the destruction, the economic losses, the costs, and the need to seek capitalist support for reconstruction, development, and so on, minimize the tremendous creative efforts that have

emerged internally from the struggle and given birth to popular mass organizations, which, in addition to carrying out the bulk of the fighting, also organized neighborhoods, production, and distribution." Yet at the same time, as Jaime Whellock has observed, "socialism cannot be built overnight." The destruction left by the war was so great that the Sandinistas must move slowly in their efforts to transform Nicaraguan society. The critical state of affairs has forced the junta to appeal to all foreign governments for assistance. Surprisingly this plea has met with relative success. The United States has provided \$30 million in emergency assistance, West Germany has authorized a loan for \$23 million at 2% interest over 30 years, and Spain has loaned the country \$25 million (Burbach, 1980; 36-37).

While international aid is obviously not a solution to Nicaragua's problems over the long haul, this immediate stop-gap financing did help alleviate some of the most pressing problems after Somoza's departure. To date, the Inter-American Development Bank has provided the most funding. In September of 1979, this Bank advanced a \$100 million dollar loan to the new government to be used to plan and begin implementation of future developmental projects.

Besides the \$30 million in emergency humanitarian relief, the United States has continued to broadcast

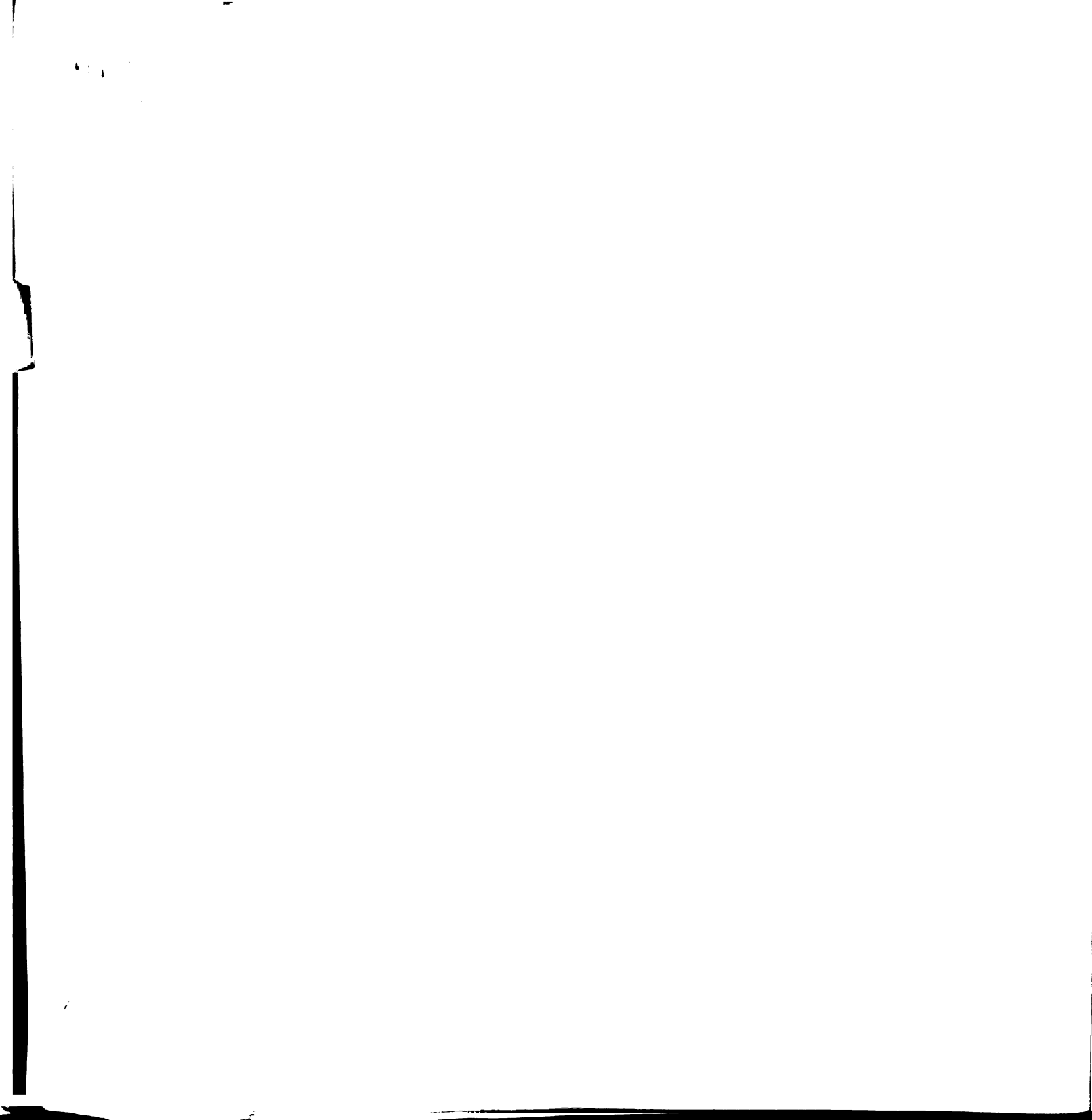
conflicting signals to the Nicaraguan people. While refusing to process the \$75 million request to AID, on September 11, 1979, by a 7 to 3 vote, the House Subcommittee on Foreign Affairs did approve \$9 million in direct U.S. assistance to Nicaragua, which even included \$23,000 for military spending. Although this amount appears ridiculously low in view of the flood of aid funneled towards Somoza and the actual needs of the country, it does provide a symbolic gesture of hope for the future.

On the other hand, many of Somoza's old friends in the U.S. Congress remain firmly entrenched against the new regime. Many supporters of Tacho have taken a hard line approach to the situation and have branded the Sandinistas as Cuban Marxists who are attempting to install a Soviet-block regime in Central America. In view of the volatile conditions in neighboring El Salvador and Guatemala, many observers believe that the commitment of U.S. troops in the area remains a distinct possibility, especially if a Conservative candidate assumes the presidency in 1980. It also appears certain that the U.S. Agency for International Development will most likely offer little technical or financial assistance to the new regime until well after the 1980 elections.

FINAL REFRACTIONS FROM THE
PRISM OF DEPENDENCY

Moral considerations aside, the United States and other developed countries should provide assistance to the underdeveloped nations because it is in their interest to do so. Apparently many members of both political parties fail to understand that after a certain point the United States does not buy more security in Latin America or elsewhere by buying more military equipment or by propping up puppet dictatorships. Excessive military spending, not just in Latin America, but in the world as a whole does not reduce the chances for violent revolutionary change, but greatly increases them. The obvious reason for this is that the vast outlays for military hardware and personnel diverts these resources from vitally needed projects aimed at eliminating poverty.

Even such previously strong proponents of military spending as ex-Secretary of Defense Robert McNamara now agree with this analysis. In a speech at the University of Chicago delivered while the people of Nicaragua were still fighting Somoza's U.S. financed military machine in the streets, McNamara observed that "Global defense expenditures have grown so large that it is difficult to grasp their full dimensions. The overall total is now in excess of \$400 billion a year." He also noted that the \$30 billion spent each year just on research and development for military purposes exceeds the total amount of money



spent on the problems of food, health, energy, and education combined.

In reality, however, there appears little chance that the awesome problems of reconstruction and development will be overcome through foreign aid alone. The new government in Managua as well as the rest of the Periphery, must confront the harsh reality of dependency. While it is not possible, let alone desirable for Nicaragua to sever all economic ties with Center powers, to achieve true development she must seriously examine the conditions and assumptions on which this assistance has been based.

As Chapter V of this dissertation attempted to document, the lessons of history are clear. There has never been an equal relationship between Nicaragua and the United States. Equality between nations in the modern world remains a legal myth that has no foundation in economic reality. Nicaragua and the United States are not equal. Simply increasing agricultural production will not eliminate these economic facts of life.

The case of cotton provides a classic example of this. In the last decade and a half, Nicaragua has greatly increased its production to the extent that it now produces more cotton per acre than the United States. Yet since most of this cotton is exported to the United States, it is this country which has the most influence in setting the price for this product. Nicaragua, because it is so

desperate for foreign exchange, must export as much cotton as it can produce and accept whatever price the Center powers will pay. Only on the relatively rare occasions when there is a severe drought or some other natural disaster will competition force the price higher - but only temporarily.

Should Nicaragua somehow manage to expand its industrial capacity to the extent that it can some day produce cloth instead of raw cotton fibers, the foreign exchange structure will still continue to support the Center powers. Tariff barriers, quota regulations, and a variety of other legal devices prevent the exportation of manufactured goods to the same Center countries that willingly import the raw materials and then sell the finished manufactured product to the underdeveloped countries. As Castro once observed, much of Latin America exports lumber, leather, and sugar only to turn around and import furniture, shoes, and candy. The World Bank estimates that the underdeveloped nations could sell an additional \$33 billion worth of goods to the developed world if existing trade barriers were eliminated (Nyerere, 1979).

Thus there cannot be an equal relationship or system of exchange between unequals. The underdeveloped countries remain underdeveloped because they are forced to function in a world system structured in favor of the Center powers. This same phenomena also explains much of the poverty

within the Center powers themselves. The numerous statistics supporting these contentions are only too well known and necessitate only a brief mentioning here.

Although the poor nations constitute 70% of the world's population, they have less than 17% of the Global Gross National Product. While much of the Periphery has a per capita national income of less than \$300, that of the United States is over \$7,000. What's worse, this inequality, instead of decreasing, continues to increase each year. From 1965 to 1975, the poorest 25 countries in the world increased their per capita income, after controlling for inflation, at an annual rate of \$2. During the same period, the per capita income of the United States and Western Europe increased by over \$130 (Ibid., p. 2).

The Periphery is repeatedly told by the Center powers that it must control their population in order to sever the bonds of poverty. Yet the fact remains that much of the developed world has a population density many times that of most countries in Africa and Latin America. Belgium has 38 times as many inhabitants per square mile as Brazil; Britain has almost 50 times as many as Paraguay or Argentina; and Japan has 32 times as many as Peru. Switzerland with 404 inhabitants per square mile is seldom regarded as overpopulated, whereas Brazil with 31.4 is considered just that. As Galeano has pointed out, Haiti and El Salvador, "the human antheaps of Latin America",

have less inhabitants than Italy. Over half of the land in Bolivia, Brazil, Chile, Ecuador, Paraguay, Venezuela, and Nicaragua has no inhabitants at all. More importantly, one study after another has demonstrated that development reduces the birth rate not the other way around.

Obviously Nicaragua is not alone in facing these dilemmas of development. Julius K. Nyerere, President of Tanzania and one of the leading spokesmen for the Periphery, in a speech at the Howard University has clearly explained why ture development cannot occur within the present international economic system. His anlysis is worth quoting here:

"International aid is certainly not the answer, especially as it is offered by most countries as if it were charity for which we should be 'deserving poor' in the best traditions of feudalism, and also very grateful!

All the poor countries - including my own - welcome capital and technical aid when it is given without political strings . . . But in any case, the whole idea of aid is wrong because it is both ineffective in dealing with the problem of poverty, and humiliating to the receiver. Within Nations we no longer think it proper to deal with the problem of poverty through the personal charity of the rich. Yet voluntary charity by the rich nations is what is being advocated as the method for dealing with the poverty of nations!

Like the workers of the Industrialized countries, what we poor nations need is the right to work, and a fair return for our labor. We want equity not charity. We want to depend upon our own efforts . . .

(But) economics is only a part of life. Political freedom, social equality and respect, freedom of worship, freedom to live in peace and harmony with your fellows - all these things are very important to man. People have been willing to kill for them. But economics is about the means of life; it is basic. In poor countries, if there is a clash between personal freedom and economic development, it is generally not possible to give priority to the former. For people are dying unnecessarily because they do not have clean water, enough good food, or basic medical care - which is what economic development means to us. The most basic human right of all is the right to life itself, and a life which is not made miserable by hunger, ignorance, or preventable disease." (Ibid.)

The success of the Sandinista movement will allow the Nicaraguan people the opportunity to obtain these rights which have been unjustly denied them for so long.

APPENDIX A

1. What do you plant primera, corn, beans, or both?
 - A. Corn - 30%
 - B. Beans - 0
 - C. Both - 70%
2. Do you plant with a plow, an espeque, or both?
 - A. Plow - 69%
 - B. Espeque - 17%
 - C. Both - 14%
3. How many times do you weed your corn?
 - A. One - 59%
 - B. Two - 40%
 - C. Three - 2%
 - D. None - 0
4. Do you have any dangerous diseases which frequently attack your corn?
 - A. Yes - 70%
 - B. No - 27%
 - C. No answer - 2%
5. (If yes) ask: What do you use to combat the disease?
 - A. Nothing - 59%
 - B. Malathion - 7%
 - C. Dipterex - 1%
 - D. "Insecticide" - 8%
 - E. DDT - 5%
 - F. Licteran - 1%
 - G. Yellow cal - 1%
 - H. Neguban - 1%
 - I. Forgot - 1%
 - J. Other - 16%

(responded with name of the disease or insect instead of what was used to combat it)

6. More or less, how many manzanas of corn do you plant each year?
- A. 1 to 2 manzanas - 41%
 - B. 3 to 4 manzanas - 33%
 - C. 5 to 6 manzanas - 18%
 - D. 7 to 8 manzanas - 2%
 - E. 9 to 10 manzanas - 3%
 - F. 11 to 12 manzanas - 0
 - G. More than 12 manzanas - 0
7. Do you know what fertilizer is?
- A. Yes - 77%
 - B. No - 22%
 - C. No answer - 0
8. Have you used fertilizer in past years?
- A. Yes - 24%
 - B. No - 75%
 - C. No answer - 1%
9. Do you use fertilizer now?
- A. Yes - 33%
 - B. No - 67%
10. (If yes) ask: On what do you apply the fertilizer?
- A. Corn - 88%
 - B. Beans - 12%
11. (If he says no) ask: Why are you not using it?
- A. Costs too much - 60%
 - B. Does not know how to apply it - 12%
 - C. Not worth the trouble to apply it - 4%
 - D. Fertilizer doesn't work - 0
 - E. Others - 24%
- (Including: Ground too hilly - 2%; Good results without it - 1%; Plants at God's will - 1%; Soil doesn't need it - 1%; Bank would not give the loan money to buy it - 2%; No reason - 6%)

12. How many arrobas of corn can you harvest from one manzana?

20 arrobas per manzana	- less than 1%
40 arrobas per manzana	- 2%
50 arrobas per manzana	- 8%
60 arrobas per manzana	- 6%
70 arrobas per manzana	- 4%
75 arrobas per manzana	- 4%
80 arrobas per manzana	- 14%
100 arrobas per manzana	- 30%
120 arrobas per manzana	- less than 1%
125 arrobas per manzana	- less than 1%
140 arrobas per manzana	- less than 1%
150 arrobas per manzana	- 12%
160 arrobas per manzana	- less than 1%
200 arrobas per manzana	- 9%
250 arrobas per manzana	- 2%
300 arrobas per manzana	- 2%
350 arrobas per manzana	- less than 1%
500 arrobas per manzana	- less than 1%
No answer	- 2%

(Average yield per manzana = 99 arrobas.)

13. Generally do you use mozos (field laborers) in the cultivation of your corn?

A. Yes - 49%
B. No - 51%

14. (If the answer is yes) ask: How many mozos are employed for how many days?

<u>No. of Mozos</u>	<u>No. of Days Employed</u>	<u>No. of Responses</u>
1	10	3
1	4	1
1	8	3
1	14	1
1	18	2
1	20	3
1	15	1
1	30	2
1	50	1
1	45	1
1	12	1
1	32	1
2	30	4
2	20	1
2	60	2
2	26	1

<u>No. of Mozos</u>	<u>No. of Days Employed</u>	<u>No. of Responses</u>
2	16	1
2	12	1
2	25	1
2	8	3
3	40	1
3	20	1
3	18	2
3	50	1
3	67	1
3	80	1
3	60	1
3	8	1
3	96	1
3	39	1
3	26	1
4	12	1
4	20	1
4	30	1
4	85	1
4	40	1
4	18	1
4	4	1
5	12	1
6	18	1
7	50	1
8	80	1
10	30	1
11	6	1

15. Generally what do you do with your corn harvest?

- A. Sell it futuro - 0
- B. Sell it all at harvest - 3%
- C. Keep it all for own use - 23%
- D. Sell part at the harvest and store part - 73%
- E. Other - 3%
(Including "Kept it all to sell to the poor at reduced cost.")

16. Tell me in your opinion, is there much difference between the price of corn at harvest time and at the time of planting?

- A. Yes - 100%
- B. No - 0

17. (If yes) ask: What is the price at the harvest and at the planting?

<u>Price at Harvest per</u> <u>Arroba of Corn</u>	<u>Price at Planting</u> <u>per Arroba of Corn</u>	<u>Frequency</u> <u>of Responses</u>
C\$ 5	C\$ 15	less than 1%
6	13	less than 1%
8	14	5%
8	15	19%
8	16	less than 1%
8	12	less than 2%
9	14	less than 2%
10	12	less than 3%
10	13	15%
10	14	4%
10	15	32%
10	16	4%
10	17	less than 2%
10	20	less than 2%
10	18 to 75	less than 1%
12	15	less than 1%
13	35	less than 1%
15	30	less than 1%
15	40	less than 1%
16	60	less than 1%
18	18	less than 1%
No answer - 2 respondents		

18. How do you send your corn and beans to market to sell them?

- A. Cart with bueys - less than 1%
- B. Mules - 7%
- C. Truck - less than 1%
- D. Horses - 6%
- E. Sell at farm - 80%
- F. Other - 5%

19. Generally do you have to rent or do you own your method of sending your basic grains to market?

- A. Have to rent - 65%
- B. Have own method - 35%

20. (If he rents) ask: What does he use and how much does it cost?

<u>Response</u>	<u>Number of Responses</u>	<u>Cost per Arroba</u>
Cart with oxen	2	C\$1; C\$2
Oxen w/o cart	0	No answer
Cart w/o bueys	1	Free (borrowed)
Mules	7	C\$1; C\$1; C\$2; C\$1; C\$1; C\$13 per dia; C\$20 per dia;
Horses	0	no answer
Truck	1	C\$1.25
Other	0	no answer

21. How do you store your corn in the house to sell later?

- A. On the husk - 22%
- B. In grain storage boxes - 2%
- C. In barrels - 6%
- D. In sacks - 2%
- E. In trojas - 66%
- F. Other - 2%

22. Are you storing your corn in the same way now as you did 5 years ago?

- A. Yes - 98%
- B. No - 2%

23. (If he has changed) ask: How have you changed?

1 respondent has changed from using a troja in the past to presently using barrels; 2 respondents said they could not answer how they had changed.

24. Do you treat your corn with something before you store it?

A. Yes - 71%
B. No - 29%

25. (If he says yes) ask: What are you using to treat your corn?

A. DDT	- 64%
B. Phostoxin	- 2%
C. Gorgohicida	- 10%
D. Insecticide	- 5%
E. Salt	- 12%
F. Ashes	- 1%
G. Sulfur	- 1%
H. "The hand of God"	- 1%
I. Other	- 1%
J. Forgot	- 2%

26. What problems do you have with the corn which is stored in your house?

A. El gorgoho	- 71%
B. Rats	- 20%
C. No problems	- less than 10%

27. If you store 10 arrobas of corn in your house, how many arrobas will you lose before you sell the corn?

A. Nothing	- 13%
B. Less than 1 arroba	- 4%
C. 1 arroba	- 7%
D. 2 arrobas	- 17%
E. 3 arrobas	- 18%
F. 4 arrobas	- 12%
G. 5 arrobas	- 30%
H. Other	- 0

28. Do you think it could be possible for someone to store corn at home until the price reaches its highest level without losing any of the corn?

A. Yes	- 74%
B. No	- 25%
C. Don't know	- 1%

29. (If he says yes) ask: How is it possible?

- | | |
|--|-------|
| A. With gorgohicide | - 29% |
| B. With luck | - 3% |
| C. "If God wants it" | - 28% |
| D. "It all depends" | - 1% |
| E. With barrels | - 12% |
| F. "Knowing the proper way of storing" | - 3% |
| G. "Making a home silo" | - 1% |
| H. With DDT | - 1% |
| I. With malethion | - 1% |
| J. Treating the corn first | - 7% |
| K. "I never lose because the pigs eat the
damaged corn" | - 2% |
| L. A,B, and C | - 1% |
| M. A and C | - 7% |
| N. B and C | - 2% |
| O. "With God's help and barrels" | - 1% |

30. Do you plant coffee?

- A. Yes - 23%
B. No - 77%

31. (If he says yes) ask: What amount of coffee do you plant?

<u>Number of Responses</u>	<u>Number of Coffee Trees</u>
1	20
1	25
1	50
2	100
3	200
1	300
1	400
4	500
5	1000
1	1500
4	2000
2	3000
1	4000
1	20,000
1	No answer

32. What do you plant postrera?

- A. Corn - 0
B. Beans - 98%
C. Both - 0
D. Nothing - 2%
("Because the diseases have gotten too bad.")

33. How do you plant your beans?

- A. Plow - 32%
- B. Espeque - 28%
- C. Espeque below corn - 33%
- D. Both - 6%
- E. A and C - 1%

34. Do you treat your beans with something before you plant them?

- A. Yes - 16%
- B. No - 84%

35. (If he says yes) ask: What do you treat your beans with before you plant them?

<u>Type of Treatment</u>	<u>Number of Responses</u>
Gorgohicide	17
Keroscene	1
Ashes	2
Carbonate	1
Bisulfuro	1
Cow Manure	1

36. How many times do you clean your beans?

- A. None - less than 1%
- B. One - 85%
- C. Two - 13%
- D. Three - less than 1%

37. Do you know what insecticide is?

- A. Yes - 66%
- B. No - 34%
- C. No answer - less than 1%

38. Do you use insecticide every year?

- A. Yes - 28%
- B. No - 72%

39. Are there insects or diseases that attack your beans?

- A. Yes - 95%
- B. No - 5%

40. (If he says yes) ask: What are these diseases?

A. Maya	-	31%
B. Lippe	-	34%
C. Langosta	-	1%
D. Gusano ciego	-	less than 1%
E. Burra	-	less than 1%
F. Picudo	-	25%
G. Chamusca	-	less than 1%
H. Hielo negro	-	less than 1%
I. Pulgon	-	3%

41. Do you plant anything besides corn and beans?

A. Yes	-	27%
B. No	-	73%

42. (If he says yes) ask: What else do you plant, and how many manzanas do you plant of it?

<u>Type of Crop</u>	<u>Number of Responses</u>	<u>Number of Manzanas</u>
Rice	7	1/2; 1/2; 1/4; 1/2; 1/2; 1/4; 1
Coffee	20	2; 2; 1; 1/2; 2; 1/4; 1/4; 1-1/4; 1/2; 1/4; 4; 3/4; 1; 5; 1/2; 1/2; 1; 1; 1/2; 2; 3; 1/2; 1; 1; 1/2; 1; 1; 1; 2
Sorgo	9	3; 1/2; 1; 1; 1/2; 1; 1; 1; 2
Chilla	1	1

43. How many manzanas of beans do you plant each year?

A. 1 to 2	-	70%
B. 3 to 4	-	19%
C. 5 to 6	-	8%
D. 7 to 8	-	less than 1%
E. 9 to 10	-	less than 1%
F. 11 to 12	-	less than 1%
G. 12 to 13	-	0
H. Other	-	-

44. How many arrobas of beans do you harvest per manzana?

<u>Arrobas Per Manzana</u>	<u>Frequency of Response</u>
15	less than 1%
20	6%
25	3%
30	11%
35	2%
40	14%
45	less than 1%
50	29%
60	19%
70	3%
75	2%
80	4%
100	5%

45. What do you do with you bean harvest?

A. Sell it futuro	- 0
B. Sell it all at the harvest	- 2%
C. Keep it all	- 6%
D. Sell part and keep part	- 92%

<u>Ratio of Part Sold to Part Kept</u>	<u>Frequency of Response</u>
25/75	less than 1%
30/70	less than 1%
40/60	less than 2%
55/45	less than 1%
50/50	28%
60/40	10%
67/33	6%
70/30	16%
75/25	7%
80/20	20%
85/15	less than 1%
90/10	6%

46. Is there a difference in the price of beans at harvest time and at planting time?

A. Yes	- 97%
B. No	- 3%

47. (If he says yes) ask: How has the price changed?

<u>Ratio of Price at Harvest Time to Price at Planting Time</u>	<u>Frequency of Response</u>
---	------------------------------

25/50	3%
25/45	less than 2%
28/40	less than 1%
28/50	3%
30/50	37%
35/40	less than 1%
35/45	less than 1%
35/50	14%
40/50	28%
45/50	7%
48/50	less than 1%
48/75	less than 1%
Don't know	

48. How do you store the beans you plan to sell later?

A. In sacks - 67%
 B. In barrels - 30%
 C. In bunkers - 3%
 D. Other - 0

49. Are you storing your beans in the same manner that you stored them 5 years ago?

A. Yes - 100%
 B. No - 0

50. (If he has changed) ask: How have you changed?

No one has changed!

51. Before storing your beans, do you treat them with something?

A. Yes - 56%
 B. No - 44%

52. (If he says yes) ask: What do you treat the beans with?

- | | |
|----------------------------|-------|
| A. DDT | - 2% |
| B. Phostoxin | - 3% |
| C. Gorgohicide | - 74% |
| D. Insecticide | - 2% |
| E. Ashes | - 3% |
| F. Bisfuro | - 8% |
| G. Alcanfor | - 6% |
| (children's cold medicine) | |
| H. Chile (ground) | - 2% |

53. Do you dry your beans in the sun before storing them?

- A. Yes - 89%
B. No - 11%

54. (If he says yes) ask: How many days do you dry them in the sun for?

- A. One - 3%
B. Two - 25%
C. Three - 56%
D. Four - 6%
E. Five - 5%
F. Six - 3%
G. Seven - 0
H. Eight - 3%

55. During storage, are there insects or diseases which attack your beans which do not attack your corn?

- A. Yes - 75%
B. No - 24%
C. Don't know - 1%

56. (If he says yes) ask: What are these diseases or insects?

- A. Gorgohol de frijole - 89%
B. Polilla - 8%
C. Palomillo - 2%
D. Forgot the name - 1%

57. If you store 10 arrobas of beans in your house, how many arrobas will you lose before you sell the beans?

- A. None - 36%
- B. Less than 1 - 13%
- C. 1 - 18%
- D. 2 - 14%
- E. 3 - 5%
- F. 4 - 3%
- G. 5 - 10%
- H. Other -

58. Do you think it would be possible for someone to store beans in their house until the price is the highest possible but not lose any?

- A. Yes - 78%
- B. No - 22%

PART II

59. Have you ever borrowed money from Banco Nacional?
- A. Yes - 46%
 - B. No - 54%
60. (If he says yes) ask: For what did you use the loan? (Some farmers took out different types of loans.)
- A. Agriculture - 66%
 - B. Oxen - 14%
 - C. Vacas paridas - 5%
 - D. Cattle - 4%
 - E. A and B - 7%
 - F. B and D - less than 2%
 - G. A, B, C and D - 4%
 - H. Fattening pigs - less than 2%
 - I. Mules - less than 2%
61. (If the loan was for agriculture) ask: What did you plant with the loan and did you plant with or without fertilizer?
- A. Corn with fertilizer - 51%
 - B. Corn without fertilizer - 24%
 - C. Beans with fertilizer - 2%
 - D. Beans without fertilizer - 2%
 - E. Corn and beans with fertilizer - 20%
62. Who do you think the bank is helping more: the rich farmers, the poor farmers, both of them?
- A. The rich farmers - 53%
 - B. The poor farmers - 9%
 - C. Both equally - 30%
 - D. Don't know - 8%
63. If the bank would give you a loan, would you work with the bank in the future?
- A. Yes - 83%
 - B. No - 16%
 - C. Don't know - 1%

64. (If he says yes) ask: What would you like to take out a loan for?
- A. Cattle - 21%
 - B. Agriculture - 64%
 - C. Milk cows - 1%
 - D. Agriculture and oxen - 2%
 - E. A and B - 5%
 - F. Vacas parida - 3%
 - G. Coffee - 1%
 - H. Business loan - 2%
 - I. Don't know - 2%
65. Do you know what INCEI'S job is?
- A. Yes - 21%
 - B. No - 79%
66. (If he says yes) ask: What is the work of INCEI?
- A. To buy grains and sell them in other parts - 8%
 - B. To provide the farmers with a safe location to store their corn and beans - 58%
 - C. To stop the price of corn and beans from fluctuating - 12%
 - D. "To dry corn" - 4%
 - E. "To buy grains" - 12%
 - F. "To give technical assistance to the farmers so that they can get a better harvest" - 3%
 - G. "An agricultural institution for the farmers" - 3%
67. Has anyone from INCEI ever visited you?
- A. Yes - 5%
 - B. No - 95%
68. Have you ever sold corn or beans to INCEI?
- A. Yes - 11%
 - B. No - 89%
69. (If he says yes) ask: How many times have you sold corn or beans to INCEI?
- A. 1 - 58%
 - B. 2 - 42%
 - C. 3 - 0
 - D. 4 - 0

70. (If he says no) ask: Why have you never sold corn or beans to INCEI?
- A. The price that INCEI pays is too low - 14%
 - B. The grains weigh too little after INCEI dries them - 2%
 - C. It is very difficult to transport the grains there - 12%
 - D. INCEI cheats in weighing the grains - 6%
 - E. Don't know - 6%
 - F. "No chance" - 3%
 - G. "Harvest is too small" - 28%
 - H. Sells all at home - 24%
 - I. "Sells to others" - less than 1%
 - J. INCEI doesn't always buy - 2%
 - K. Doesn't trust INCEI - 2%
 - L. Only trusts one buyer in town - less than 1%
71. Do you think it would be possible to maintain the price of corn and beans all year?
- A. Yes - 46%
 - B. No - 13%
 - C. Don't know - 41%
72. Do you think it would be good if the price of corn and beans always stayed the same?
- A. Yes - 54%
 - B. No - 13%
 - C. Don't know - 33%
73. Who do you think INCEI is helping more, the rich farmers, the poor farmers, or both equally?
- A. The rich farmers - 39%
 - B. The poor farmers - 9%
 - C. Both equally - 24%
 - D. Don't know - 28%
74. Do you know anyone who either sold or stored their corn or beans in the silos at INCEI?
- A. Yes - 30%
 - B. No - 70%

75. To whom do you sell your corn and beans?
- | | | |
|----------------------------------|---|--------------|
| A. Herman Rayo | - | 6% |
| B. Porfilio Flores | - | 2% |
| C. Orlando Cerrato | - | 15% |
| D. Outside buyers | - | 38% |
| E. Others | - | 4% |
| F. "highest bidder" | - | 8% |
| G. "first person who comes" | - | 9% |
| H. "whoever will buy" | - | 18% |
| I. "to the poor who need it most | - | less than 1% |
76. Has anyone ever cheated you when you were selling your corn and beans?
- | | | |
|--------|---|-----|
| A. Yes | - | 16% |
| B. No | - | 84% |
77. (If he says yes) ask: What happened?
- | | | |
|---------------------------------------|---|-----|
| A. The scale was rigged | - | 11% |
| B. The buyer did not pay a fair price | - | 32% |
| C. Other | - | |
| D. Lied about the correct weight | - | 47% |
| E. B and D | - | 11% |
78. To whom do you prefer selling your corn and beans to, buyers from Ciudad Sandino or from other parts?
- | | | |
|--------------------------------|---|--------------|
| A. Sandino | - | 59% |
| B. Ocotal | - | less than 1% |
| C. Esteli | - | 0 |
| D. Managua | - | 0 |
| E. Other areas | - | 9% |
| F. Does not matter | - | 17% |
| G. Highest bidder | - | 13% |
| H. "The poor who need it most" | - | less than 1% |
| I. Don't know | - | less than 1% |
79. Would you spend your own money to build a spot where you could store your grains on your own farm and at the same time be certain that you would not lose any corn or beans?
- | | | |
|---------------|---|-----|
| A. Yes | - | 54% |
| B. No | - | 11% |
| C. Don't know | - | 35% |

80. If a silo on your own land was too expensive, would you give money to build a site where you could store grain with your neighbors and at the same time be certain that you would not lose any corn or beans?

- A. Yes - 68%
- B. No - 13%
- C. Don't know - 19%

81. Do you think that INCEI is drying the corn and beans too much?

- A. Yes - 20%
- B. No - 9%
- C. Don't know - 71%

82. Do you know why INCEI is drying the corn and beans?

- A. Yes - 28%
- B. No - 6%
- C. Don't know - 66%

PART III

83. How many years have you lived in this location?

- A. Less than 5 - 6%
- B. 6 to 10 - 17%
- C. 11 to 15 - 12%
- D. 16 to 20 - 13%
- E. 21 to 25 - 8%
- F. 26 to 30 - 10%
- G. 31 to 35 - 10%
- H. 36 to 40 - 6%
- I. 41 to 45 - 3%
- J. More than 45 - 16%
- K. No answer - 2%

84. Were you born here or have you come from another part?

- A. Here - 54%
- B. Came from another location - 46%

Locations

- Somota - 3%
- Leon - 30%
- Esteli - 29%
- Ocotal - 2%
- Condega - 3%
- Quilali - 2%
- Pueblo Nuevo - 2%
- Trinidad - 14%
- Jalapa - 3%
- Santa Maria - 2%
- Osocona - 2%
- San Juan - 2%
- El Sausa - 2%
- Puerto Cabaza - 2%
- No answer - 2%

85. If you could, would you like to go to another location?

- A. Yes - 75%
- B. No - 15%
- C. No answer - 7%
- D. Does't know - 3%

86. How old are you?

- | | | | |
|----|--------------|---|-----|
| A. | 15-20 | - | 3% |
| B. | 21-25 | - | 16% |
| C. | 26-30 | - | 9% |
| D. | 31-35 | - | 14% |
| E. | 36-40 | - | 20% |
| F. | 41-45 | - | 11% |
| G. | 46-50 | - | 3% |
| H. | More than 51 | - | 23% |
| I. | No answer | - | 2% |

87. How many kids do you have?

- | | | | |
|----|----|---|-----|
| A. | 0 | - | 14% |
| B. | 1 | - | 3% |
| C. | 2 | - | 6% |
| D. | 3 | - | 18% |
| E. | 4 | - | 13% |
| F. | 5 | - | 8% |
| G. | 6 | - | 12% |
| H. | 7 | - | 10% |
| I. | 8 | - | 7% |
| J. | 9 | - | 9% |
| K. | 10 | - | 0 |
| L. | 11 | - | 0 |
| M. | 12 | - | 0 |
| N. | 13 | - | 2% |
| O. | 14 | - | 1% |

88. Are you the owner of the land that you plant or are you renting it?

- | | | | |
|----|--------------------------------|---|-----|
| A. | Own | - | 51% |
| B. | Rent | - | 43% |
| C. | Both | - | 0 |
| D. | Family provides land rent free | - | 6% |

89. How many manzanas do you plant each year?

A. Number of manzanas of corn primeria

- | | | |
|-----------------|---|-----|
| 0 manzanas | - | 0 |
| 1 manzanas | - | 16% |
| 2 manzanas | - | 25% |
| 3 manzanas | - | 21% |
| 4 manzanas | - | 11% |
| 5 manzanas | - | 14% |
| 6 manzanas | - | 5% |
| Over 7 manzanas | - | 8% |

B. Number of manzanas of beans primeria

0 manzanas	- 44%
Less than 1 manzana	- 23%
1 manzana	- 23%
2 manzanas	- 5%
3 manzanas	- 3%
Over 3 manzanas	- 3%

C. Number of manzanas of corn postrera

0 manzanas	- 100%
------------	--------

D. Number of manzanas of beans postrera

0 manzanas	- 3%
Less than 1 manzana	- 4%
1 manzana	- 24%
2 manzanas	- 43%
3 manzanas	- 13%
4 manzanas	- 8%
Over 4 manzanas	- 5%

90. Do you own vacas paridas?

A. Yes	- 42%
B. No	- 58%

91. (If he says yes) ask: How many vacas paridas do you own?

Owns 1 vaca parida	- 26%
Owns 2 vacas paridas	- 26%
Owns 3 vacas paridas	- 20%
Owns 4 vacas paridas	- 16%
Owns 5 vacas paridas	- 4%
Owns 6 vacas paridas	- 2%
Owns more than 6 vacas paridas	- 6%

92. Do you own oxen?

A. Yes	- 47%
B. No	- 53%

93. (If he says yes) ask: How many oxen do you own?

Owns 1 ox	- 9%
Owns 2 oxen	- 79%
Owns 3 oxen	- 4%
Owns 4 oxen	- 9%

94. Do you own other animals, pigs, chickens, or horses?

A. Number of pigs owned

None	- 42%
Owens 1 pig	- 25%
Owens 2 pigs	- 17%
Owens 3 pigs	- 6%
Owens 4 pigs	- 3%
Owens 5 pigs	- 3%
Owens more than 5 pigs	- 5%

B. Number of chickens owned

None	- 11%
Owens 1 to 5 chickens	- 17%
Owens 6 to 10 chickens	- 21%
Owens 11 to 15 chickens	- 17%
Owens 16 to 20 chickens	- 21%
Owens over 20 chickens	- 13%

C. Number of horses owned

None	- 59%
Owens 1 horse	- 25%
Owens 2 horses	- 11%
Owens 3 horses	- 1%
Owens more than 3 horses	- 3%

95. Do you own a radio?

A. Yes - 76%
B. No - 24%

96. Do you know how to read?

A. Yes - 40%
B. No - 60%

97. Do you know how to write?

A. Yes - 37%
B. No - 63%

98. More or less how many quintales of beans and corn do you need to harvest each year for a comfortable life?

A. Corn

Less than 100 arrobas	- 8%
100 arrobas	- 17%
150 arrobas	- 8%
200 arrobas	- 33%
250 arrobas	- 3%
300 arrobas	- 10%
350 arrobas	- 17%
400 arrobas	- 5%
500 arrobas	- 8%
Over 500 arrobas	- 8%

B. Beans

Less than 50 arrobas	- 23%
50 arrobas	- 29%
100 arrobas	- 28%
150 arrobas	- 3%
200 arrobas	- 10%
300 arrobas	- 5%
500 arrobas	- 5%

99. Do you think the moon is important in planting?

- A. Yes - 86%
B. No - 14%

100. Do you believe there are monkey people?

- A. Yes - 5%
B. No - 95%

101. Do you know anyone who has had corn, beans, or chickens stolen by monkey people?

- A. Yes - 2%
B. No - 98%

102. Do you know anyone who has seen monkey people?

- A. Yes - 4%
B. No - 96%

103. Write the name of the farmer:

104. What valle is he from?

San Diego	- 10%
El Collo	- 5%
San Albino	- 16%
Quebrada Grande	- 3%
Muyuca	- 20%
Casa Viejas	- 6%
Pie de Cuesta	- 1%
Arenal	- 2%
Sabana Larga	- 7%
Sabana Grande	- 6%
El Terrero	- 5%
Carrisal	- 4%
La Podria	- 2%
La Fragua	- 2%
Buenos Aires	- 10%

105. Type of house

Adobe	- 58%
Straw	- 5%
Stick	- 8%
Brick	- 2%
Wood	- 22%
No answer	- 2%

106. Number of rooms

1 room	- 57%
2 rooms	- 31%
3 rooms	- 9%
4 rooms	- 2%

107. Where do you get your water from?

Stream	- 61%
Well	- 10%
Running water	- 1%
Water hole	- 25%
River	- 2%

108. Is there electricity?

Yes	- 26%
No	- 74%

109. Is there a latrine?

Yes - 47%

No - 53%

110. What type of floor do you have?

Earth - 89%

Wood - 1%

Brick - 1%

Cement - 8%

Tile - 1%

APPENDIX B

1. ¿Qué siembra usted de primera, maíz, frijoles o los dos?
 A. maíz _____
 B. frijoles _____
 C. los dos _____
2. ¿Siembra usted con arado, con espeque o con los dos?
 A. de arado _____
 B. de espeque _____
 C. los dos _____
3. ¿Cuántas veces limpia usted su maíz?
 A. ninguna _____
 B. una _____
 C. dos _____
 D. tres _____
4. ¿Tiene usted algunas plagas peligrosas que ataca su maíz con mucha frecuencia?
 A. si _____
 B. no _____
5. (Si dice que si) pregúntele: ¿Qué usa usted para combatir las plagas?
 ESCRIBA lo que el dice _____
6. Más o menos, ¿cuántas manzanas siembra usted de maíz cada año?
 A. 1 al 2 _____
 B. 3 al 4 _____
 C. 5 al 6 _____
 D. 7 al 8 _____
 E. 9 al 10 _____
 F. 11 al 12 _____
 G. Más que 13 _____
7. ¿Sabe usted lo que es abono?
 A. si _____
 B. no _____
8. ¿Ha usado usted abono en los años pasados?
 A. si _____
 B. no _____

9. ¿Usa usted abono ahora?
- A. si _____
B. no _____
10. (Si dice que si) pregúntele: ¿En que aplica el abono?
- A. maíz _____
B. frijoles _____
11. (Si dice que no) pregúntele: ¿Porque no está usandolo?
- A. cuesta demasiado _____
B. no sabe como aplicarlo _____
C. no vale la pena aplicarlo _____
D. el abono no sirve _____
E. otra razón (escriba que dice) _____
12. ¿Cuántas arrobas de maíz puede usted cosechar de una manzana?
- (ESCRIBA el numero) _____
13. ¿Generalmente ocupa usted mozos para el cultivo de su maíz?
- A. si _____
B. no _____
14. (Si dice que si) pregúntele: ¿Cuántos mozos está ocupando y por cuántos días?
- A. numero de mozos _____
B. numero de días _____
15. ¿Generalmente que hace usted con su cosecha de maíz?
- A. se vende futuro _____
B. se vende todo al cosecha _____
C. dejarla todo para sus gastos _____
D. vende una parte a la cosecha y guarde una parte _____
E. otra (Escriba lo que el dice) _____
16. Dígame en su opinion ¿Hay mucha diferencia entre el precio de maíz del tiempo de cosechar y del tiempo de sembrar?
- A. si _____
B. no _____

17. (Si dice que si) pregúntele: ¿Cuáles son los precios a la cosecha y a la siembra?
- A. el precio a la cosecha por arroba de maiz C\$
 - B. el precio a la siembra por arroba de maiz C\$
-
18. ¿En qué manera manda usted su maíz y frijoles al mercado para venderlos?
- A. en carreta con bueyes _____
 - B. en machos _____
 - C. en caballos _____
 - D. en camioneta _____
 - E. vende en la finca _____
 - F. otra _____
19. Generalmenta ¿tiene usted que aquilar o tiene su propio metodo a mandar sus granos basicos al mercado?
- A. tiene que aquilar _____
 - B. tiene su propio metodo _____
20. Si aquila pregúntele: ¿Qué usa y cuánto vale?
- A. carreta con bueyes _____
precio por arroba C\$ _____
 - B. bueyes sin carreta _____
precio por dia C\$ _____
 - C. carreta sin bueyes _____
precio por dia C\$ _____
 - D. machos _____
precio por arroba C\$ _____
 - E. caballos _____
precio por arroba C\$ _____
 - F. camioneta _____
precio por arroba C\$ _____
 - G. otra _____
precio _____
21. ¿Como guarda usted el maíz que tiene en su casa para vender más tarde?
- A. en la mazorca _____
 - B. en los bunques _____
 - C. en los barriles _____
 - D. en sacos _____
 - E. en una troja _____
 - F. otra (Diga lo que el dice) _____

22. ¿Está guardando usted su maíz en la misma manera como lo hizo hace cinco años?
- A. si _____
B. no _____
23. (Si lo había cambiado) pregúntele: ¿Como lo habia cambiado usted?
- A. ESCRIBA lo que el dice _____
24. ¿Está curando su maíz con algo antes de que lo guarde?
- A. si _____
B. no _____
25. (Si dice que si) pregúntele: ¿Qué está usando para curar el maíz?
- A. D D T _____
B. Phostoxin _____
C. Otra cosa _____
26. ¿Qué problema tiene usted con el maíz cuando está guardandolo en su casa?
- A. el gorgoho _____
B. ratones _____
C. otra (diga lo que dice) _____
27. Si tuviera usted diez arrobas de maíz guardado en su casa ¿cuántas arrobas pudiera perder antes de que se vende?
- A. nada _____
B. menos que una arroba _____
C. una arroba _____
D. dos arrobas _____
E. tres arrobas _____
F. cuatro arrobas _____
G. cinco arrobas _____
H. otra _____
28. ¿Piensa usted que sería posible para alguien a guardar el maíz en su casa hasta el precio es lo más alto posible sin perder nada del maíz?
- A. si _____
B. no _____

29. (Si dice que si) pregúntele: ¿Cómo sería posible este?
- A. con gorgohicide _____
 - B. con suerte _____
 - C. si Dios quiere _____
 - D. otra (escriba lo que dice) _____
30. ¿Siembra usted el café?
- A. si _____
 - B. no _____
31. (Si dice que si) pregúntele: ¿Qué cantidad de café siembra usted?
- A. ESCRIBA la cantidad _____
32. ¿Qué siembra usted de postrera?
- A. maíz _____
 - B. frijoles _____
 - C. nada _____
33. ¿Cómo está sembrando usted los frijoles?
- A. de arado _____
 - B. con espeque _____
 - C. con espeque abajo el maíz _____
 - D. los dos _____
34. ¿Está curando usted los frijoles con algo antes de sembrarlos?
- A. si _____
 - B. no _____
35. (Si dice que si) pregúntele: ¿Con qué cura usted los frijoles antes de sembrarlos?
- A. ESCRIBA lo que dice _____
36. ¿Cuántas veces limpia usted los frijoles?
- A. ninguna _____
 - B. una _____
 - C. dos _____
 - D. tres _____

37. ¿Sabe usted lo que es insecticida?
- A. si _____
B. no _____
38. ¿Está usando usted insecticida todos los años?
- A. si _____
B. no _____
39. ¿Tiene usted algunas plagas o enfermedades que ataca sus frijoles?
- A. si _____
B. no _____
40. (Si dice que si) pregúntele: ¿Cuáles son las plagas?
- A. ESCRIBA lo que dice _____
41. ¿Está sembrando usted algo más de maíz y frijoles?
- A. si _____
B. no _____
42. (Si dice que si) pregúntele: ¿Qué más está sembrando y el numero de manzanas?
- A. arroz _____ numero de manzanas _____
B. café _____ numero de manzanas _____
C. sorgo _____ numero de manzanas _____
D. otra _____ numero de manzanas _____
43. ¿Cuántas manzanas de frijoles está sembrando usted cada año?
- A. 1 al 2 _____ E. 9 al 10 _____
B. 3 al 4 _____ F. 11 al 12 _____
C. 5 al 6 _____ G. 13 al 14 _____
D. 7 al 8 _____ H. otra _____
44. ¿Cuántas arrobas de frijoles está cosechando usted de una manzana?
- A. ESCRIBA la cantidad _____
45. ¿Qué hace usted con su cosecha de frijoles?
- A. se vende futuro _____
B. se vende todo a la cosecha _____
C. se vende una parte y guarda una parte _____
(si #C, pregúntele el porciento) vender _____
guardar _____

46. Dígame ¿hay una diferencia entre el precio de los frijoles a la cosecha y al tiempo de sembrar?
- A. si _____
B. no _____
47. (Si dice que si) pregúntele: ¿Cómo ha cambiado el precio?
- A. precio a la cosecha por arroba es C\$ _____
B. precio al siembra por arroba es C\$ _____
48. ¿Cómo guarda en la casa los frijoles que va a vender más tarde?
- A. en sacos _____
B. en barriles _____
C. en bunques _____
D. otra _____
49. ¿Está guardando usted los frijoles en la misma manera como lo hizo hace cinco años?
- A. si _____
B. no _____
50. (Si lo había cambiado) pregúntele: ¿Cómo cambió?
- A. ESCRIBA lo que dice _____
51. ¿Antes de que usted guarda los frijoles está curando los frijoles?
- A. si _____
B. no _____
52. (Si dice que si) pregúntele: ¿Con qué está curando los frijoles?
- A. D D T _____
B. Phostoxin _____
C. Gorgohicide _____
D. otra (escribe que) _____
53. ¿Asolea usted sus frijoles antes de guardarlos?
- A. si _____
B. no _____

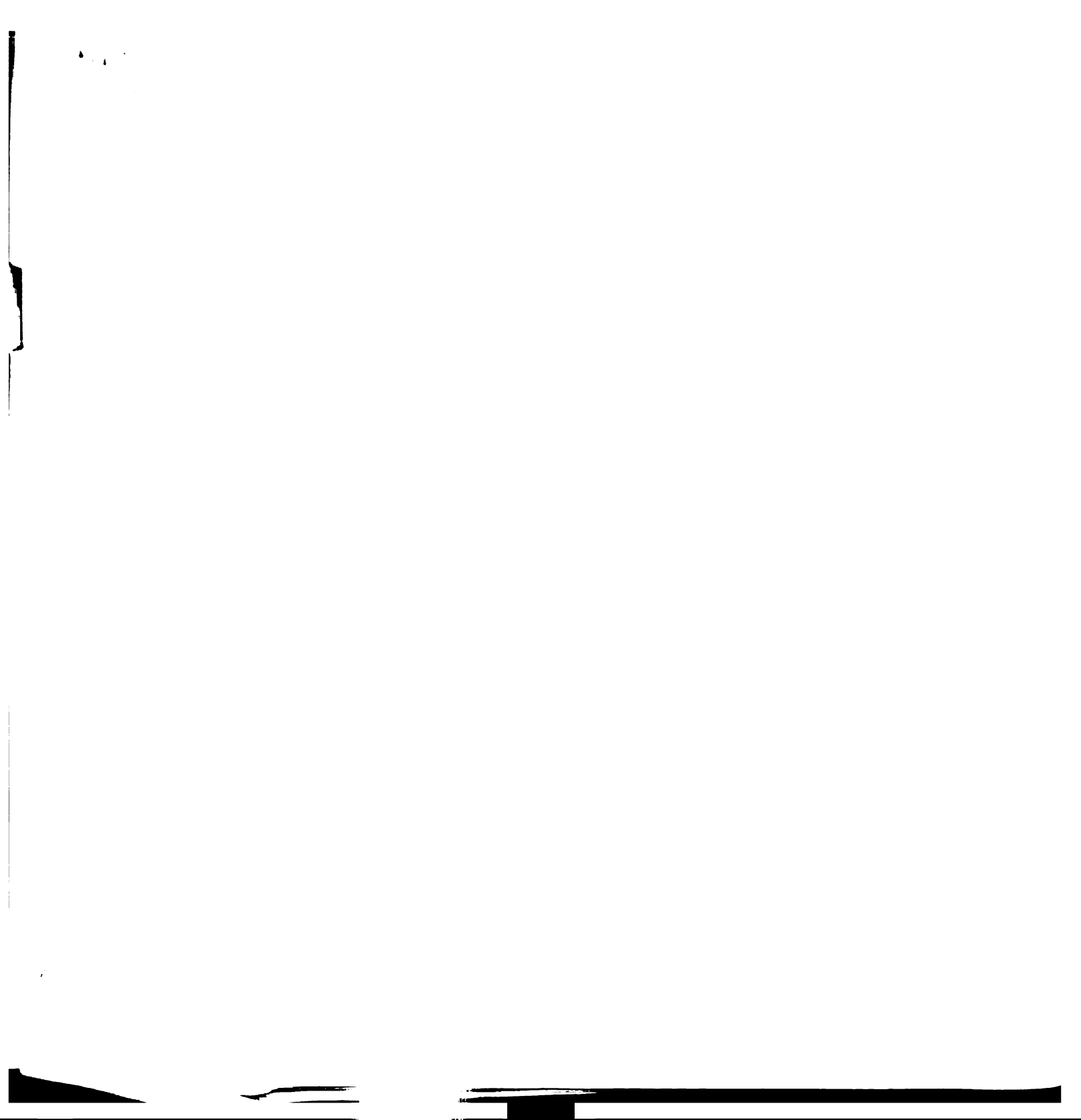
54. (Si dice que si) pregúntele: ¿Para cuántos días está asoleandolos?
- A. un día _____ C. tres días _____
B. dos días _____ D. otra _____
55. Cuando está guardando sus granos ¿tiene ud algunas insectos o plagas que ataca solamente los frijoles y que no ataca el maíz?
- A. si _____
B. no _____
56. (Si dice que si) pregúntele: ¿Cuáles son?
- A. ESCRIBA lo que dice _____
57. Si usted guarde diez arrobas de frijoles en su casa, ¿cuántas arrobas puede perder antes de que usted vendelas?
- A. nada _____
B. menos que una arroba _____
C. una arroba _____
D. dos arrobas _____
E. tres arrobas _____
F. cuatro arrobas _____
G. cinco arrobas _____
H. otra _____
58. ¿Piensa usted que sería posible para alguien guardar frijoles en su casa hasta que el precio es lo más alto posible sin perder nada?
- A. si _____
B. no _____

II

59. ¿Alguna vez ha prestado usted dinero del Banco Nacional?
- A. si _____
B. no _____
60. (Si dice que si) pregúntele: ¿Para qué usaba el prestamo?
- A. agricultura _____
B. bueyes _____
C. vacas paridas _____
D. ganado _____
E. otra (escriba que) _____
61. (Si fuera para la agricultura) pregúntele: ¿Que sembró usted con el prestamo y lo sembró sin o con abono?
- A. tipo de siembra _____
B. con abono _____
C. sin abono _____
62. ¿A quién piensa usted el banco está ayudando más, a los agricultores ricos o a los agricultores pobres, o a los dos igualmente?
- A. a los ricos _____
B. a los pobres _____
C. a los dos igualmente _____
63. Si el banco le diera habilitación, ¿trabajaría usted con el banco en el futuro?
- A. si _____
B. no _____
64. (Si dice que si) pregúntele: ¿Para qué le gustaría sacar el prestamo?
- A. ESCRIBA lo que dice _____
65. ¿Sabe usted lo que es el trabajo de INCEI?
- A. si _____
B. no _____

66. (Si dice que si) pregúntele: ¿Qué es el trabajo de INCEI?
- A. para comprar granos y venderlos en otra parte
 - B. para dar a los agricultores un sitio seguro para guardar el maíz y frijoles
 - C. para parar el precio de maíz y frijoles de subir y bajar
 - D. otra (escriba lo que dice) _____
67. ¿Alguna vez ha venido a visitarle en su casa un representante de INCEI?
- A. si _____
 - B. no _____
68. ¿Ha vendido usted alguna vez maíz o frijoles al INCEI?
- A. si _____
 - B. no _____
69. (Si dice que si) pregúntele: ¿Cuántas veces ha vendido su maíz o frijoles a INCEI?
- A. una _____
 - B. dos _____
 - C. tres _____
 - D. otra (escriba lo que dice) _____
70. (Si dice que no) pregúntele: ¿Porque nunca ha vendido su maíz o frijoles a INCEI?
- A. el precio lo que paga INCEI es muy bajo
 - B. los granos pesan demasiado pocos despres ellos se secan
 - C. es muy dificil a llevar los granos alla
 - D. no le sale la pesa _____
 - E. no sabe _____
 - F. otra razon _____

71. ¿Piensa usted que sería posible mantener el precio de maíz y frijoles todo el año?
- A. si _____
 B. no _____
 C. no sabe _____
72. ¿Piensa usted que sería bueno si el precio de maíz y frijoles siempre quedaba lo mismo?
- A. si _____
 B. no _____
 C. no sabe _____
73. ¿A quién piensa usted que INCEI está ayudando más, a los agricultores ricos, o a los agricultores pobres, o a los dos igualmente?
- A. los ricos _____
 B. los pobres _____
 C. los dos _____
74. ¿Conoce usted alguna persona quién vendió o quién guardaba su maíz o frijoles en los silos de INCEI?
- A. si _____
 B. no _____
75. A quién vende usted su maíz y frijoles?
- A. Herman Rayo _____
 B. Porfilio Flores _____
 C. Orlando Cerrato _____
 D. compradores de afuera _____
 E. otra (escriba a quien) _____
76. ¿Alguien le engañaba a usted alguna vez cuando estaba vendiendo su maíz y frijoles?
- A. si _____
 B. no _____
77. (Si dice que si) pregúntele: ¿Qué le paso?
- A. la balanza era equivocada _____
 B. no le pagaba un precio justo _____
 C. otra razón (diga lo que dice) _____
 D. le cachaba la pesa _____



78. ¿A quién prefiere vender su maíz y frijoles a los comerciantes del Jicaro o otra parte?
- A. de Jicaro _____
 - B. de Ocotol _____
 - C. de Esteli _____
 - D. de Managua _____
 - E. otra parte _____
 - F. no es muy importante _____
79. ¿Gastaría usted su propio dinero para construir un sitio donde pudiera guardar sus granos en su propio finca y al mismo tiempo queda seguro usted que no perdería nada de su maíz y frijoles?
- A. si _____
 - B. no _____
 - C. no sabe _____
80. Díganos que un silo en su propio terrano es demasiado caro, ¿daría usted dinero para construir un sitio donde puede guardar granos juntos con su vecinos y al mismo tiempo queda seguro que no va a perder nada de su maíz o frijoles?
- A. si _____
 - B. no _____
 - C. no sabe _____
81. ¿Piensa usted que INCEI está secando el maíz y frijoles demasiado?
- A. si _____
 - B. no _____
 - C. no sabe _____
82. ¿Sabe usted porque INCEI está secando el maíz y frijoles?
- A. si _____
 - B. no _____
 - C. no sabe _____

III

83. ¿Cuántos años tiene usted de vivir en este lugar?
A. Escriba el numero del años _____
84. ¿Nació usted aquí o ha venido de otra parte?
A. nació aquí _____
B. vino de otra parte _____
(dónde?) _____
85. Si usted podría, ¿le gustaría ir a otra parte?
A. si _____
B. no _____
86. ¿Cuántos años tiene usted?
A. 15 a 20 _____ E. 36 a 40 _____
B. 21 a 25 _____ F. 41 a 45 _____
C. 26 a 30 _____ G. 46 a 50 _____
D. 31 a 35 _____ H. más que 51 _____
87. ¿Cuántos niños tiene usted?
Numero _____ Numero de varones _____
Los edades _____ Numero de embras _____
88. ¿Está usted el dueño de la tierra que está sembrando o está aquilandola?
A. dueño _____
B. aquilando _____
C. los dos _____
89. ¿Cuántas manzanas está sembrando usted cada año?
A. Numero de manzanas de maíz primera _____
B. Numero de frijoles primera _____
C. Numero de manzanas de maíz postrera _____
D. Numero de manzanas de frijoles postrera _____
90. ¿Tiene usted vacas paridas?
A. si _____
B. no _____
91. (Si dice que si) pregúntele: ¿Cuántas vacas paridas tiene usted?
A. ESCRIBA el numero _____

92. Tiene usted bueyes?
- A. si _____
B. no _____
93. (Si dice que si) pregúntele: ¿Cuántas bueyes tiene usted?
- A. ESCRIBA el numero _____
94. ¿Tiene usted otras animales como chanchos, gallinas o caballos?
- A. numero de cerdos _____
B. numero de gallinas _____
C. numero de caballos _____
95. ¿Tiene usted un radio?
- A. si _____
B. no _____
96. ¿Sabe usted como leer?
- A. si _____
B. no _____
97. ¿Sabe usted como escribir?
- A. si _____
B. no _____
98. Más o menos ¿cuántos quintales de maíz y frijoles tiene que cosechar usted cada año para tener una vida más o menos regular?
- A. numero de quintales de maíz _____
B. numero de quintales de frijoles _____
99. ¿Piensa usted que la luna es importante cuando uno está sembrando?
- A. si _____
B. no _____
100. ¿Cree usted que hay mono gente?
- A. si _____
B. no _____

101. ¿Conoce usted a alguien que tenia maíz, frijoles,
o gallinas robado por mono gente?

A. si _____

B. no _____

102. ¿Conoce usted a alguna persona que ha visto mono
gente?

A. si _____

B. no _____

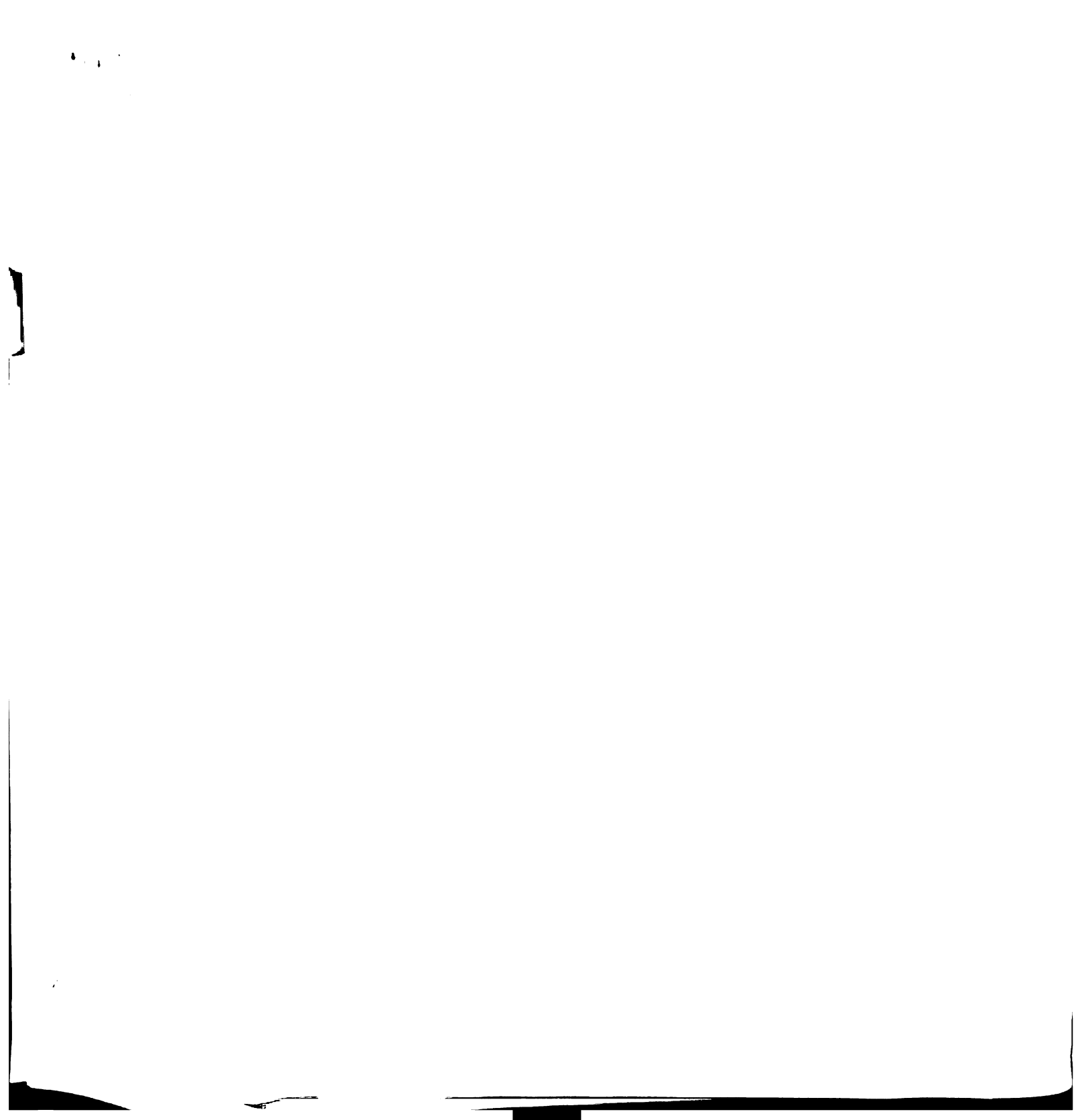
103. Escriba el nombre de agricultor _____
104. Valle _____
105. Numero de cuartos en la casa _____
106. Tipo de casa: Adobe _____ Paja _____
Ladrillo _____
107. ¿De dónde consiga usted su agua?
Quebrada _____ Pozo _____ Agua Potable _____
108. ¿Hay electricidad? Si _____ No _____
109. ¿Hay una latrina? Si _____ No _____
110. ¿Qué tipo de piso tiene usted? _____

APPENDIX C

As mentioned in my letter of introduction, I am a graduate student in Sociology from Michigan State University in the United States. As part of the requirements for my degree, I am conducting research on INCEI and grain storage practices here in Nicaragua. If it is not too much trouble, I would like to ask you a few questions. I will not identify any of the individuals I interview as part of my research by name, so please feel free to give any opinions you may have regarding the subjects I am about to discuss with you and to expand upon your answers at any time.

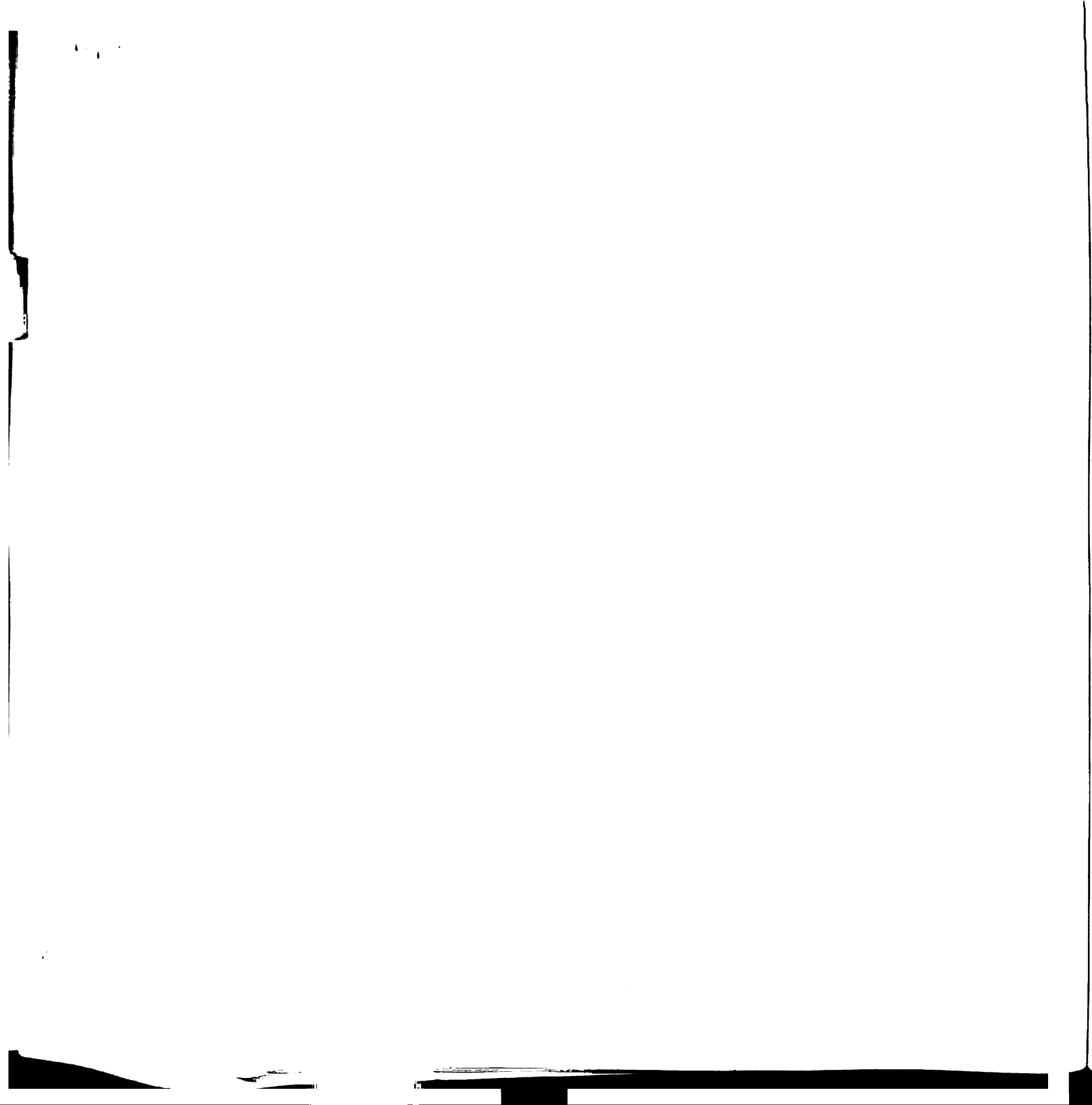
1. To begin with, do you know how long the INCEI project was in the planning stages before the Nicaraguan government actually began construction of the silos?
2. How did INCEI decide what type of silo to use? Were various different models or structures considered?
3. What were the advantages of building large centralized silos as opposed to small silos on individual farms?

4. What do you believe were the major goals or objectives of INCEI?
5. Do you know who the original idea behind the project came from?
6. Who decided where to locate the silos?
7. What factors were important in deciding where to locate the silos?
8. Do you know the names of the companies which actually build the silos?
9. Do you know how these companies were selected? For example, were competitive bids submitted or what?
10. To your knowledge, were the campesinos ever asked whether or not they wanted or would use the silos?



11. Do you think INCEI has done a lot to help the small farmers in the area of grain storage and price control?
12. Do you believe there is much that still remains to be done in this area? (If so, what specifically?)
13. Do you have any specific ideas what may help INCEI become more effective?
14. If you could start the program over again from scratch, is there anything you would like to see done differently?
15. What do you think are the major problems with INCEI?
16. What do you think are the major strong points or accomplishments of INCEI?
17. What major groups, organizations, or institutions were affected by this project?

18. Do representatives from INCEI ever visit the small farmers on their farms?
19. Do you think INCEI is a threat to large grain buyers? (If so, why?)
20. If a small farmer stores 10 arrobas of corn or beans in his house for 6 months, how many pounds do you think he would lose to insects, rats, or whatever?
21. Do you believe there is much of a difference between the price of corn at planting time and at the harvest? (If so, how much?)
22. Do you believe there is much of a difference between the price of beans at planting time and at the harvest? (If so, how much?)
23. Do you think most campesinos are storing their corn and beans in the same manner as they did 5 years ago?
24. Do you think most small farmers presently know what INCEI's job is?



25. Do you have any idea what percentage of farmers have either sold or stored corn or beans with INCEI?
26. Why do you think some farmers are still not working with INCEI?
27. Do you think it is possible to keep the price of corn and beans at the same level all year round?
28. Do you think it would be a good idea if the price of corn and beans was kept at the same level all year?
29. Who do you think INCEI is helping more: the rich farmers, the poor farmers, or both equally?
30. Do you think the average farmer would spend his own money to build a small silo on his farm if he knew for certain that he would not lose any corn or beans?
31. If it was too expensive to build an individual silo on this farm, do you think the average farmer would spend his own money to build a community silo where he could store with his neighbors if he knew for certain that he would not lose any corn or beans?

32. Do you think INCEI is drying the farmers' corn and beans too much?

33. Do you believe that it is a very serious problem that INCEI employees steal from the farmers while weighing their corn and beans?

APPENDIX D

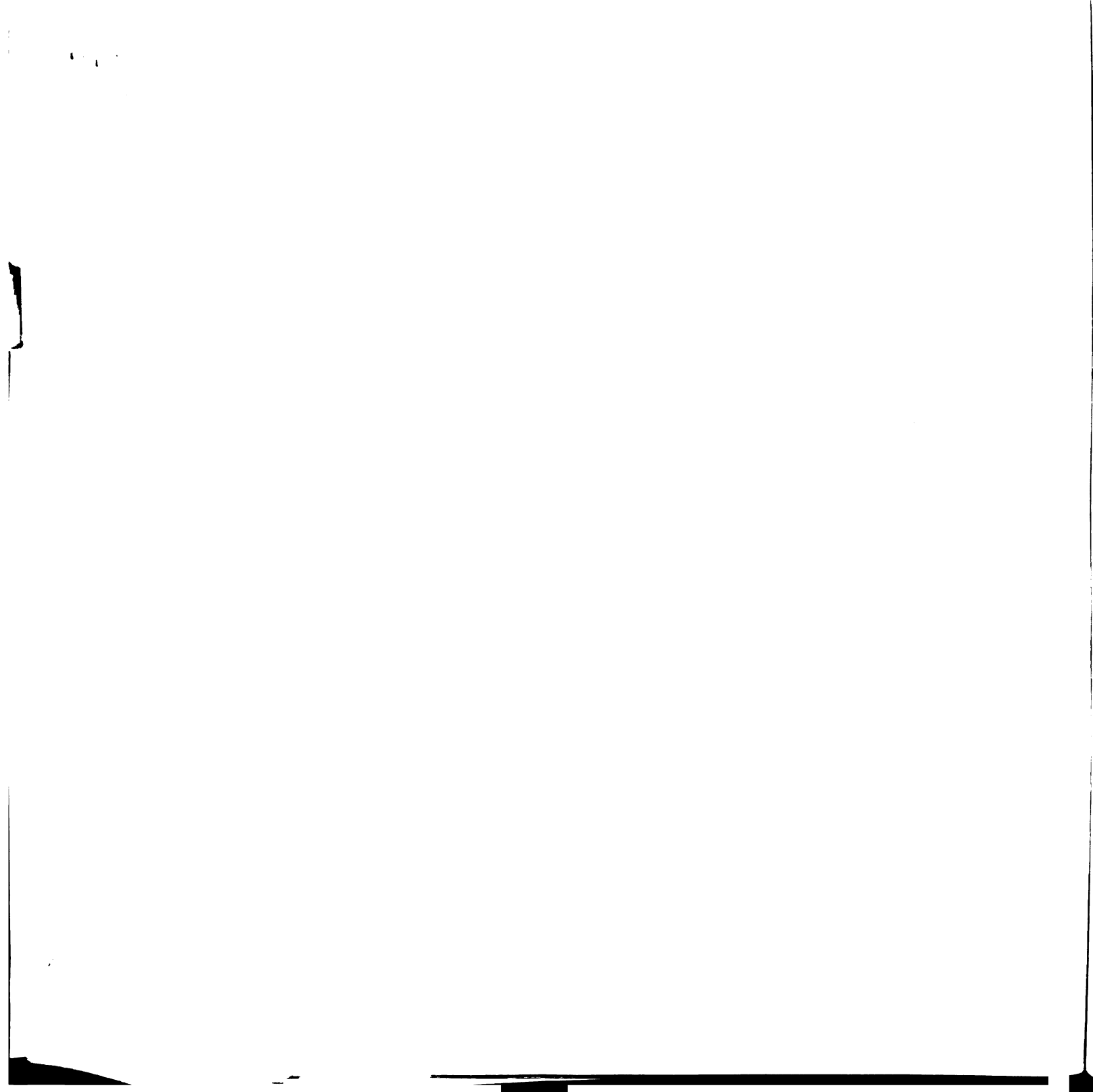
Como estaba mencionado en mi carta de introducción, yo soy un estudiante graduado de la universidad de Michigan State en los Estados Unidos. Los requisitos para mi doctorado exigen que conduzca un estudio del INCEI y los métodos de guardar los granos aquí en Nicaragua. Si no es muy difícil, me gustaría hacer algunas preguntas a cerca del INCEI. Los individuos a quienes yo entrevistaré no serán identificados por nombre en mi investigación y yo le agradecería mucho si usted pudiera darme alguna información u opiniones que tiene a cerca del sujeto y que usted se sienta cómodo para expandir sus respuestas en cualquier momento.

1. Primero, ¿sabe usted cuánto tiempo ha estado el proyecto del INCEI en las etapas del planeo antes de que el gobierno de Nicaragua empezara la construcción de los silos?
2. ¿Como decidio el INCEI el tipo de silo que querían utilizar? ¿Consideron varios modelos o estructuras diferentes?
3. ¿Cuáles eran las ventajas de construir silos grandes y bien centralizados en comparación a los silos más pequeños situados en fincas individuales?

4. ¿Cuáles cree usted que son las metas o objetivos más importantes del INCEI
5. ¿Sabe usted de donde se originó la idea para el proyecto?
6. ¿Quién decidió los lugares en donde poner los silos?
7. ¿Cuáles fueron los factores más importantes para decidir en donde se iban a situar los silos?
8. ¿Sabe usted los nombres de las compañías que construyeron los silos?
9. ¿Como estaban seleccionados las compañías que hicieron la construcción? Por ejemplo, habían propuestas competitivas sometidas?
10. Según su conocimiento, se le habían preguntados a los campesinos que si ellos querían poder usar los silos?

11. ¿Piensa usted que el INCEI ha hecho mucho para ayudar a los pequeños campesinados en el area de guardar los granos y el control del precio?
12. ¿Cree usted que hay mucho que hacer en esta area?
(Y si hay, específicamente cuál es?)
13. ¿Tiene usted algunas ideas específicas que le ayudará al INCEI ser más efectivas?
14. ¿Si pudiere empezar el programa nuevamente, habría algo que le gustaría hacer o cambiar a diferente manera?
15. ¿Cuáles piensa que son los problemas mayores del INCEI?
16. ¿Cuáles piensa que son los puntos y los hechos más importantes del INCEI?
17. ¿Cuáles son los grupos y organizaciones o instituciones que estaban afectados por este proyecto?

18. ¿Han visitado alguna vez los representantes del INCEI a los campesinos en sus fincas?
19. ¿Piensa usted que el INCEI es una amenaza para los compradores grandes? (Y si hay porque?)
20. Si un campesino pequeño guarda diez arrobas de maíz o frijoles en su casa para seis meses, ¿cuántas libras piensa usted que el perdería por causa de los insectos or ratas etc. . . ?
21. ¿Cree usted que hay una gran diferencia entre el precio de maíz al tiempo de la siembra y cosecha? (Y si hay, cuántos?)
22. ¿Cree usted que hay una gran diferencia entre el precio de los frijoles al tiempo de la siembra y la cosecha?
23. ¿Piensa usted que la mayoría de los campesinos están guardando su maíz y frijoles de la misma manera que lo hicieron hace cinco años?
24. ¿Piensa que la mayoría de los campesinos pequeños saben ahora el trabajo del INCEI?



25. ¿Tiene alguna idea que porcentaje de agricultores ha vendido o ha guardado su maíz o frijoles con el INCEI?
26. ¿Porque piensa usted que hay algunos campesinos que todavía no están trabajando con el INCEI?
27. ¿Piensa que sería posible mantener el precio de maíz y frijoles al mismo nivel todo el año?
28. ¿Piensa que sería una buena idea que si el precio de maíz y frijoles están al mismo nivel todo el año?
29. ¿A quién piensa usted que el INCEI está ayudando más a los agricultores ricos o a los agricultores pobres o a los dos igualmente?
30. ¿Piensa usted que el típico agricultor gastaría su propio dinero para construir un silo pequeño en su terreno, si el tuviera la seguridad de que no iba a perder nada de su maíz o frijoles?
31. Si fuera demasiado caro para construir un silo individual en su terreno, ¿piensa usted que el típico agricultor gastaría su propio dinero para construir un silo de la comunidad donde el pudiera guardar con sus vecinos si tuviera la seguridad de que el no iba a perder nada de su maíz o frijoles?

32. ¿Piensa usted que el INCEI está secando demasiado el maíz y los frijoles?
33. ¿Cree usted que sea un problema serio que los empleados del INCEI están robando a los campesinos cuando están pesando su maíz y frijoles?

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