A.I.D. Evaluation Special Study No. 7

THE VICOS EXPERIMENT

A Study of the Impacts of the Cornell-Peru Project in a Highland Community

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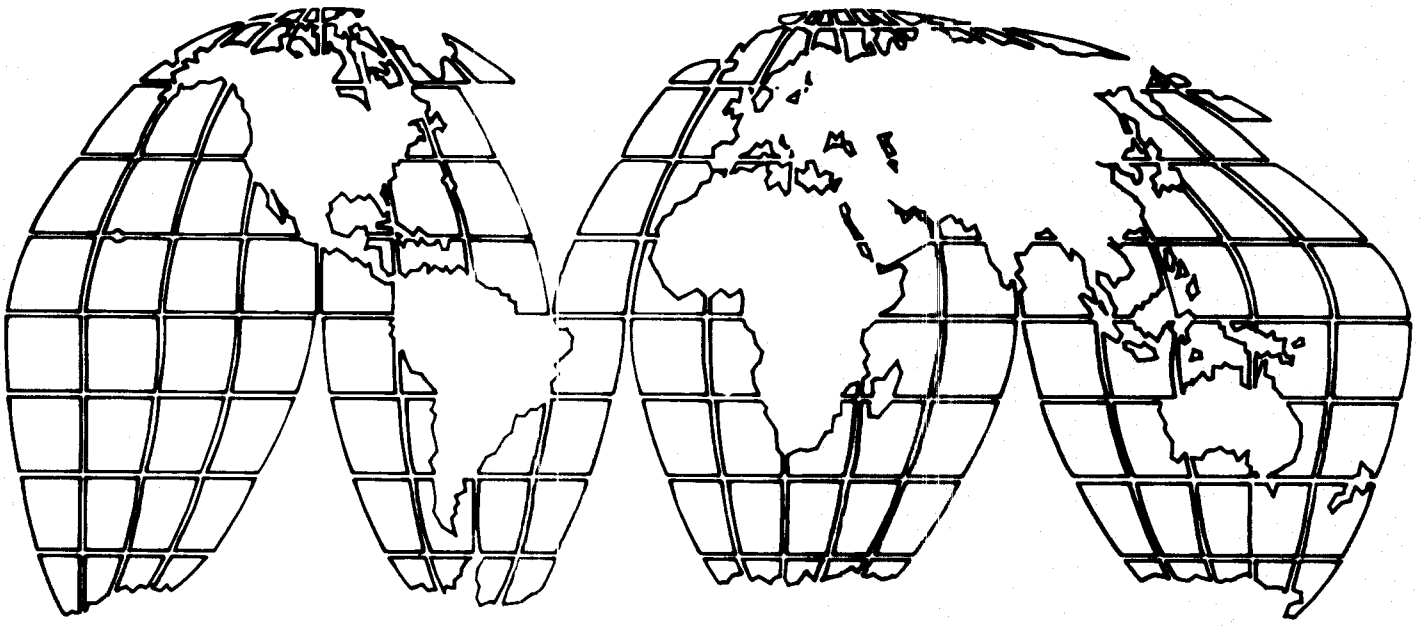

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THE VICOS EXPERIMENT

A STUDY OF THE IMPACTS OF THE CORNELL-PERU PROJECT IN A HIGHLAND COMMUNITY

by

Barbara D. Lynch

A.I.D. Evaluation Special Study No. 7

Bureau for Latin America and the Caribbean
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PREFACE

"The Vicos Experiment," prepared by Barbara D. Lynch for the Development Programs Office of the Bureau for Latin America and the Caribbean, examines one of the earliest efforts to bring about planned social change. The experiment was an action-oriented research program aimed at improving the quality of life of a highland hacienda community in Peru. It was initiated in 1952, under the auspices of Cornell University and the Instituto Indigenista Peruano, and continued into the mid-sixties. Implementation was closely monitored by a team of Cornell social scientists, whose reports served as the basis for this study.

The study examines the success of the program in achieving its broad range of development goals, e.g., to raise agricultural productivity, to improve health and nutrition, to increase literacy and to increase Vicosinos' sense of self-worth. It also looks at some of the unintended effects of the intervention. The report concludes that on balance the standard of living in Vicos was raised and the impact of the project was more positive than negative. The most serious shortcoming, in the author's view, was the failure to anticipate the effects of innovations on the distribution of wealth within the community.

The Vicos study is one of a series organized by LAC/DP to look more closely at the social impact of development activities. The abundance of material on implementation activities generated by social scientist project managers provided a unique opportunity to examine thoroughly a wide range of direct and indirect consequences of a community-level development process.

David Lazar
Director
Office of Development Programs
Bureau for Latin America
and the Caribbean

EXECUTIVE SUMMARY

The Cornell-Peru Project was an attempt to create a laboratory for the anthropological study of social change. In 1952, Cornell University and the Instituto Indigenista Peruano, a Peruvian government agency, entered into a formal agreement to lease a highland hacienda and to undertake a program of research and development which would lead to the refinement of the study of social change as well as the improvement of the quality of life of hacienda residents and to their integration as a productive force in Peruvian society. This report is an assessment of the impacts of the project on the Quechua-speaking hacienda population, based on an extensive review of the literature and materials in the Cornell University Library Department of Manuscripts and Archives.

Hacienda Vicos was owned by a semipublic charitable organization in Huaraz, capital of the Department of Ancash, and rented for five- to ten-year terms to the highest bidder. Rent from Vicos and other properties was used to support the Huaraz hospital. Before the project began, renters were primarily interested in the hacienda as a source of labor to be used outside of Vicos. Only about 10 percent of the land was cultivated for the patron; the rest was parcelled out to peons in holdings differing widely in both quality and size. Vicosinos were bound to the hacienda by highly restrictive labor requirements, but they had relatively secure usufruct rights to some arable land and to extensive pastures. At the outset of the project, they were taken advantage of by both the patron and by mestizos in Marcará, the nearby district capital. They had no legal protection from local governmental agencies. Their diet was poor, living standards low; they were uniformly illiterate and only in a few isolated instances could they communicate in Spanish.

Allan R. Holmberg, a Cornell University anthropologist and project director, believed that the quality of life at Vicos could be measurably improved with the integration of the hacienda into the national economy and society. He planned a series of activities designed to reverse a negative spiral of effects suppressing the Indian population. He sought to increase literacy, to familiarize Vicosinos with the larger society, to encourage migration, to raise agricultural productivity, to improve health and nutrition, and to increase Vicosinos' sense of self-worth, and their faith in progress and each other. Finally, he hoped to train Vicosinos to take control of their own destiny, to regain control of the hacienda, and to govern it themselves.

Project activities included the introduction of improved potato seed, new technologies, and a credit package, other agricultural activities designed to improve crops and to introduce new sources of income, improvement and enlargement of the school, military recruitment, a series of public health and nutrition programs and the creation of a new set of political institutions. Most of these activities were undertaken with the participation and support of Peruvian government agencies.

The new seed potato program and supervised agricultural credit resulted in the accumulation of a capital fund for community development and for a down payment on the hacienda when it was transferred to the community in 1962. The program also stimulated the commercialization of production in the subsistence sector. By 1954, Vicos had become one of the largest potato producers in the region. The program resulted in an increase of cash in the community, dietary improvements, an increase in commercial activity, a proliferation of occupational specialties and in an improved economic position in the region. However, the new technology was available only to wealthy and middle class Vicosinos. Those with very small holdings were unable to participate in the program. Thus their relative position in the community deteriorated. The influx of cash into the economy led to a decline in reciprocal labor obligations and redistribution after harvest. On the other hand, fiesta sponsorship and other acts of generosity became more common.

Project educational activities resulted in substantial increases in literacy and Spanish speaking ability. By the 1960s, a number of Vicos boys had gone on to secondary school. Education increased the ability of a number of Vicosinos to engage in transactions in the mestizo world on a relatively equal footing. However, differential educational opportunities for men and women led to a deterioration in the status of women in the community. As formal education superseded informal education, and as educated children were encouraged to take increasing roles in household decision-making, the status of the aged also declined. Secondary schooling was seen as a mixed blessing in Vicos: individuals could increase their social mobility through education, but lack of jobs for graduates in the community meant that in most cases the investments made by family and community in education did not pay off in Vicos.

Regularization of the military status of Vicosinos resulted in the creation of a power bloc of veterans, by and large committed to increased integration and social and economic innovation. The emergence of the veterans as a political force helped to weaken the traditional Vicosino elite and institutions of fictive kinship. Regularization of military status enabled Vicosinos to use local government institutions. This too lessened dependence on traditional elites.

The transfer of authority from the patron and traditional elites to an elected council of delegates and to a governing body

of literate Vicosinos was by and large successful. However, clientelistic political bonds were more tenacious than the project had anticipated. The result was a decline in traditional authority in favor of charismatic authority. For example, even after the creation of new institutions, a well-liked Peruvian field director has enormous power in the community because of his personal prestige.

The project did not have a significant impact on values or on the traditional world view. It did change the cultural identity of the community and had a positive effect on self-esteem. Vicosinos were less frequently defined as Indians (a reference to inferior class status, rather than a racial definition in the Peruvian case), and their localism was intensified by attention to the project and concrete symbols of development. On the other hand, status and role ambiguity increased as a result of the project.

The successes of the project were qualified. The project was constrained by regional and national economic, social and political structures. Development remained dependent upon the good will of national and international development agencies. Relations with mestizos in the Callejón de Huaylas improved, but equality was not achieved. Integration into the national society resulted in the reproduction of inequalities in the local society. The status of women deteriorated, and even as wealth spread from a small Vicosino elite to a larger middle class, the gap between rich and poor seems to have widened. On the balance, however, the standard of living in Vicos was raised, and the impacts of the project seem to have been more positive than negative.

About the Author

Barbara D. Lynch is a Ph.D. candidate in Development Sociology in the Department of Rural Sociology, Cornell University. Mrs. Lynch is familiar with the Vicos area. In preparing this study, Mrs. Lynch had access to the large body of literature and materials located in the Department of Manuscripts and Archives, Cornell University Libraries.

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GLOSSARY
(prepared by A.I.D.)

castas: kin groups

compadrazgo: ritual godparenthood, through which Vicos families generally sought ties to a more prominent patron or sponsor.

curandera: healer

la república: public works projects.

leídos: literate members of the community.

mando: a weekly meeting held with the hacienda labor force.

mayoral: straw boss; ensured that labor obligations on the hacienda were properly performed.

minka: one form of reciprocal labor obligation, in which a feast was provided to repay a service.

padrino: godfather; usually also a sponsor and patron.

papa comun: variety of potato.

puna: high plain, used primarily for grazing.

varayoc: religious hierarchy.

varados: officials of the religious hierarchy (varayoc).

yayas: elder members of the community.

I. VICOS AND THE CORNELL-PERU PROJECT: THE BACKGROUND

Lauded for its contribution to the development of democratic institutions in Latin America and condemned for its paternalism, its arrogance, and its disorganization, the Cornell-Peru Project's impact on the hacienda which it sought to transform has seldom been evaluated. The project was unique in placing an American university in the role of patron of a Peruvian highland hacienda, and for putting an anthropologist in the position of instigating social change as well as evaluating it. Among 1950s development projects, it was unusual for its emphasis on social science input into the choice and dissemination of innovations and for its efforts to coordinate its ıose of Peruvian government agencies. The objective to determine to what extent the project achieved its and to assess the impacts of various project activities on the lives of Vicosinos.

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Origins of the Cornell-Peru Project

The transformation of Hacienda Vicos in the Callejón de Huaylas (Ancash), Peru into a laboratory for social change was in some ways an unforeseeable consequence of a Cornell program on research on and teaching of cultural change from a comparative perspective. This program, undertaken by the University's Sociology and Anthropology departments with funds from a Carnegie Corporation five-year grant, brought Allan Holmberg to Cornell, after he completed a long study of the Ciriono in Bolivia. Holmberg's intent in 1948 was to do a passive study of social change processes as they were occurring in the Callejón. He had hoped to place a number of graduate students in key regions throughout the valley to study the impact of projects which were to have been undertaken by the Corporación Peruana del Santa, a state capitalist venture, billed as the TVA of the Andes (Patch, 1953).

Holmberg was attracted to the Callejón because it appeared that the Santa Corporation's programs would create an ideal setting for the study of social change. The Corporation, established in 1943 by the populist APRA government, was to have been a regional project which in turn would stimulate national growth. Its goals were grandiose--to develop the fishing village of Chimbote as a major port, to install hydroelectric plants in the Callejón de Huaylas, exploit iron deposits in Ancash, to undertake large scale irrigation projects

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in coastal valleys, to build a rail network connecting coast and highlands, and to construct blast furnaces, steel mills, and zinc aluminum and fertilizer plants.

In 1949, Holmberg commissioned two Peruvian students to undertake baseline studies in the mestizo town of Marcará and the neighboring hacienda Vicos. It is probable that the sites were selected because of their proximity to Pati, a linen factory recently developed by the Santa Corporation as part of the regional program.

The Santa Corporation was created in an atmosphere of war time shortages. With the major powers engaged in World War II, Latin American countries enjoyed an assured market for their limited industrial production for the first time in many years. The presence of this domestic market generated an optimism about Peru's economic future which may have been unwarranted. Patch (1953) concludes that the Santa Corporation was an "outgrowth of thinking. . . that industrialization, particularly heavy and impressive industrialization, is the recognized symbol of an advanced country" and that its projects were conceived to increase national prestige as much as to achieve economic goals.

Whatever the Corporation's motives, by 1948 the political and economic climate of Peru and the Western world had changed. Postwar recovery brought with it inflation in Peru, an increased flow of goods from the United States, and a return to conservative national politics. Within the Santa Corportion, American engineers hired at high salaries were replaced by political appointees. Following the Odría coup in 1948, the corporation's directorate and staff were dominated by political appointees totally lacking in engineering skills.

Two disasters at the local level and one at the national level ensured that the corporation's role in Peruvian and regional development would never approach expectations. By 1950, the corporation faced a capital shortage. In that year the Westinghouse International Development Corporation did a feasibility study for a Santa Corporation zinc and fertilizer plant. Despite a favorable report, the U.S. Export-Import Bank chose instead to finance an identical project proposed by the U.S. owned Pasco Corporation. In 1950, a glacial lake in the mountains above the Huallanca plant construction burst, burying the plant with debris. The following year a dynamite explosion set back construction for a second time. Patch suggests that these accidents may have been in part due to a lack of engineering competence. In any case, the regional development envisaged by Holmberg when he asked Mario Vásquez and Humberto Ghersi to undertake pilot studies in Vicos and Marcará failed to occur.

By 1950 it was clear that Holmberg would have to alter his original research plans. He already had made a substantial investment in the region with the pilot studies and was reluctant to leave it. He saw a vast cultural gap between the modern, developed Peruvian coast and the Sierra--seemingly incapable of supporting

development and modernization. Holmberg (1951b) argued that lack of integration between Sierra and Coast meant that the enormous Sierra labor reserve could not be efficiently tapped as an industrial work force, nor was it capable of meeting the food needs of the growing urban sector.

It was no longer possible to study processes of social change in the Callejón as a result of Santa Corporation activities, but Holmberg felt that these processes could be induced on a small scale and studied in order to affect the planning process. To this end, he collaborated with Dr. Carlos Monge, Director of the Instituto Indigenista Peruana, a medical doctor and high altitude biologist, in securing the remaining five years of the Vicos lease from the Santa Corporation, renter of the hacienda since 1946, and the Public Benefit Society of Huaraz, a charitable organization responsible for funding the hospital in the provincial capital.

Acquisition of a Peruvian hacienda as a laboratory for social change posed certain ethical questions: was it legitimate for Cornell University to control both land and Indian labor in Peru? Was it not possible that induced social change might destroy the community of Vicos? Both questions were explored at length by Cornell anthropologists and sociologists before steps were taken to secure the Vicos lease. The first was never successfully resolved, but Holmberg regarded Cornell's role as patron as temporary. From the beginning, Vicosinos were to be trained to assume control over their collective destiny. The second ethical question posed no serious problems for researchers, who assumed that the condition of the Vicosinos was so bad under the existing system that innovations made in good faith could only improve their lot (Adams and Cumberland, 1961; Mangin, 1979).

The Setting

Vicos is situated 270 miles northeast of Lima on the western flank of the Cordillera Blanca, Peru's highest mountains. The hacienda overlooks the intermontane Santa valley to the west. The Río Santa originates at Lake Conococha on the puna to the south; it is a fast flowing river, gaining in volume as it is fed by streams from the perennial snowfields of the Cordillera Blanca and intermittant streams from the Cordillera Negra on the west. The Santa Valley is called the Callejón de Huaylas until the point where it narrows into a deep gorge at Huallanca, site of the Santa Corporation hydroelectric plant and, until the 1970 earthquake, terminus of a railroad joining the plant and the coastal port of Chimbote.

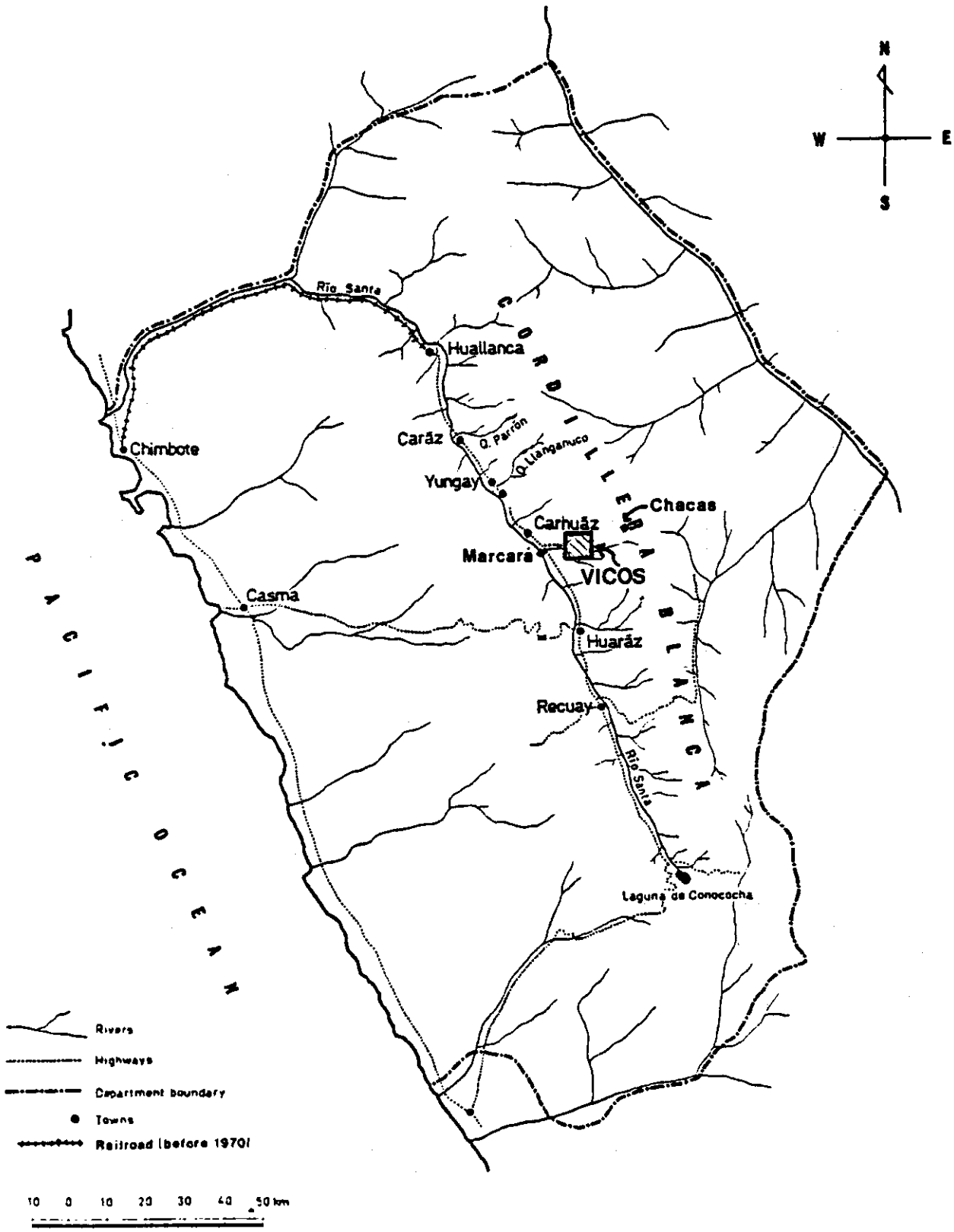
A major, improved road connected the railroad with the cities of the Callejón strung out along the Santa--Huallanca, Caraz, Yungay, Carhuaz, Huaraz and Recuay. The road runs southwest over the pass at Conococha to the extensive industrial sugar plantations at Paramonga and the Pan American highway. A second road joins Huaraz

and Casma, a small port and plantation town north of Paramonga on the Pan American highway. Vicos was linked by road and rail to the major cities of the Callejón, to coastal plantations and ports, and finally to Lima by road and rail.[1] While the trip from Vicos to the coast was uncomfortable, one could not call Vicos isolated by Peruvian standards. This transport network made it possible for some Vicosinos to leave the hacienda to work seasonally as enganche laborers on plantations and haciendas in the Casma valley and at Paramonga.

Vicos lies at the end of a motor vehicle road which connects it with Marcará, a small mestizo town on the main road which is the district capital complete with police station and post office. Beyond this road, however, a trail passes over the Cordillera Blanca through a canyon called the Quebrada Honda. This trail through the Quebrada Honda is the main route from the Callejón (and ultimately the coast) to the eastern slopes of the Cordillera Blanca. It serves the region of Conchucos with its small mining towns. To some extent Vicos serves as an entrepôt for limited trade over the mountains. Trails also lead from Vicos to neighboring haciendas and communities, some of which were deeply affected by changes at Vicos.

Vicos is an extensive territory--7,710 hectares (19,050 acres) extending from an altitude of 9,500 feet to 14,750 feet above sea level. Of this total, 4,320 ha. are either cultivated or used as range land (Garrido-Lecca, 1965). The remainder are either too steep or too high to be used even as pasture. Vicos, unlike many haciendas and communities of the Callejón, lies on the western slopes of a snowclad range, and enjoys year round water supply despite distinct dry and rainy seasons. The main limiting factors in agricultural production are cold at higher elevations and soil quality. The topography is varied. On the lower reaches of the hacienda, at about 10,000 feet above sea level, there are small areas of flat, alluvial lands. The best of these lands were cultivated for the hacienda, and are now communal lands. The cabeceras, or piedmont, extending above the alluvium to an altitude of about 11,200 feet are checkered with fields worked by Vicosinos[2] although some hacienda lands are also found at this level. The puna, or high plain, lies above 11,200 feet, and is used primarily for grazing. Church, school and hacienda buildings are located at the end of the road at about 10,000 feet.

Cultivated lands lie in the alluvial plain near the lower border of the hacienda and on the cabeceras; a few fields have been plowed on the lower fringes of the puna. One thousand six hundred ten hectares are cultivated[3] (Alers, 1966)--90 percent of which is held in private plots. Hacienda (now communal) lands take up most of the alluvial zone (17.3 ha.) and about 9 percent of cabecera lands (150 ha.). The alluvial plains are relatively fertile and gently sloping, although erosion is something of a problem and nitrogen levels are low. Cabecera fields (1,746 ha.) may slope between 20 and 50 percent. Soils on the higher parts of the cabeceras are badly eroded, leached and contain little organic matter. Because of constant deposition of soils from the upper parts of the cabeceras, soils on the lower slopes are somewhat deeper and less leached. Most



DEPARTMENT OF ANCASH, PERU

cabecera lands are too high for corn cultivation. Above the cabeceras lies the puna, relatively flat land with deep soils, high in moisture and organic content. Although potatoes are occasionally planted on the lower margins of the puna, temperatures are low and danger of frost constant. The 1,590-hectare puna is primarily used as pasture. Some cattle remain on the puna until sale or slaughter. More valuable cows, sheep, goats and pigs are driven up to the puna on a daily basis, but are penned down near settlements at night.

To summarize, Vicos is located in Ancash, one of the most densely populated regions of Peru, part of the "Mancha India." It is linked to the main artery of the Callejón de Huaylas by a 6-kilometer truck and automobile road and thence to the industrial cities and modern agricultural enterprises of the coast. Its location on the western slopes of the snow-capped Cordillera Blanca assures a steady water supply, but its altitude and slope mean that it lacks large quantities of fertile, alluvial land for agriculture. Relative to other haciendas in the region, its share of puna lands is large; this enables the concentration of wealth in the form of livestock.

Vicos at the Outset of the Project

In 1951, 2,250 people lived in Vicos in 361 household units. Dwellings were scattered in the cabeceras and grouped in units of two to twelve buildings, depending on the size and wealth of the family. These compounds housed one or more nuclear families, but usually only members of one extended family. Compounds were located close to usufruct holdings, and some families maintained additional crude huts near their outlying parcels.

In 1951, the population was largely endogamous, although there is evidence of migration to and from Vicos and exogamy in the early part of the century (Price, 1961). Census data indicate steady growth in population since the end of the eighteenth century, with an increase from 800 in 1901 to 1,230 in 1940 (Mangin, 1954). According to Mangin (1954), patrons encouraged immigration to Vicos in order to increase the size of the labor force.

This population has been defined as Indian both officially and by mestizos in neighboring towns. This is not a racial distinction, but an index of acculturation into the dominant society. Only twenty-three Vicosinos could speak Spanish, none could read. The one-room school operating on the hacienda was poorly taught, poorly attended and made no impact on literacy. Language separated Indian and mestizo populations: Indians spoke Quechua, mestizos Spanish. In addition, Vicosinos could be distinguished from Callejón mestizos by their distinctive, homespun clothing and by their deferential attitudes. These distinctions gave the Vicos population an appearance of a relic society, one cut off from progress for at least three centuries. But it would be (and was) a mistake to make assumptions about isolation on the basis of these characteristics.

The hacienda as an economic enterprise. To properly assess the impact of the Cornell-Peru Project on Vicos, it is necessary to have a reasonably clear understanding of the status quo ante. While much of the literature portrays Vicos as a vestige of the feudal system, a closed, corporate society only tenuously linked to the outside world through the patron and his administrators (e.g. Dobyns, Doughty and Lasswell, 1971), it was in fact an evolving society, deeply touched in many ways by changes in Peru and in the external market economy.

Vicos shows signs of settlement well before the Spanish conquest. Prehistoric sites are common on hacienda land, and a major Inca road through the Callejón de Huaylas passes several kilometers below the community. The first mention of Vicos after the Conquest appears in a 1593 document which notes that the land was administered by the Beneficencia Publica de Lima in order to raise capital for the operation of a Lima hospital. It is likely that during the sixteenth century, part of what is now Vicos was owned by two families,[4] but by 1611, Vicos was consolidated in the hands of the Public Benefit Society of Lima (Vásquez, 1952:34-35). Throughout the seventeenth, eighteenth and nineteenth centuries, the hacienda was rented for terms of varying length to the highest bidder, who would operate it for profit.

Indications are that Vicos was operated as an obraje or textile workshop in the nineteenth century (Mangin, 1954), and that the Pati linen factory was also built on the site of another textile factory. While data are lacking, it can be assumed that Vicos and surrounding haciendas were linked to the national and perhaps even to international economy through textile production.

By the latter half of the nineteenth century, Vicos was generating an increasing number of problems for the Public Benefit Society of Lima. Renters defaulted on payments, augmented their own holdings on the margin of the hacienda by shifting the boundary lines without the Society's consent, and refused to comply with the Society's request for surveys and inventories. By 1875, the Society had voted to sell Vicos along with other peripheral properties, but as late as the 1920s, the Society still owned the property and was still trying to sell. The hacienda was expropriated by the government in 1928 and would probably have received community status were it not for the fall of the Leguía government in 1930. The following year, the hacienda was transferred to the Public Benefit Society of Huaraz (Barnett, 1960).

What kind of investment was the hacienda? With its lower boundary at about 9,000 feet above sea level, most of its terrain uncultivable and the remainder consisting largely of eroded and depleted soils, it was never prime agricultural land. Even within the valley the most productive bottom lands were by and large held by mestizos. Nationally, commercial agricultural production was far more important on the coast than it ever became in highland Ancash. Cattle were introduced to Vicos in the mid-nineteenth century, but we do not know to what extent cattle generated a profit for the

patron. By the opening years of the twentieth century, the hacienda's value lay in the labor force at the renter's disposal. The last patron to rent from the Public Benefit Society of Lima complained when he fell behind in his rent payments that Indians were insubordinate and refused to work in his fields. An investigation by the Benefit Society revealed that the patron was renting his peons out to work in the mines of the Conchucos region and to other haciendas, some at a considerable distance on the western slopes of the Cordillera Negra (Barnett, 1960).

Little is known about management of Vicos from the transfer of its title to the Public Benefit Society of Huaraz in 1928 until the Santa Corporation took over management in 1946, except that it was still difficult to collect rents from patrons and that Vicosinos fulfilled labor obligations by working on construction in Huaraz. The Santa Corporation invested in Vicos as a source of both flax and labor for the nearby Pati linen factory owned by Ignacio Macias, Santa Corporation official, owner of Pati, and member of the Public Benefit Society of Huaraz. Some Vicosinos complained bitterly to Vásquez (1952) and Barnett (1960) about hacienda administration during this period. They disliked being transported to the linen factory for their labor requirement because its lower altitude was debilitating and working conditions in the factory were poor. In contrast, others told Mangin that they found the work at Pati easy and the truck ride enjoyable. They also complained about flax production on hacienda lands on the grounds that (1) it was destroying soil quality, and (2) flax production left nothing for workers to glean or steal.

Whether because Callejón lands were unsuited for flax production, because Vicosinos comprised a restive labor force, or because Pati linen faced heavy competition from Ireland in the postwar years, Vicos proved to be a poor investment for the Santa Corporation. By 1951, the company was bankrupt and eager to turn over its lease.

If, at one level, Vicos was an economic opportunity, albeit a poor one, both for the charitable organization that owned it and the patron who rented it, at another level it provided economic security for the Vicosino population. While the obligations of a Vicos peon were heavy, and frequently odious, a set of privileges were offered in return. The Vicosino received complete usufruct rights over his allotted parcel and the right to keep it in the family through inheritance. In exchange for this he was required to work three days a week for the hacienda and to perform a series of other services.

The three-day-a-week labor obligation or <u>tarea</u> was normative to a certain extent. Mangin (1954) reports that, while there were 381 nuclear families residing in Vicos, only 252 peons were registered. Before Holmberg became patron, the labor obligations of some Vicosinos were reduced to one or two days a week. A tarea could be performed in different ways. About two-thirds of the labor force fulfilled its obligation by working in the hacienda fields, usually on Monday, Tuesday, and Wednesday. Their 7.5-hour day was punctuated

with breaks for lunch and coca chewing. Ten men worked in the hacienda vegetable graden; others took 24-hour turns guarding the hacienda house; seven field guards supervised irrigation, frightened birds and guarded against theft; one guarded the gate at the Quebrada Honda, collecting tools and recording traffic passing through the canyon; and two other Vicosinos guarded cattle in the Quebrada. Finally, seven men of high standing in the community were assigned to work as straw bosses or mayorales for the hacienda, to ensure that the tarea was properly performed.

About three to four years before Holmberg assumed the hacienda lease, the Santa Corporation instituted the payment of the temple, a small gratuity, theoretically to cover the cost of coca. While this was a progressive innovation for a highland hacienda, payment was dropped as the corporation's financial problems deepened.

While the tarea was generally accepted in Vicos, peons resented ancillary services. All unmarried and widowed women were obliged to work for one month a year as maid or cook in the hacienda house or as a swineherd. The former obligations carried with them the danger of being sexually abused by mestizo administrators and staff living in the compound. Each peon had to work as mulero for a month. The mulero was on call 24 hours a day to ready horses for the use of the patron.

A second privilege granted to peons and their families was the right to pasture their livestock on the puna without charge. Once again, Vicosinos were fortunate in this respect. The presence of large expanses of puna was not typical of all highland haciendas; Vicosino animals were able to share pastures with hacienda cattle. (A portion of the puna in the Quebrada Honda was rented to outside stock owners.) The obligation attendant upon the privilege was the provision of tools and draft animals to work the hacienda fields.

Onerous labor obligations were combined with relatively free access to and use of land. While the most common forms of land acquisition were inheritance from father or grandfather, by grant from the patron, and through marriage, some Vicosinos had acquired their holdings either by usurping hacienda lands or by renting, trading or even buying land (Mangin, 1954). The most common form of usurpation was to cultivate a previously vacant tract of puna, but Vicosinos sometimes gradually encroached upon neighboring hacienda fields one row at a time.

Haciendas and independent indigenous communities often existed side-by-side in highland Peru. While the Indian communities offered freedom from labor obligations and unrestricted land tenure, comuneros were continually harassed by outside claimants and encroachers upon their land. These claims resulted in lengthy court battles, which the comuneros could ill afford. The advantage of usufruct rights as they existed at Vicos was that peon holdings were safe from encroachment by neighboring landowners. The hacienda was relatively more powerful in the face of other haciendas than was the indigenous

community (Mangin, 1954). Thus, even if the Vicosino had no permanent title to the land, he or she was assured that usufruct rights were safeguarded, at least on a temporary basis.

Other factors helped to mitigate the burdens of hacienda peons. First, absentee ownership and control of Vicos meant that activities of Vicosinos were not very closely supervised, except for brief periods. I have noted above the ability of Vicosinos to acquire land at the expense of the hacienda and the fact that some peasants were not obliged to fulfill their labor obligation. In addition, theft of hacienda crops was routinely accepted by hacienda administrators, and Vicosinos habitually overstepped the limits of customary privilege (Barnett, 1960). Animals were allowed to stray from paths to graze on hacienda crops; field workers often left caches of corn or potatoes for their wives and children to glean after the harvest. If Vicos were more isolated from mestizo and national society, it is likely that the benefits of hacienda life would outweigh those of integration into national society. Vicos, however, was integrated into the coast-dominated society and economy on very unequal terms. Labor obligations performed on other haciendas, in nearby mines, and in the city of Huaraz had a disruptive effect on family and community life that was only partially compensated for by security of tenure and other mitigating factors.

Vicos society. The community in 1952 was little more than a dispersed agglomeration of family units tied together by common work obligations, a local religious hierarchy and fiesta system, and by fictive kinship ties (compadrazgo). Beyond these unifying institutions, anthropologists perceived little sense of community at the outset of the project. The hacienda system weakened horizontal bonds in favor of vertical ties. That is, a Vicosino could more easily improve his or her lot by manipulating relations with hacienda administrators, mestizos in the district capital of Marcará, and the mayorales or straw bosses, than by strengthening bonds with unrelated individuals of the same socioeconomic status. Nor did the organization of hacienda labor foster the development of community. Peons were assembled once a week to listen to instructions for the following week. There was limited opportunity to forge a group consensus. Hacienda work groups, consisting of about ten to twenty men were not permanent; no single group of peons was likely to remain together for a sufficient time to form bonds over and above those of compadrazgo and kinship.

Despite seemingly uniform poverty, Vicosinos were also distanced from one another by great differences in wealth. Land holdings varied widely in size. Mangin (1954) reports several cases of families holding usufruct rights to over 120 hectares, while poorer families had less than 1 hectare. While land was an important determinant of well-being, wealth was measured primarily in terms of livestock (Vásquez, 1971). After about 1850, patrons and hacienda administrators began to give cattle to Vicosinos in return for favors. Cattle and other large animals were a useful form of accumulation for several reasons. Pasture was plentiful and cheap, and the expense

of maintaining additional animals relatively low. Second, in a cash poor economy manure was the most important source of fertilizer. Cows and other ruminants were staked in different parts of a field until the field was well covered. Wealthy Vicosinos lent their animals for plowing and for fertilization; in return the borrower would feed the animals while they fertilized his field. The size of one's herd determined to a large extent the number of hectares one could effectively cultivate. Finally, cattle could easily be transformed into cash. Mestizo cattle dealers frequently came to Vicos to buy animals. In 1950, 80 percent of Vicosinos owned at least one cow, one family had about a hundred cattle, and 63 families owned plow oxen (one family owned seven pair) (Stevens, 1954). Pigs, sheep and chickens were also kept as a form of wealth. Pigs and sheep were sold much in the same way as cattle, while chickens and eggs were sold by Vicos women in the Marcará market on Sundays.

Vásquez (1971) differentiated three classes of Vicosinos on the basis of animal ownership. Twenty-eight (7.7 percent) wealthy families owned at least eleven cows or their equivalent. The middle class consisted of 146 families (40 percent) and owned six to ten large animals, and fewer pigs and sheep than upper class families. The remaining 52.3 percent (189 families) were classified as poor. They owned fewer than five large animals, had no extra clothes, and were usually debtors. The poor, according to Vásquez (1971) were often stereotyped by other Vicosinos as lazy, irresponsible and drunk. The wealthy, on the other hand, were brokers between mestizos and the bulk of the Indian population. Vásquez (1971:71) sees them as "an artifact of the exploitative system."

Wealthier Vicosinos were better able to sponsor fiestas and were therefore accorded a greater degree of prestige. This prestige was translated into local political roles and favored status as a mayoral. The top 8 percent were also in a position to lend money in return for labor extractions. They were thus in better position to shift the burden of their tarea to others and spend more time cultivating their own lands. As owners of oxen, they could plow their fields at optimal moments and extract services in return for lending their teams. Finally, their cash surplus allowed them to bribe mestizos in Marcará and on the hacienda to further their ends.

The gulf between rich and poor was masked by several factors. First, wealth did not entitle any Vicosino to leisure. The normative value of work for Indians was emphasized both by Vicosinos and mestizos. Second, possession of material objects was discouraged beyond a certain point. A wealthy Vicosino was expected to own two sets of clothes, and a multi-roomed house with a tile roof, but beyond this, it was felt that ownership would create envy. In fact, theft was a problem among Vicosinos just as it was with hacienda land, crops, and chattles. Third, it was assumed that the wealthy would refrain from wage labor either in the mestizo towns of the Callejón or on coastal plantations, would sponsor lavish fiestas, and would assume positions of authority which required considerable cash outlays (Vásquez, 1971).

Despite these mitigating factors and forced generosity, inequality within the Vicosino population tended to foster suspicion and mistrust rather than promote solidarity. For example, Holmberg (1971) notes the prevalence of complaints about cattle rustling at the outset of the project. His attempt to introduce a branding program aroused little enthusiasm until the wealthiest cattle owners were accused of obstructing the program. They were charged with profiting unfairly from the lack of clear identification. Rather than perpetuate suspicion, they acquiesced to having their cattle branded (Holmberg, 1971).

Relations between individuals and the hacienda reinforced and deepened inequality within the community. Despite enormous differences in land allotments, all Vicos peons theoretically had equal work obligations. According to Martínez (1963), this inequality of reward for equal work produced tension between members of different castas or kin groups. He also notes that differential access to the patron or the possession of advantageous lessons of their relations

they supervised a weekly ceremony on the church steps, and made sure that all peons participated. At varying intervals, the varayoc would conduct night raids to round up couples living in trial marriage arrangements. Couples would be locked up until a priest arrived to perform a mass religious marriage ceremony. Varados could try and punish Vicosinos for such crimes as murder, assault, slander, rape, and breach of promise to marry. Traditionally crimes could be punished by whipping or fine. Varados were also charged with supervising public works projects on church, chapels, and cemetery, and on local roads, bridges, and irrigation ditches.

According to Vásquez, because the varayoc was invested with authority by the patron, it was committed to serve him. However, its authority was not absolute and appeared to be declining even before Holmberg rented Vicos. Its judicial power was weakened in 1932 by the district governor of Marcará, a young, revolutionary APRA (Alianza Popular Revolucionaria Americana, a left of center Peruvian political party) member. A complaint was brought against a varado by his godson who had been whipped. The violent varado was jailed for six months and the whip was never again used, thus weakening varayoc authority. Assembly of parties for public works projects (la república) became increasingly difficult. Varados could punish absentees by levying fines on written order from mestizo authorities. The fines, usually less than the going daily rate for similar labor, were in fact a reasonable alternative to la república labor. Finally, the varayoc appears to have been losing power in the religious sphere, as customs surrounding trial marriage and religious marriage have been changing.

Both elites were interlocking. Progression through the hierarchy of varayoc offices was in most cases a prerequisite for becoming a mayoral before 1952. It is important to note that varados and mayorales at this time enjoyed considerable prestige within Vicos. They were older men who had worked hard, managed to amass more than the usual share of hacienda resources, and could sponsor lavish fiestas. Their prestige within the hacienda was reflected in their office; the patron used the office for his own ends because of the prestige associated with it.

Despite the limits placed on community development by unequal distribution of wealth and the exploitation of local authority systems to protect the position of the patron, cooperation and reciprocal bonds did occur and were important in the daily lives of Vicosinos. The hacienda was informally broken up into several distinct residential zones, and its population into 69 castas or unilineal, patrilineal kin groups (Holmberg and Vásquez, 1965). While members of specific castas did not necessarily live in a single neighborhood, there was a strong association of kinship and residential proximity. Thus, neighborly ties often overlapped with casta ties. Reinforcing and cross cutting family and neighborhood bonds were fictive kinship ties. These could be horizontal, linking individuals and families of approximately equal status, or vertical and instrumental--a voluntary patron-client relationship for the purpose of securing protection and possibly favored status from a

wealthier Vicosino or a Marcará mestizo. According to Mangin (1954), informal overlapping groups of kin, compadres and neighbors, varying in size from ten to twenty members, were the basic units of social interaction beyond the nuclear family. "The same groups tend to participate in the same fiestas, cooperative agricultural work projects, house-buildings, and visiting patterns" (Mangin, 1954:III-39).

Below the social group and casta level of organization stood the extended family and nuclear family. About one-third of the nuclear families in Vicos lived in compounds comprising an extended family of varying composition and dimensions. The rest were isolated, living more than one hundred yards from the nearest neighbor. Within the family, power relationships were fluid; women participated fully in the decision making process, and all family members were expected to cooperate in its productive functions. Respect for age was a governing norm, although Mangin (1954) points out that this may have been correlated to the greater wealth of older people. He also notes that respect for elders was less pronounced on the behavioral level than on the verbal level.

Reciprocal obligations held kin, fictive kin and neighbors together as did the institution of the fiesta. A varado calling a work party was likely to see only relatives and compadres. Reciprocal labor obligations took many forms, but fell into two basic categories. The first (rantín) was an exchange of similar work. One Vicosino helped with another's housebuilding or an agricultural task. The latter provided a similar or identical service to the former. In some cases, a Vicosino in need of a service could not repay in kind. He or she was expected to provide a lavish feast, usually with coca, chicha (corn beer) and or huasco (cheap cane alcohol). This second form, the minka, involved considerable expense and was used as a last resort. Mangin (1954:III-54) listed the following settings in which reciprocal labor in some form was used:

(1) All phases of agricultural work from preparing the ground through sorting the crop after harvest.
(2) Building houses and outbuildings.
(3) Repairing or constructing walls and irrigation ditches.
(4) Selling eggs in the Marcará market.
(5) Cooking for a large crowd (e.g., at a fiesta or a funeral).
(6) Working a day for the hacienda.

The fiesta was perhaps the most important institution in welding community solidarity and promoting a general feeling of belonging. According to Mangin (1961), it both "reinforces the cultural insularity" of Vicos and sets Vicosinos apart from outsiders. Bonds between kin, compadres and neighbors were strengthened through the reciprocal labor obligations that went along with fiesta sponsorship. Further, the fiesta was an important opportunity for courtship and the widening of social ties (Price, 1961; Mangin, 1961).

Beyond reciprocal labor obligations and the fiesta complex, the forces for internal integration in Vicos were weak. La república labor within Vicos attracted few participants. The instability caused by constant changes in hacienda administration and the failure of successive administrations to invest in hacienda improvements was mirrored in a reluctance on the part of both community and individuals to invest time or resources in capital improvements in the irrigation system, terracing, etc. (Fried, 1960). Furthermore, the cooptation of the local power structure to serve the needs of the hacienda reduced community cohesion. Before the Cornell-Peru Project, the principal symbols of community were church, cemetery and chapels. Such community cohesion as existed was centered about the maintenance of these symbols and participation in fiestas. Both activities were closely intertwined.

Vicos and the outside world. Isolation of the Vicosinos from contemporary Peruvian society has been a persistent theme of writings emanating from the Cornell-Peru Project. Much has been made of the fact that few Vicosinos spoke Spanish, even fewer were literate, and that travel tended to be restricted to the district capital of Marcará and to the regions of Chacas and Vertientes for work in mines and haciendas, but the use of isolation in this context is a misnomer. Griffin's model of social change in the Sierra contributes far more to our understanding of the impact of the project on Vicos:

> It is frequently affirmed that colonialism consisted of the superimposition of a European society upon an indigenous social structure, and that the latter continued its existence essentially undisturbed and unchanged. The problem of development then is viewed as 'integrating' the unchanged, backward, and 'traditional' sector into the modern economy. Thus for example, a group of U.N. economists, sociologists and political scientists asserts that, 'The social structure of Latin America has in the past been characterized by a serious lack of integration.'
>
> Yet the effect of colonialism was not to isolate but to destroy the indigenous social structure and to reintegrate the original population into a capitalist-colonialist system which was and is highly unfavorable to their interests (1972:206).

Vicosinos were not impoverished and powerless because they remained outside of Peruvian national society, but because they were linked on extremely unequal terms to the regional society of Ancash through the Public Benefit Society of Huaraz and regional governmental authorities, to the national society through the hacienda renter, usually a limeño, and finally to the mestizos of the District of Marcará.

An important feature of the hacienda's integration into national and regional society was that Vicosinos lacked control over their interactions with the outside world. According to Martínez, "The hacienda acted as a channel or funnel of official relations with the outside" (1963:10). Draft notices and notices of taxes levied on animals were passed on by the hacienda administration. Outsiders looking for Vicosinos stopped first at the hacienda buildings. Hacienda crops were sold at high prices to Vicosinos when local supplies ran short. The patron retained control over Vicosino labor in two ways. First, he effectively prevented a large proportion of the labor force from engaging in more profitable employment off the hacienda. Unless a Vicosino could transfer his labor obligation to another on a long-term basis, he had to make himself available three days a week for the tarea. Second, the hacienda administration not only determined the duration and nature of service on the hacienda, but whether and where a Vicosino would be forced to work off the hacienda--in the mines, in the linen factory, on a hacienda with a different agricultural calendar, or constructing housing for the middle class in the provincial capital. Although the Vicosino was integrated into the national economy through the application of his labor in a variety of enterprises, he had no control over either wages or working conditions. His only economic weapons were sloth and petty theft from the hacienda.

The renters of Vicos operated in the national society and economy. They leased the hacienda in order to control a servile, but more or less mobile labor force which they could dispatch to whatever location and enterprise would secure them the greatest profit at the time. By the end of the nineteenth century, it was often more profitable to use this free labor off the hacienda rather than in the production of cash crops in Vicos but as the coastal population entered a phase of rapid growth in the twentieth century even the manipulation of a captive labor force became less profitable.

The Public Benefit Society of Huaraz, the charitable organization which owned Vicos, represented the regional elite. The society's board was composed of some of the wealthiest landowners in Ancash, many of whom owned or rented haciendas near Vicos. Their interest was in the preservation of the hacienda system so that class relations in the Callejón would not be destabilized. This interest in the maintenance of a social system was not always consistent with the extraction of maximum profit from the hacienda. During the course of the century Vicosinos had proven themselves willing to petition the government for communal status, given adequate outside support, and, while there is no direct evidence to support this contention, the behavior of the Public Benefit Society seemed somewhat more attuned to the social maintenance of the system than to its economic viability. The stipulations of the sublease to Holmberg, requiring that existing relations of production be maintained, support this contention (Martínez, 1963).

If the patron and the Public Benefit Society controlled to a great degree the terms of Vicosino integration into national and

regional society, it was the mestizos of neighboring towns--in particular, Marcará--who determined their routine interactions with the outside world. Unlike many hacienda families in the Andes, Vicosinos did not depend on the hacienda to supply consumer goods. For the most part Vicosinos consumed the produce of their individual holdings, or at least on the hacienda, but they depended upon outside merchants for some basic consumer goods--e.g. salt, sugar, coca, huasco, aniline dyes, metal tips for hoes and plows, matches, needles, knives, rubber tire sandals. To a lesser extent, they imported wool, corn, and lard--all of which were produced on the hacienda, but were usually in short supply. To make these basic purchases, Vicosinos needed a source of cash income. Cash was obtained primarily through the sale of livestock and wage labor in the town of Marcará. Because mestizos controlled market interactions and had a large pool of labor upon which to draw both activities placed the Vicosino at a disadvantage vis-à-vis mestizos.

According to Stein (1974), wealthy Vicosinos acted as intermediaries between mestizos and other Vicosinos. Wealthy Vicosinos were in a position to influence mestizo administrative personnel on the hacienda, to bribe Marcará judges, and to help their sons to avoid the draft. Most Vicosinos, however, related to Marcarinos as servants, day laborers, as legal clients, as customers and as debtors. These ties were reinforced but softened by compadrazgo relationships between Vicosinos and mestizos. The mestizo compadre would give gifts to his god-children or intervene in behalf of his Vicosino compadre before the judge, governor, or other mestizos; in turn he would gain preferential access to the Vicosino's labor along with the guarantee that he would work hard at low wages, buy all his goods from his store, etc. (Martínez, 1963). Before Holmberg's intervention, Vicosinos were forced to participate in public works projects in Marcará without renumeration. These projects seldom yielded any benefits for Vicosinos. Instances of abuse of Indian women working in Marcará households were reported frequently and lasciviousness, according to Indians, was a key trait in the mestizo stereotype (Stein, 1974).

This system of economic relationships was bolstered by a set of values and attitudes which reinforced mestizo superiority and Indian inferiority. The key distinction between Indian and mestizo was that the latter could speak Spanish and thereby control interactions with the regional and national society. As a corollary, mestizos were usually literate and had computational skills. Some Vicosinos had acquired a knowledge of basic Spanish before the project, but mestizos habitually used Quechua with Indians, thereby reinforcing the status differences. A second distinction between mestizo and Vicosino was in dress. Mestizos wore store bought clothes, while Vicosinos dressed in distinctive homespun costumes with an archaic appearance.

The difference between Indian and mestizo was based not on race, but on cultural distinctions maintained by mestizos in order to protect their own status and reinforced by Indians who feared that

further integration would worsen their economic and social position. Thus, hostility and fear of outsiders were inculcated in young Vicosino children who were warned of pishtakos or bogeymen who would steal them away and turn them into grease to lubricate machines on the coast (Patch, 1962).

In conclusion, Vicos at the outset of the Cornell-Peru Project was rented as a source of free labor for the patrón rather than an economically productive commercial enterprise. It was leased to the highest bidder on five- or ten-year leases by a public charity whose directors were major landowners in the region. Vicosinos were integrated into the national society through a series of clientelistic relations with wealthier Vicosinos in positions of authority, with mestizos in Marcará, with hacienda administrators and the patron. As Stein (1974) notes, a patron's authority was limited to the extent that he could not break the bonds of clientelism between Vicosinos and Marcará mestizos. To break these bonds would bring mestizos and Indians together to make trouble for the patron. The hacienda then operated within the context of Vicosino-mestizo relations.

Clientelistic relationships with both patron and mestizos were of greater necessity for economic stability than community institutions. Agricultural productivity in Vicos was low, partly because of climatic and agronomic limitations, but largely because of undercapitalization, due to the fact that hacienda renters were interested in short-term gain, rather than long-term investment. Vicosinos' labor obligations and their need to work in Marcará left little time to work on terraces and irrigation. This, together with weak community institutions inhibited capital improvements. Poor infrastructure, combined with the anachronistic appearance of Vicosinos, their use of Quechua, and their distrust of outsiders, made Vicos appear to American researchers as a backward relic of the colonial era.

Cornell University as Patron

Having decided that little could be done to hurt Vicos, given its debilitated condition, Holmberg set about amassing support and resources for the project. He enlisted the support of Dr. Carlos Monge, director of the Instituto Indigenista Peruano, an agency established in 1948 by the Peruvian government to conform to a 1942 interAmerican agreement. The agency was an office with little power and without a budget (Adams and Cumberland, 1961). Nonetheless, Monge enjoyed considerable prestige among the elite of Lima, and his willingness to enter into a formal agreement between the Institute and Cornell made Holmberg's lease of the hacienda possible. Holmberg also obtained the support of General Armando Artola, Minister of Labor and Indigenous Affairs and one of the few members of the Odría government concerned about Indians, and Dr. Edgardo Rebagliati, Peruvian Minister of Health, who recommended to the Public Benefit Society of Huaraz that the transfer be approved. Holmberg's careful

nurturing of supportive relationships with Peruvians in positions of power was probably crucial in getting the project off the ground, but these relationships would impose certain limits on the types of changes that could be carried out.

It is somewhat surprising that any experiment in social change on a Peruvian hacienda should have been backed by powerful Peruvians, given class relationships at mid-century. But it must be remembered that indigenismo, a movement which placed renewed emphasis on Indian culture, had become an increasingly important force in Latin American intellectual and political life during the course of the twentieth century. Although Stein (1974) sees the movement as yet another expression of the superiority of "townsmen" over "countrymen," the movement had a liberal component which brought the issue of Indian rights into the political arena.

In the 1920 Constitution, Indian rights were guaranteed for the first time, and in 1921 la Sección de Asuntos Indígenas was created within the Ministry of Development to protect Indian rights and to promulgate laws for their social advancement (Barnett, 1960). In 1922, the Patronato de la Raza Indígena was created by the government. Its local offices were intended to help organize and protect indigenous communities. While it may be argued that the creation of special status and institutions for Indians legalized and thereby ensured continued discrimination, it was nonetheless an important recognition of the existence of Indians as Peruvians entitled to the protection of the laws.

With the growth of institutions to support Indians, a number of indigenous communities were organized, including two in the Callejón. In 1925, Vicosinos for the first time presented their grievances before the Central Junta of the Patronato. The process of bringing disputes concerning patron-peon relations before the Patronato accelerated in the 1930s, and in 1946 under the liberal Bustamanta government, the Casa del Indio was established with the dual aim of promoting indigenous handicrafts and housing Indian delegations from the Sierra (Barnett, 1960). Fear of violence in the countryside was growing, and by 1952 land reform was seen as a necessary measure to avoid uncontrollable peasant movements.

Thus, Holmberg's academic interests in the study of social change coincided with a growing awareness on the part of the Peruvian government of the need for change in the hacienda system. They also coincided with the debilitation of a number of highland haciendas to the point where they were no longer profitable enterprises for either owners or operators. In 1951, Monge and Holmberg drew up a formal agreement between Cornell and the Instituto Indigenista which specified that Cornell would be responsible for financing the project, that it would last for no less than five years, and that administration of the agreement would be in the hands of a social scientist acceptable to both institutions who spoke Ancash Quechua. The project was to be a training site for both American and Peruvian students. The agreement was approved by the Ministry of Labor and Indigenous

Affairs, and in 1952 arrangements for hacienda rental were concluded.

It required little effort to convince Ingeniero Ingnacio Macias, an important landowner in the Callejón and general manager of the Santa Corporation, to relinquish the lease if he could be assured that the transfer would not bring radical social change (Martínez, 1963:12). As I noted above, flax production was unprofitable and as the linen factory at Pati was falling into worse straits, the market for Vicosino labor was contracting. The transfer of lease made the Instituto Indigenista and Cornell co-patrons of Vicos. All rights held by the Santa Corporation were transferred, except for the right to pasture cattle on a small part of the Quebrada Honda. At this time it was agreed that the lease was contingent upon the maintenance of traditional hacienda labor relationships and that the lands directly administered by the hacienda not be alienated. That is, hacienda lands had to remain in tact and work obligations fulfilled. In this way the Public Benefit Society board protected itself from an assault on established class relationships.

These stipulations meant that Cornell University, represented in Peru by Holmberg, had to assume the role of patron. Holmberg was never comfortable "playing the dual role of God and anthropologist" (1958:12), and complained, "What we essentially have on our hands is the problem of running a small nation together with the job of trying to study its development so that literally hundreds of problems arise for which we do not have sufficient trained personnel to do a thorough job on each" (1952b:7). Nonetheless, this role was continually reinforced in a number of ways. Vicosinos had long since grown accustomed to interacting with hacienda administrators as patrons and continued to do so despite Holmberg's efforts to address them as equals. Several American and Peruvian project officials have been criticized for internalizing the role (Himes, 1972), but others fell into it despite good intentions. Project staff found that, given the structure of Peruvian society, they had to maintain their position as intermediary between Vicosinos and the mestizo society of the region

II. CORNELL-PERU PROJECT GOALS

The Cornell-Peru Project played a major role in Vicos affairs from 1952 to 1957 as patron and from 1957 until Holmberg's death in 1966 in administrative, research and teaching activities. From 1957 to 1962 project efforts were directed at the transfer of ownership of the hacienda from the Public Benefit Society to Vicos itself. That accomplished, reunification of Vicos with Chancos (a lower portion of the hacienda separated from it by the Public Benefit Society in 1933) was accomplished. With reunification, the economic viability of the community became the most pressing concern. From 1950 until 1975, there was no period when outsiders interested in Vicos development did not live there (Mangin, 1979). This period witnessed a remarkable array of studies and programs designed to improve conditions at Vicos and a large, shifting group of scholars and field personnel with divergent and sometimes conflicting agendas and methodologies.

Underlying Assumptions of the Project

The goals of the Cornell-Peru Project were framed in an atmosphere of optimism and faith in the power of democratic institutions and technological innovation and diffusion to overcome poverty and oppression. Holmberg and many of his fellow workers believed in progress--that the betterment of one group of individuals could take place without the impoverishment of other groups and that conflict need not be zero-sum. Beyond these broad assumptions about man and progress, project activities reflected a set of assumptions about Vicos as a community and a hacienda, about regional development and integration into Peruvian society, about the interrelatedness of social, economic, and cultural systems, and about the feasibility of effecting social change through large-scale changes in a very small framework.

The project's underlying assumptions about the place of Vicos in Peruvian society not only determined its goals to a large extent, but defined its expectations and its concepts of progress. Vicos was seen as an "anachronism in the modern world" (Holmberg, 1971b:32)--a medieval manor with Indian serfs. It seemed almost totally isolated from what Holmberg saw as the modern Peru--the cities and industrial sugar plantations of the coast--and resistant to outside influence (1952a). Language and dress were regarded as symbols of backwardness

and isolation--relics of a colonial past. Holmberg portrayed Indians as passive, fearful, and hostile to outside influence:

> The indian element . . . lives relegated to an inferior cultural status, which creates in it an inferiority complex. It can count on few opportunities and it lacks the necessary means for its self-defense in its relations with those integrated into other rungs of the cultural ladder (1951b).

In an ex post facto explanation and justification of the analytical framework of the project, Holmberg, Dobyns, and Vásquez (1961) set up two polar ideal types and a continuum between them as an instrument for measuring the effects of Cornell intervention. This construct contrasts Vicos, which the authors define as a "medieval-type" community, with "Western Civilization," which they do not define, but describe as a secularized civilization with recent antecedents. The analytical merits of the construct will not be discussed here, but it is important to note the persistence of their view of Vicos as a medieval society, isolated from, rather than a product of, modern Western civilization.

As was emphasized in the previous chapter, not only was Vicos integrated into the national society, but Vicosinos were better off economically than many other hacienda peons and members of indigenous communities both in the Callejón and in the Sierra as a whole (Mangin, 1955). Himes (1972) notes that in 1952, there were 4 hectares of cultivated land per household at Vicos, as opposed to an average of 1.6 hectares of cultivated land per household for the Sierra as a whole. In addition, Vicosinos had access to greater pasture and water resources than most Sierra populations. Vicos was integrated into the Peruvian economy as a source of labor for regional public works projects, for the mines of Conchucos, for commercially oriented haciendas on the western slopes of the Andes, and for the Santa Corporation linen factory at Pati. The terms of this integration were generally unfavorable, but far less so than for many other Indian populations.

Nonetheless, Holmberg argued that "a wholesale type of change is necessary to bring them (Vicosinos) in line with the modern world and make them productive elements in an emerging democratic Andean society" (1951a:18). The assumption that the poverty and powerlessness of Vicosinos were a product of isolation rather than integration on unfavorable terms, led Holmberg and other project personnel to place great faith in the ability of integration into the national society to bring about positive changes in Vicos.

Holmberg also expressed a strong faith at the outset in the evantual modernization of the Sierra and its integration on an equal basis with the coast. He saw integration and self-determination for Vicosinos as compatible goals. He felt that the community could be helped to "shift for itself from a position of relative dependence and submission in a highly restricted and provincial world to a

position of relative independence and freedom within the larger framework of Peruvian life" (1955:23). Participation in the national society would bring with it expanded employment opportunities, access to goods from outside the region, mobility, an expanded world view, and a role in shaping the future of the nation. Vicos' low standard of living and inward-turned world view was assumed to be a function of isolation; improvement would come with integration.

With integration, Holmberg assumed that the 60 percent of the Peruvian population engaged in subsistence agriculture (and residing for the most part in the Sierra), would become either commercial farmers or industrial workers. This transformation could only take place if Sierra dwellers could be taught sufficient Spanish to participate in the industrial sector and proper agricultural methods, so that commercial production became possible. He saw an interrelation between the inferior status of sierra Indians and their inferiority complexes, hostility toward innovation and outside influence, and their propensity to indulge in coca chewing and alcohol use. This same inferior status was related to their lack of capital for agricultural improvements, which in turn contributed to soil exhaustion, malnutrition, and, again, fear, suspicion, coca and alcohol use, and resistance to modern innovations (1951b).

Holmberg assumed that lack of integration and poor quality of life within the hacienda were related in a cumulative causation spiral, but that underneath the pessimistic world view resulting from this spiral, Indians saw the need for change and were cautiously sanguine about improvement of their condition. He asserted, "It is probable that if they are offered an opportunity to develop an optimistic and progressive world view, they will rapidly adjust to modern conditions and will soon gain the capacity to take responsibility in Peruvian national life" (1951b:93). The negative spiral could only be broken by an integrated development effort which would simultaneously attack poverty, illiteracy, and the lack of community institutions, and which would bring Vicosinos into the national market economy and society through commercial production and the involvement of Vicosinos in national institutions such as the school system and the draft. Finally he believed that even on the coast, development would lag if sierra and coast were <u>not</u> linked in a positive relationship.

Despite the Santa Corporation's failure to attract international capital in the years preceding the project, and despite the disasters at the Huallanca hydroelectric plant and the failure of the Pati linen factory, Holmberg was sanguine at the outset of the project about the future development of Ancash and the Callejón. He expected the Huallanca hydroelectric plant to be supplemented by others upstream on the Río Santa. This cluster of hydro installations was to have lured industry with its cheap electrical power. By 1954, however, Holmberg began to realize his assumptions about Callejón industrialization were unfounded and he revised his scenario for regional development, taking a regionally rather than a nationally oriented stance on economic development and market integration:

> As originally designed [the project] was not planned to go much beyond the stage of a modern agricultural development which the Indians themselves could eventually operate. At the time the project was started, it was expected that industry should develop in the area --and thus absorb the increasing population and the people displaced by the modernization of agriculture and education--since the Peruvian government was involved in a plan to industrialize the Santa Valley. But as the result of a series of natural catastrophies and a lack of capital, this does not seem likely to take place in the foreseeable future. Consequently, we may soon have a surplus labor supply on our hands at Vicos, a problem which has already begun to arise. Since there are at present few industrial opportunities for Indians in the local area, or even on the coast, this is a problem which we are not in a position to solve immediately. Local industrialization, under our direction, seems to be the only answer at this time (n.d.:26).

Elsewhere, Holmberg (1954) elaborated on the need for local industrial development to support the burgeoning Vicos population. It was his feeling that such development should depend on local resources, require little capital and serve local markets. This particular shift in Holmberg's goals is reflected in the training of Vicosino masons and carpenters and in addition of vocational education in the Vicos school and the institution of sewing classes for women, but project funding was never adequate to launch a local industrialization program. Stalled industrialization notwithstanding, he continued to stress the importance of integration as a precondition for the well-being of Vicosinos. Conversely, he held that in Peru, "the ultimate success of the economic developments in industry and agriculture will depend on the contented adjustment of subsistence, landless Indian farmers, who now constitute 60 percent of the population, to commercial agriculture and industrial life" (1951a:17).

Despite the continued emphasis on integration of Vicos into the national society and of Sierra and Coast into a unified whole, Holmberg clung tenaciously to the belief that improvements of a permanent nature could be made at the community level without far-reaching changes in the national and regional social structures. He asserted that the conditions depressing Indians in 1951 were the ruthless exploitation of human and natural resources in the Sierra; the Indians' lack of economic security and legal protection; their poor health, nutrition, and their lack of education; and their inefficient agricultural practices. In a proposal to the Carnegie Corporation, he proposed "to change these conditions in as controlled a manner as possible and by the best methods of social science, in order to study systematically the impact of our program on the native economy, social structure, and the system of beliefs" (1951a:19). Holmberg assumed that systematically introduced changes designed to raise the standard of living would enable Vicosinos "to take a progressive and

independent role in the modern world" (1950, cited in Mangin, 1954: I-14).

Underlying this set of convictions about the benefits of integration and the possibility of effecting progressive social change in a controlled microenvironment were a set of fundamental assumptions about the nature of man. He set forth the following as fundamental articles of faith:

> (1) . . . human traits are such that progress can be made toward the realization of human dignity, and
>
> (2) . . . the natural order (physical nature) is such that with greater knowledge and skill, human beings can turn it progressively to the service of social goals (1958:13).

He did not, however, wish to impose a single set of institutions upon Vicos and felt that institutional choices should be made by the Vicosinos themselves. The job of the project was to establish the preconditions that made rational choice of a development strategy possible. Holmberg assumed that breaking the negative spiral of poverty, fear, suspicion and ignorance through the introduction of new technology and values would be a necessary and sufficient condition for self-determination.

If Holmberg assumed that change within Vicos would suffice to bring Vicosinos into a position of power and dignity in the national society, he was skeptical of the potential for isolated changes, and argued that attempts at innovation would contribute to the maintenance of negative attitudes when they were not part of an integral development plan. He saw the failure of hacienda attempts at modernization as a result of the lack of an integrated development strategy (1951b). Because he believed in the interrelatedness of social, economic, and cultural phenomena, Holmberg advocated a multipronged intervention designed to raise the standard of living at Vicos and to use "power to share power to a point where we would no longer hold power" (1958:13).

Within this general systemic approach to social change, Holmberg and other project staff members held assumptions about the introduction of innovations common to the diffusionist perspective. He believed that changes could be initiated in a small area or among a small population, and that when the efficacy of these changes was demonstrated, they would be adopted by other individuals and communities. The diffusionist perspective fostered a preoccupation with the identification of potential innovators and the development of methods for introducing innovations to these key individuals. This preoccupation with the role of key individuals was accompanied by a failure to examine the social consequences of technological change. The diffusionist perspective held that just as innovations would spread throughout the population, the benefits of adoption would diffuse throughout the community of innovators. The tenacity of these

diffusionist assumptions is reflected in the lack of systematic studies of the equity effects of project innovations.

Finally, it is important to note that Holmberg held certain assumptions about the conduct of research that were later subject to criticism by outside observers (Adams and Cumberland, 1961) and project personnel. A close associate remarked that Holmberg believed in "creative anarchy." Rather than adhere to a closely defined set of programs and priorities, Holmberg's concept of a laboratory for controlled social change involved allowing a large number of researchers with an equal number of research agendas, methodological orientations and priorities free rein to explore their interests in Vicos. This democratization of the research process had an important impact on the project in that a pragmatic rather than a doctrinaire approach to change predominated in the field. Second, the unleashing of graduate students, Peruvian and American professionals, undergraduates and Peace Corps volunteers on a single community over a decade and a half produced a literature remarkable in terms of its scope and its diversity of theoretical and political orientations.

In summary, most of the assumptions underlying the Cornell-Peru Project were widely shared by social scientists and policy makers in the postwar era. Poverty was seen as a product of isolation from, rather than integration into western society. It was believed that knowledge and technological diffusion could eliminate poverty and that the elimination of poverty was a necessary and sufficient condition for the realization of basic human dignity. It was assumed that the introduction of a set of key innovations within a single community could reverse the negative spiral of poverty, suspicion, fear, and ignorance. These innovations, if useful, would diffuse rapidly throughout the community and eventually the region. Holmberg's belief in cultural relativity and his preoccupation with the devolution of power to the Vicosinos were perhaps unique to the anthropological perspective, and his faith that social change could be effected in a democratic, loosely directed research and development environment was probably idiosyncratic.

Project Goals

The translation of Holmberg's assumptions about human dignity, progress, and regional development into the formulation of general goals for social change in Vicos was not difficult. The tasks at hand were to reverse the cumulative process which kept Vicosinos impoverished and isolated from the national society and to oversee the orderly devolution of power from project staff to the community. Holmberg favored a multifaceted approach toward the realizations of these ends.

Project goals at the outset were both theoretical and practical. The former included the development and testing of theories relating to the processes of social and cultural change and the introduction of

technology, improvement of measurement of these changes and the promotion of interdisciplinary research. Practical goals included the improvement of the standard of living of Vicosinos to a point where they could participate fully in the modern world, study of the progress of "an applied integral plan" in the Andes, and an increased understanding of the biology of Andean man (Adams and Cumberland, 1961). Adams and Cumberland note that while theoretical and social goals were both important for Holmberg and the Cornell Cross Cultural Methodology Project, the Instituto Indigenista was primarily interested in practical goals. Monge, as a high altitude biologist and physician, had a stake in the psysiological and health-related aspects of the project.

Holmberg believed in the interrelatedness of theory and praxis. He saw research goals and social change as equally important. According to Mangin,

> He wanted the anticipated results of the Vicos project diffused throughout Peru and the world, for he felt he was developing a model that would aid greatly in solving universal problems of poverty, exploitation, and racism. Basically, the project represented to him the opportunity to demonstrate the capacity of the 'common man' to assume responsibility for his own life and well-being, given the opportunity to do so. His thinking, as we shall see, conformed closely to that of other social reformers of the time, especially those concerned with community development. But he differed from them in a very important way: The key to the problem, as he saw it, lay in the combination of applied research and political action (1979:67).

Holmberg's basic belief in the need for developing the capacity of Vicosinos to lead full, productive lives in the context of a national society and to participate in national institutions seemed basically unchanged throughout the period of the project. But specific objectives shifted over time; some were actively promoted and others set aside.

At the outset of the project, three programs received top priority. The first was to increase agricultural productivity on hacienda lands. Carnegie had granted the project funds for research, but not for capital improvements. In order for the hacienda to survive as an entity to be passed on to Vicosinos, it had to be made into a productive enterprise without overexploitation of the labor force. Second, Holmberg hoped to integrate Vicosinos into the national society immediately through (1) regularization of army service, and (2) the establishment of a school, which would be part of the national school system. Third, he made plans for the gradual devolution of political power to the Vicosinos.

Within the context of the hacienda system, he hoped to establish a basis for trust and confidence by altering relations of

production. Vásquez recommended that, over and above the tarea, all services performed at no cost by Vicosinos be abolished and that extra work be paid for at the going rate. He also recommended that the mayorales continue in their roles and that Enrique Luna, mestizo overseer for the Santa Corporation, who had enjoyed good rapport with Vicosinos, be retained. Luna and Vásquez played key roles in translating Holmberg's specific goals into programs.

Holmberg thought of Cornell's role as patron as transitional. He anticipated that Cornell would pull out at the end of the lease period and that the hacienda would be expropriated and granted official status as an Indian community. He not only expected Vicos to be economically self-sufficient by the end of this period, but he hoped that Vicosinos would be able to organize, manage, and defend themselves as a community. To this end he sought to transform selected hacienda institutions into the bases for self-government, while others less susceptible of use for this end were allowed to decline.

By the end of the lease period, it had become apparent that the "realization of basic human dignity" could not be achieved simply by removing traditional patron-peon relationships. Holmberg began to emphasize the achievement of equality within Vicos as well as the liberation of Vicosinos from oppression by hacendado and mestizo. With the devolution of power to the newly created Council of Delegates, concern shifted from institution-building to group survival and stability and to the prevention of further power concentration in the hands of wealthy Vicosinos. According to Holmberg,

> One of the development goals of the Vicos program was to bring decision-making bodies of the community up to a level of competence at which we, the patrones, could be dispensed with but without the community's falling victim to its more predatory members (1958:14).

It was hoped that the replication of mestizo-Indian relations within Vicos could be avoided.

Thus, the aim of the Cornell-Peru Project was to introduce an interrelated set of carefully planned strategic interventions designed to improve well-being, to increase Vicosinos' linguistic, computational, and technical skills, to foster integration of the community into the national society, and to allow the orderly devolution of power to the community. While project activities were initiated with these goals in mind, they tended to reflect the interests and ideas of various project personnel and cooperating Peruvian and international agencies rather than represent specific facets of a coordinated agenda for development.

Because the project had to depend on the cooperation of outside agencies for resources, programmatic objectives tended to be ad hoc and fluctuating, as indeed they would have had to have been for the project to succeed at all. This looseness proved frustrating for

field personnel. One project field director complained, "My own feeling is that it would be more discreet at least, and certainly more honest, to admit that the Project has had no goals in the sense of anything actually put into effect, or anything that has even come to my attention" (Blanchard, 1956a). While ultimate social goals were always discernible, middle range objectives that could be translated into programs were often elusive and for practical reasons shifting over time in response to changing opportunities.

Finally, while an integrated approach to development made sense theoretically, in practice, programs related to specific objectives sometimes set back the achievement of others. For example, the project's successful devolution of power to Vicosinos spurred a stream of return migrants. This stream intensified pressure on the land, slowing the achievement of agricultural and nutritional objectives. This and similar conflicts will be discussed in the following chapters.

III. PROJECT ACTIVITIES

While Cornell-Peru Project activities changed to a certain extent over time, throughout they fell into five main categories: improvements in agricultural productivity, development of an educational system, regularization of Vicosino interactions with regional authority systems, health and nutritional improvements, and the devolution of power on the hacienda into the hands of Vicosinos. Most of these activities involved the cooperation of Peruvian agencies and reflected the goals of these agencies as well as those of the project. As I noted in the previous chapter, Holmberg probably did not think that these two sets of goals were essentially in conflict, but cooperation proved more successful in some cases than others and often involved a degree of conflict or at least confusion.

Improving Agricultural Productivity

In 1952, Vicos' most glaring problem was its poor agricultural productivity. It made no economic sense for previous renters to invest in long term capital improvements, given the short terms of their leases. Similarly, peon tenure was too insecure to encourage the improvement of individual holdings. Furthermore, the use of labor off the hacienda and peons' need to supplement their subsistence production with cash income from employment off the hacienda meant that the labor supply for improvements in terracing and irrigation was lacking. Poor agricultural productivity had an impact on nutrition. While no one appeared to be starving, malnutrition was common and caloric intake was low by Peruvian standards (Alers, 1966: 26; Martínez, 1960). When Cornell took over the lease, most Vicosinos did not produce enough to meet their subsistence needs. Nutritional implications aside, this meant that dependency relationships with both the hacienda and Marcará mestizos were reinforced by Vicosinos' urgent need for income to fill the gap between production and consumption. Poor productivity on hacienda lands made it difficult to accumulate a reserve of capital from cash crop production. This in turn prevented capital investment in agricultural improvements.

A number of agricultural programs were carried out to break this cycle--to improve nutrition, to encourage market production for the accumulation of a reserve of private and community capital on the hacienda, and to restore and conserve agricultural land. Among

these were a potato production program carried out with the aid of SCIPA (Servicio Cooperativo Interamericano de Producción Alimentos), a reforestation program, and a demonstration vegetable garden cultivated in conjunction with the school prevocational program. Agricultural credit was made available through share-planting arrangements and direct loans. Terracing improvements were made early in the course of the project on hacienda lands. Later, a livestock immunization program was undertaken under Peace Corps supervision (Dobyns, Doughty and Holmberg, 1964), and during the same period a Lima brewery carried out a small-scale experiment in barley production on communal lands (Garrido-Lecca, 1965).

The new seed potato program. Of these agricultural programs, the most successful was the new seed potato program. The intent of the program was to raise productivity, to generate cash income both for the hacienda and for individual Vicosinos, to contribute to the solution of Peru's food problem, and, finally, to foster the integration of Vicos into the national economy through participation in national markets. This program was in many ways the most visible project activity. Not only were potato shortages eliminated, but Vicos potato production allowed the accumulation of a capital fund for public works projects and a down payment on the hacienda in 1962. Many Vicosinos enjoyed an improved diet as a result of the program and were able to increase their consumption of purchased goods.

Like so many other project activities, the new seed potato program started informally when Mario Vásquez asked extension workers in the SCIPA office in Huaraz for advice on improving potato production on hacienda lands. When Vásquez first approached SCIPA, potato production at Vicos had almost ceased. The potato nematode, a pest afflicting crops throughout the highlands, had decimated yields of the papa comun, the variety preferred by Vicos cultivators. A second potato variety was also grown; this variety yielded poorly but ripened early, filling a gap in the subsistence cycle. Thus dramatic results were almost guaranteed with the introduction of nematode-resistant varieties and pesticides.

Vásquez got advice on row spacing, seed, fertilizers and pesticides. Two potato varieties were imported: the papa blanca, a large white potato with a hole in the center, and the papa paltaj. The hole in the white potato made it unattractive to Vicosinos, as did its texture and lack of flavor (Stein, 1972). The papa paltaj, similar in many respects to the papa comun, was well received but often in short supply.

Two types of fertilizer were recommended--guano de la isla and guano de chincha--both natural fertilizers which had been used before on hacienda crops. Pesticides and crop disinfectants, copper compounds and DDT spray were recommended to destroy the potato nematode and other pathogens. Row spacing was to be changed, with plants set 70 to 90 cm. apart, with 45-cm. intervals between rows. Vásquez introduced the concept of row spacing by cutting a stick to the appropriate length and laying it out on the ground, thus making the SCIPA

prescription immediately comprehensible to all who cared to follow it.

The program was started as a demonstration on hacienda lands, carried out under the direction of foreman Enrique Luna, with the labor of Vicosinos fulfilling their three-day labor obligation. At that time a meeting was held to announce the availability of the new inputs. These were made available at cost to Vicosinos on a cash or share-planting basis. The share-planting system was commonly used by mestizo suppliers in the region: seed and other inputs were supplied in return for a specified portion of the crop. The project offered individual Vicosinos disinfected seed, fertilizer, pesticides and advice. In return Vicosinos were obliged to furnish land, draft animals, their own labor and tools. The project would dictate row spacing, harvest timing and other cultivation practices and would receive half of the crop after harvest.

Diffusion of the new technology was slow at first, but gradually gained momentum. Out of a total of 363 households, seventeen families participated in the share planting program during its first year, eighty-seven in 1953-54, and 158 in 1954-5 (Vásquez, 1971). Each family could participate only once; thus, these figures are not cumulative; the total number of participating families was 262, or about 72 percent of all households. In addition, several other families did not participate in the share planting program, but purchased seed, sometimes fertilizer, and less often pesticides, adapting the new technology to their own needs.

The share planting system and the new seed potato technology were subject to considerable criticism at the outset. Row-spacing and hilling requirements for the new package increased labor inputs. The white potato was unappealing and paltaj seed was in short supply. People with small holdings and poor land felt that even if yield increases were almost guaranteed, they could not afford to relinquish half of their crop. Despite the emphasis placed on potato cultivation, corn was still the most important subsistence crop for Vicosinos. Where participation in the new seed potato program would have necessitated the use of low corn fields for potato cultivation, it met with resistance. Finally, distrust of the hacienda administration was deeply engrained, and did not disappear with the introduction of the program (Stein, 1972).

Diffusion of the program was slowed up by conflict of interest between the two parties over harvest timing. Project personnel felt that it would be impossible to collect the project's half of the harvest if cultivators were allowed to take early maturing potatoes out of the ground before the harvest to tide their families over. Vicosinos on the other hand found this a necessary option. Furthermore, they realized that total yield would be greater if these early potatoes were harvested rather than left to rot in the field. Other discrepancies in attitudes toward the potato harvest were latent, rather than expressed. As field director, Blanchard (1955a) objected to overconsumption of potatoes immediately after the harvest in spite of the fact that an insufficient quantity were stored to meet annual needs. He also inveighed against the custom of sharing the fruits of

the harvest widely among relatives, fictive kin and friends. This, he argued, reduced the portion of the crop that could be marketed, thus frittering away the benefits of the program. Despite these qualifications, by 1955, the new seed potato technology was widely adopted; the share planting system fell victim to its own success and was abandoned in favor of a cash credit program.

The immediate results of the new seed potato innovations were dramatic. The first year, production more than doubled on experimental plots. By 1954, Vicos was the second largest potato producer in the Callejón (Stevens, 1954). Income from hacienda potato crops was used for local public works projects such as school construction and was eventually converted into a capital reserve to be used as a down payment on the hacienda in 1962. Potato sales also generated cash income in the private sector. Vicosinos participating in the program sold potatoes as individuals in the Marcará and Huaraz markets or marketed them in Lima with the hacienda (later communal) potato crop. In time, the profitability of potato production at Vicos waned as new disease infestations reduced yields and other highland producers began to compete with Vicos in the Lima market.

Credit. Agricultural credit was first made available by the Cornell-Peru Project to Vicosinos in the form of share planting. The share planting option could be exercised once by Vicosinos who wanted to participate in the new seed potato program. Share planting seems to have been less a mechanism for providing credit than an incentive for cultivators to use new technology. The system was unattractive for a number of reasons, and only Vicosinos with insufficient funds to buy their own seed participated (Goldsen and Stein, 1955).

The 50-50 arrangement seemed unfair to some participants who felt that the hacienda contribution of seed, fertilizer, and pesticides was not equivalent to the cultivator's contribution of land, tools, and, most of all, labor. The increased labor requirements of the new package meant that reciprocal labor obligations were unbalanced. A participant required more aid than a non-participant. Participants also complained about the uneven sharing of risk (Stein, 1972).

In response to these criticisms, the project instituted a new credit program in 1954. Vicosinos could purchase inputs on credit at low interest rates, with payments either in crops or cash (Vásquez, 1955). In 1955-56 the share planting system was abandoned in favor of credit in kind made available to any Vicosino who requested it. In 1955, seventy-two Vicosinos borrowed money for inputs; in 1956 there were thirty-five borrowers (Vásquez, 1962). This drop probably reflected the growing availability of cash in Vicos rather than dissatisfaction with the program. Borrowers were allowed to choose among available inputs, but were required to pay back both principal and interest in cash. Participation in the credit program meant that at least part of the crop had to be marketed. According to Garrido-Lecca, this shift to cash repayment gave the subsistence sector "a strong push toward commercialization: (1965:41).

The credit program was dropped by the Cornell-Peru Project in 1957 when the hacienda lease was transferred to Vicos as a community. The same year PNIPA (Plan Nacional de Integración de la Población Aborigen) introduced a Supervised Rural Agricultural Credit Program (CRAS) through its Programa Ancash. Programa Ancash made annual loans to the community ranging from $6,700 to $9,300. These loans were provided for crop production on 30 to 50 hectares of communal land. After purchasing all necessary supplies, the community was able to lend the surplus to Vicosinos for their own plots. Loans were also made to mestizos and neighboring communities. Loans were made in kind and paid back (both principal and interest) in cash (Garrido-Lecca, 1965). The interest rate was 9 percent, the same for both the community and individuals.

Participation in the PNIPA credit program was initially low. Much of the sum lent to Vicos was made available for individual loans. In 1957, eighteen individuals took out loans. This represented a drop from seventy-two borrowers in the previous season. This discrepancy was the subject of some ill will between the Programa Ancash and the Cornell-Peru Project. Garrido-Lecca cites the following exerpt from an early Programa Ancash report as evidence of tensions:

> Since an organized program with respect to agricultural activities was non-existent, they were either not accomplished or if accomplished, not done at the proper time. In such a disorganization labor was being wasted since unnecessary operations such as pesticide applications were overdone. The lack of field supervision of the different agricultural activities was also causing much wastage, much of which was affecting yields in a negative manner. All this only went to increase costs of production (1965:42).

Some of these criticisms were fair, and the frustration was understandable, but the passage is more an indication of the difficulties inherent in the transfer of responsibility for development programs in Vicos from the project to national agencies than an indictment of the project itself. After an initial period of confusion, participation in the CRAS loan program rose. In 1958-59, 50 families participated, 85 in 1962-63, and 248 in 1963-64. According to Vásquez (1971) a total of 54,491 soles worth of credit in kind was distributed under the CRAS program.

Other agricultural activities. A baseline study of Vicos agriculture was undertaken in 1953-4 (Stevens, 1954) after the new seed potato program and share planting were under way. In his assessment of Vicos' potential to increase agricultural productivity, Stevens, an agricultural economist, emphasized the need to keep hacienda lands intact, rather than redistribute them to individual Vicosinos. Redistribution, he argued, would add little to the incomes of

individual Vicosinos and would prevent the building of capital reserve and the introduction of new technology necessary for significant production increases. Specifically, Stevens recommended continuation of the potato program, continued experimentation with fertilizers, pesticides, and lime, and the introduction of vegetable production, and new rotations with sod crops.

He proposed renovation of the irrigation system and terrace construction to control erosion, and experiments with water delivery --especially for potatoes. He also advocated the introduction of "top grade" cattle, dairy cows and sheep, and a poultry disease prevention program. Pasture management and the use of leguminous sod crops were also proposed. But only a few of these proposed innovations were actually implemented. Steven's prescriptions for agricultural improvement at Vicos reflected a bias in favor of imported technologies. He advocated commercialization of agriculture and the use of commercial seed, fertilizer and pesticides. This bias, which was shared by SCIPA and PNIPA staff, dominated project agricultural activities. As a result, the cultivation of non-market crops and the introduction of technology tailored to the Andean setting were largely ignored.

The school demonstration garden. One small-scale activity that served a number of related functions was the demonstration plot controlled by the school. The reservation of an approximately 1.5-hectare plot of hacienda land for creation of the school garden drew opposition from the Public Benefit Society of Huaraz, whose members saw it as a reduction in the size of the patrimony of the hacienda. The school garden was set aside, however, and prevocational students gained experience with new crops and innovations on a small scale, although it is not known to what extent these took hold in the community. Second, the plot was used to grow food for the school lunch program. The introduction of hot lunches was both an incentive to lure children to school and to maintain good attendance, as well as a means of introducing new, nutritious foods into the diet of school children. It was hoped that as children became familiar with new vegetables, they would encourage their cultivation and addition to the family diet. While the direct impact of the school demonstration garden has not been evaluated, by 1961 consumption of calories and animal protein had increased, and average daily consumption of iron, thiamine, riboflavin, niacin and vitamin C exceeded the minimum daily requirement (Alers, 1966).

The school garden produced information on the suitability of vegetable crops for cultivation at Vicos. Onions, cauliflower, tomatoes, cabbage, lettuce and carrots were planted. Tomatoes, cauliflower and carrots did poorly, tomatoes because of climate and cauliflower for obscure physiological reasons. Cabbage and lettuce on the other hand did well (Garrido-Lecca, 1965). Onions were highly successful, even without pesticides and with low fertilizer and labor inputs and, according to Garrido-Lecca, offered promise as a cash crop. Again, no one has studied the impact of school

demonstration activities on Vicos vegetable cultivation.

Reforestation. The Cornell-Peru Project undertook a small-scale reforestation program in 1952 in an attempt to control erosion. Five hundred pines, 250 peaches, and 300 eucalyptus were planted. Most of the pines and peach trees were eaten by goats and sheep, but the eucalyptus survived (Garrido-Lecca, 1965). A second abortive project was undertaken by a Peace Corps volunteer and the school agronomy instructor. Ten thousand seedlings were planted in a prepared bed and carefully nurtured only to die when the volunteer left for vacation without leaving watering instructions (Dobyns, Doughty and Holmberg, 1964).

In 1964, a massive forestation program was again undertaken, directed by the Forestation Administration of the Ministry of Agriculture and supported by Alliance for Progress funds. Large stands of eucalyptus (800,000 trees) were planted with the agreement that proceeds from the harvest be shared between the Ministry of Agriculture and the Vicos community (Vásquez, 1971). As a result of the 1964 program, many Vicosinos earned cash income from transplanting, and Vásquez estimated that 15 percent of the Vicos labor force would find at least part-time employment in forest management until the first harvest in 1975. He also noted that as a result of the project, several Vicosinos got jobs with the Forestry Administration on other projects in the region. These eucalyptus are maturing, but no further reforestation has taken place. While the second and third reforestation programs were not strictly Cornell-Peru Project activities, they may be considered spinoffs of project efforts.

Barley production. In 1964, a Lima brewery (Malteria Lima, SA) conducted an experiment in barley production on communal fields. The fields chosen were located on fertile, alluvial soils. Communal labor was used and pesticides, nitrogen and phosphorous applied. Yields more than doubled. Results of this demonstration were reported in 1965 (Garrido-Lecca), but no information about Vicos barley production after the experiment is available.

Livestock management. With so much of Vicos land suitable only for grazing and so much of Vicosinos' wealth tied up in livestock, it is surprising that so few efforts were made at stock breeding, disease control, and pasture management. A branding program was initiated in the first years of the project, and, in 1963, a Peace Corps volunteer tried to begin a vaccination program. The volunteer had poor rapport with Vicosinos, and the program initially met with substantial resistance. Despite its bad start, however, the vaccination program was eventually accepted as vaccinated animals showed greater resistance to hoof-and-mouth disease (Dobyns, Doughty and Holmberg, 1964).

Education

Holmberg's model for planned social change in the Andes placed education in a pivotal role. Education would enable Indians to improve their economic well-being, to change the basis of their interactions with the mestizo world, and provide them with a means of identification with the national society. In 1952 Vicos had a school. Founded in 1940 by a hacienda administrator's wife, the school had only one teacher, an enrollment which had dwindled from seventy-nine pupils in its first year of operation to about twenty, and a daily attendance of about ten (Stein, 1975). The school was nominally coeducational, but the enrollment was virtually all male. According to Holmberg and Dobyns (1962:108), "This school had made no Vicosinos literate in its eleven years of operation." The teaching position was a sinecure, equipment was lacking, and children were taught in a dark corridor.

Thus, the problem of providing Vicosinos with educational opportunities was complicated from the start by a history of negative experiences. The building of an educational program was further complicated by the need to achieve coordination of efforts on the part of the project and the Peruvian Ministry of Education, which provided teachers, other personnel, and supplies, and made decisions about changes in the school's official status. As with the CRAS loans, project objectives could only be achieved to the degree that they were compatible with the administrative objectives of the cooperating agency.

These difficulties notwithstanding, the Cornell-Peru Project educational program had a major impact on Vicos. In the first year enrollment increased from twenty to sixty and average daily attendance from about ten to thirty and forty (Garrido-Lecca, 1965). Profits from sales of hacienda crops were used to buy construction materials for a new school building, and tarea labor was used for construction under mestizo supervision.

The first wing of the new school (three classrooms, offices and library) was completed in 1953. That year, the only grade taught was "transitional" (roughly equivalent to kindergarten in the United States). The following year first grade was added to the program, and the hot lunch program was instituted. Attendance doubled with the hot lunch program. A second wing of the school, built by volunteer Vicosino labor, was completed, housing three more classrooms, a kitchen, dining room, shop, and auditorium (Holmberg and Dobyns, 1962). The new system had separate facilities for boys and girls.

The school was reclassified in 1954 as a Rural Prevocational School. This permitted the addition of a shop teacher, and the following year industrial arts and agriculture instructors. The upgrading of the school continued, and, in 1957, it was made a núcleo escolar campesino, a central school district with annexes in the outlying zones of Vicos and in neighboring communities.

Advances in status were accompanied by steady increases in enrollment. In 1952, 4 percent (15) of the school-age population attended school; by 1959, 35 percent (167) were pupils (Stein, 1975). The project was successful in identifying education with self betterment and the percentage of registered pupils attending school rose along with total enrollment figures. In 1959, 70 percent of Vicos school age boys attended school, as did 6 percent of school age girls (Alers, 1966).

In 1959, nine Peruvian teachers lived in Vicos in a teachers' residence constructed for the project. The teachers were hired by the Ministry of Education and assigned to the Vicos school. Vicos was considered a poor assignment, and unfortunately, the quality of the teaching staff tended to reflect this attitude. As field director, Blanchard (1955b) found it necessary to file a complaint about the poor attendance of the Vicos teaching staff with the Secretary General of the Instituto Indigenista Peruano. He singled out the director of women's education for special criticism: "It is a well established fact that the director of the women's school either does not know how to or cannot teach, therefore her pupils, and this is no exaggeration, are not learning anything." Blanchard noted a terrible drop in attendance due to teacher absenteeism and lack of interest, and blamed poor recruitment policy for the problem.

This type of problem continued even with the designation of the Vicos school as a nucleo, and in fact may have been intensified as the school became a focus of Vicos community life. In 1961, members of the Vicos parents association locked the teachers out of the building at the beginning of the school year. A six-man delegation was sent to Lima to demand the transfer of the principal on the grounds that he did not teach, that he allowed students to play and waste time, that he collected a salary for an adult education class which he did not teach, and that he did not account for production on agricultural lands planted by the school (Holmberg and Dobyns, 1962).

Cornell-Peru Project associates and, later, Peace Corps volunteers made efforts to enrich the school curriculum. An art education specialist from Skidmore introduced an art curriculum into the school, even though she spoke no Quechua. Vásquez and other project personnel tutored Vicos children in Spanish to facilitate their transition to secondary school in Carhuaz. School trips to mestizo schools in the Callejón and to the newly completed hydroelectric plant in Huallanca were encouraged. Night school literacy classes for adults were instituted, and in 1963 sewing classes for Vicos women were started.

There can be no doubt that whatever the broader consequences of education, the school had a strong, immediate impact on Vicos. The number of Vicosinos having completed first grade rose from 39 (3 percent) in 1952 to 295 (18 percent) in 1963; the number of Spanish-speaking Vicosinos grew from 23 (2 percent) in 1952 to 279 (17 percent) in 1963 (Alers, 1966). In 1952 there were no literate Vicosinos. In 1959 the literacy rate was 13 percent (Vásquez, 1961). By 1965 a total of eight alumni of the Vicos school had gone on to

secondary school; one of these graduates returned to Vicos as a teacher. The school physical plant was a source of community pride, and many Vicosinos maintained interest in academic issues despite the persistent problem of poorly prepared, uncooperative, and irresponsible school teachers, either assigned to the Vicos district as punishment or recruited with the expectation of light duties. The project and community were willing to pump their own funds and labor into the system despite the fact that the Ministry of Education allocated few resources for equipping elementary schools, particularly in the Sierra (Stein, 1975).

Integration and Interaction with Regional and National Authorities

By far the most important activity designed to regularize interactions of Vicosinos with extralocal authorities was the campaign to see that Vicosinos fulfilled their military obligations. Activities to end draft evasion had two distinct, but interrelated functions. The first was to make sure that all Vicosinos were properly registered so that they might enjoy equal access to the law. The second was integration: two years in the army would expose Vicosinos to the national culture, accustom them to new ideas, give them contacts with fellow conscripts outside of Vicos, and, hopefully, teach them a working knowledge of Spanish.

Past patrons had discouraged peons from complying with the Peruvian draft law, which required two yeras of service for all adult males, with the exception of those deferred for educational reasons. Compliance with the law would have meant the temporary loss of the best part of the hacienda labor force and would have exposed peons to new ideas which might undermine the social fabric of the hacienda (Holmberg and Dobyns, 1963). Indians, with their well engrained distrust of all mestizo institutions, were willing partners in draft evasion, and the project's efforts at registration aroused a certain amount of hostility from Vicos families (Stein, 1974).

In addition to encouraging registration for the draft, the project initiated Sunday morning reserve exercises and instruction in 1953 in order to make military training more accessible to Vicosinos and to upgrade the status of the hacienda (Blanchard, 1955). Exercises included drill, classes, and soccer games. An ex-sergeant was hired to conduct reservist classes and to counsel young Vicosinos on matters related to their military obligations. Literacy classes were also instituted for reservists on Sundays. The following year, Blanchard got reservists from Carhuaz and provincial officials to participate in Vicos military ceremonies, and reservists contributed their labor to the construction of a community health center.

The vast increase in the population of veterans at Vicos as a result of the project's registration drive produced immediate changes in Vicos social organization. Reservists and veterans began to participate in fiestas and assist at mass as a group. The return of veterans swelled the ranks of adult Spanish speakers in the early

years of the project, and this group constituted a significant political force by the time the community took over the hacienda lease. Finally, the army was increasingly used as an escape for young Vicosinos who found themselves in trouble at home. Its encouragement of registration for the draft, promotion of reservist training, and sponsorship of Fiestas Patrias (Peruvian Independence Day) celebrations placed the Cornell-Peru Project in the role of promoter of national institutions.

In relation to regional and district authorities, it more frequently behaved as an intermediary, continuing in the role established by earlier patrons. Activities related to this intermediary role were usually spontaneous, rather than planned, and were responses to immediate problems.

For example, on 1955 a livestock tax enumerator working for the subprefecture of Carhuaz placed on the tax rolls Vicosinos who owned too few head to be included. Project foreman Enrique Luna took up the cause of this group, addressing a note to the enumerator criticizing his lack of formal investigation, and asking the alcalde of the provincial municipal council of Huaraz to remove their names from the tax rolls. Luna evantually went to Carhuaz with the thirteen complainants to seek satisfaction and threatened to take their case to the Ministry of Indian Affairs. In his report to the Instituto Indigenista, Blanchard (1955c) concluded: "As a lesson in the significance of becoming a citizen in the modern world, I believe that they (Vicosinos) must learn to accept taxation and contributions on a scale that corresponds to their economy and their standard of living, but not the way they have done it in Carhuaz."

Another source of conflict between Vicosinos and the mestizo world was la república labor. Prior to the project, Vicosinos were often required to contribute their labor to public works projects in Marcará and other parts of the Callejón without compensation. One of the first immediate goals of the project was to stop this type of labor exploitation. As might be expected, this met with a certain amount of resistance from mestizo authorities and other exploiters of la república labor.

In 1953, Luna arranged with a director of the Public Benefit Society of Huaraz to supply a Vicosino labor party to haul stone to the river bank at Chancos for a wage of six soles per day (a reasonable wage by local standards). The Vicosinos worked for a day, but no other laborers appeared, and eventually the Vicosinos quit. When they failed to receive compensation for their labor, Luna and Blanchard complained to the Huaraz prefect, who treated Luna with condescension and ruled that the Vicosinos be paid three soles per day, the going rate for la república labor. The prefect ordered that work on the Chancos river bank be resumed at once (Blanchard, 1953). Dissatisfied with the response from the prefecture, Blanchard complained to the Instituto Indigenista, which replied that la república labor was prohibited and that the prefect had no authority to require that labor be performed (Velasco, 1953). The administrator

offered to intervene with the prefect on behalf of the Vicosinos.

These two incidents were reported in detail in the Vicos correspondence, but it is probable that they were representative of a number of minor confrontations in the ongoing battle to secure for Vicosinos a regular and more favorable status in a mestizo-dominated world. But the most important instance of Cornell mediation between Vicosinos and the outside world was the designation of Vicos as an indigenous community, its expropriation by the Peruvian government, and finally, after five years of foot dragging and the intervention of Senator Edward Kennedy, the purchase of the hacienda by Vicosinos. When Holmberg and Monge assumed the Vicos lease for Cornell and the Instituto Indigenista, it was with the agreement that at the expiration of the lease, Vicos would be controlled by the community. To this end, Holmberg planned an orderly devolution of power, which will be discussed later in this chapter. This accomplished, Monge and Holmberg engaged in a long process of prodding to transfer Vicos into the hands of its inhabitants.

In December, 1956, the final year of Holmberg's lease, the Peruvian government authorized the expropriation of Vicos and its sale to Vicosinos by the Public Benefit Society of Huaraz. Until a purchase price and method of payment could be agreed upon, the hacienda was rented to the community by the Public Benefit Society for a five year period. The expropriation decree expired in 1958 without the hacienda's having changed hands due to strong opposition by the Public Benefit Society and the unwillingness of the government to take action (Tuohy, 1961). As years passed, the Benefit Society made upward adjustments on the purchase price, based on capital improvements at Vicos. It was rumored that with the expiration of the current lease, the society expected to auction the lease as it had in the past.

In a spectacular intervention, Paul Doughty, a project anthropologist and embassy officials urged Senator Kennedy to stop at Vicos on a Latin American tour and to press for expropriation as a condition of Alliance for Progress aid. According to Mangin (1979), Kennedy heard an emotional speech about past abuses at Vicos and, later in talks with Peruvian President Prado, questioned the government's ability to carry out a major land reform effort if it could not even expropriate a single hacienda. This intervention, plus another year's worth of effort by Cornell, Monge, and Vásquez, resulted in the final expropriation decree and purchase agreement.

Health and Nutrition

While improvement of the health and diet of Vicosinos was always a major commitment for the project, and, from the first, Vicos attracted researchers and institutional support, activities in this arena enjoyed less impressive results than those in education and agriculture. First of all, disease problems at Vicos were severe.

Most of the population had serious parasite infestations, and such childhood diseases as measles and whooping cough took major tolls, especially among infants and small children. Second, sanitation was poor and caloric content of the average diet below the average for Peru. Third, rural health care delivery in highland Peru had been abysmal, and the project's best efforts to reverse that situation had only a minor impact.

Project efforts fell into three categories--conducting surveys of disease incidence and diet, carrying out programs of public health and nutrition instruction, and providing clinic services. The first year of the project, Parke Davis and the Peruvian Ministry of Health conducted a parasitology survey of Vicos and several mestizo towns in the Callejón. Stool samples were collected for two hundred Vicosinos.[7] Fifty percent of the sample had one or more parasites, and overall incidence of infestation was far higher than for any of the mestizo communities (Payne et al., 1956). A follow-up investigation of liver damage showed that Vicosinos had made a physiological adjustment to their parasite populations. The result of this first survey was elevation of consciousness among project personnel on the subject of sanitation and waste disposal. In 1955, the project undertook a program of latrine installation. Blanchard (1956b) admitted that progress on the program had been slow, but felt that there was some hope for diffusion.

Vicos was chosen as one of a large number of sites in the Peruvian Coast, Sierra, and Selva for a ten-year dietary investigation. The food consumption of 519 Vicosinos from 98 families was measured and analyzed in a series of four surveys. The survey had a number of methodological deficiencies (Alera, 1966), but some of its early findings had an impact on nutritional project programs. The initial surveys showed low animal protein consumption, despite widespread animal ownership. In response to this deficiency, powdered milk was added to the school lunch diet, and, in 1956 it was made available to pregnant women and nursing mothers. A SCIPA dietitian was enlisted to make recommendations for the school lunch program, where a number of missing elements in the Vicos diet were introduced.

Holmberg had hoped to effect a cultural transformation in attitudes toward health and disease. He had hoped that Vicosinos would learn to avail themselves of modern health facilities in the Callejón and at Vicos, to gain an understanding of the germ theory of disease, and to appreciate the value of proper sanitation and innoculation programs.

The first activity to implement this goal was the building of a first aid station near the hacienda complex. In 1954, a biweekly clinic was established under the auspices of UNICEF and the Patavilca-Huaraz-Huaylas Program of the Peruvian Ministry of Public Health and Social Assistance. The clinic was staffed by a doctor, a nurse, two aides, and a social worker. Initially housed in hacienda rooms, the clinic was eventually housed in a new building constructed by reservist labor.

When the clinic started operations in June 1954, it was regarded by Vicosinos as an object of curiosity (Blanchard, 1955d), but by the end of the year about 150 families had members who had used its facilities. Members of the project staff were trained to administer medicines between clinic visits. In 1954, physical examinations were conducted for school children as part of the educational program, and the following year, a doctor and team traveled through some of the more remote parts of Vicos, holding clinics. In 1955, average weekly attendance at the clinics rose between thirty and forty patients per week (Blanchard, 1956b).

In the late 1950s the clinic carried out an innoculation program for whooping cough. A study of concepts of disease in Vicos (Chadbourn, 1962) reports that all Vicosino informants had heard of innoculation, and that in each family at least one child had been immunized, but the clinic immunization program did not have the effect of increasing Vicosinos' confidence in western health practices. One woman told Chadbourn:

> The younger ones are not immunized because their father doesn't want it because it hurts. After the shot it became very swollen and hurt for two or three days. The doctor did not warn me that it would hurt and it did--a lot (Chadbourn, 1962:71).

Another woman admitted that she would have her children innoculated if a new outbreak were to occur, but complained that "a woman and a girl also came around house to house innoculating by force, even to people who did not want to have it done. Many of these wanted to hit her" (Chadbourn, 1962:72). Vicosinos were not warned about the severity of reactions to the shots, nor was it emphasized that three shots were needed to confer immunity. The whooping cough innoculation program was conducted without an adequate educational program, which limited its impact.

UNICEF support for the clinic was terminated in 1960, because the post of physician was created at the school. It was filled for a few months, but it was difficult to recruit doctors, and for most of the next five years the post remained vacant. Thus it was impossible to maintain regular medical clinics (Dobyns, Doughty and Holmberg, 1964). In 1963-64, a Peace Corps volunteer who was a licensed practical nurse attempted to run a clinic at Vicos. She spoke no Quechua and little Spanish and lacked supplies to treat patients. When a major whooping cough epidemic broke out in 1964, she had no drugs for treatment and innoculation and could do no more than administer aspirin. Her inability to control the epidemic resulted in a loss of confidence in Western medicine among Vicosinos (Dobyns, Doughty and Holmberg, 1964).

Project personnel felt committed to providing medical care for sick and badly injured Vicosinos whenever possible. As Mangin (1979) notes, transporting the sick and injured to hospitals in Carhuaz, Huaraz, and Lima became a time-consuming activity. As a result of

these individual interventions, a number of Vicosinos gained familiarity with regional hospitals. Attitudes toward hospitalization were mixed: some Vicosinos were impressed with their speed of recovery and the abundance of food, while others emphasized the fear of strangers and hospital apparatus, and their unwillingness to be surrounded by death.

The result of project efforts to introduce Western medicine and attitudes toward health and sanitation was not the replacement of native hot and cold concepts of disease with an understanding of the germ theory nor the replacement of the curandera with doctor and hospital. Blanchard's observation, that when people are sick,

> They try their own resources, that of family members, of curanderos, of brujos, and now the doctor too, not necessarily following a fixed course of trials. They accept advice from here and there, perhaps going to Marcará where a storekeeper will tell them to try something. . . . They are used to failures of different sorts, seem to accept failure of the doctor as another type, but still familiar (Blanchard, 1956a:4)

was still valid in 1962 (Chadbourn, 1962). Western medical technology was incorporated into the Vicosino view of sickness and health care; it did not supplant it.

Devolution of Power

In a 1950 statement of goals, Holmberg emphasized that the practical purpose of the project was "to assist in raising standards of living among the Indians of the Andean area to a point where they can take a progressive and independent role in the modern world." From the moment the hacienda lease was signed, the gradual transfer of control over decision making to Vicosinos was a goal of paramount importance both to Holmberg and Vásquez. As hacienda leaseholders, however, they were forced to operate within the basic framework of the hacienda system (Martínez, 1963). Hacienda fields could not be divided among its peons, the tarea had to be continued. Just as Holmberg and Vásquez decided to make use of the institution of the tarea and the integrity of hacienda fields to generate capital for community development, they decided to make use of the institution of the mayorales and the mando, a weekly meeting of the hacienda labor force, to begin the devolution of power.

Holmberg and Vásquez made a conscious decision to use the institution of mayoral rather than that of the varayoc in the transition of power from patron to community. Both felt that the functions of the varayoc were largely religious, and that they had too little effective power. The mayorales on the other hand enjoyed real power, even if this was only a reflection of the will of the hacienda

administration. The mayorales also had considerable standing in Vicos because of their age and differential access to benefits from the hacienda administration. As mayorales retired, they were replaced with younger men, less committed to traditional authority structures.

Monday nights, project personnel gathered in weekly seminar to share field experiences and impressions and to make policy suggestions. These suggestions would be discussed at a meeting with the mayorales the following night. Gradually, the mayorales were invited to take an increasing role in matters formerly decided by the hacienda administration--economic policy, dispute adjudication, etc. The transfer of power and responsibility to the mayorales was neither rapid nor smooth. Blanchard (1956a) noted that after Holmberg left Vicos, the mayorales met only sporadically, and always at Blanchard's prodding. At meetings, they generally restricted their input to matters regarding the cultivation of hacienda fields and their personal problems on the job. Blanchard felt that while the mayorales wanted arbitrary power, they were extremely reluctant to take responsibility for policy decisions. He further felt that they lacked cohesion as a body. While this view of the mayorales may have been colored by Blanchard's personal characteristics, it is an indication that the process of transfer of power was not necessarily easy or smooth.

Each week, a meeting was held with the patron or hacienda administrator, the mayorales and peons. At this meeting, the mando, instructions were given to peons for the following week's labor requirement. The project continued to use this meeting, but turned it into a forum for discussion of new ideas and responses to programs. The mando became one in a series of three weekly meetings at which day-to-day policies were decided. It was redesigned by Holmberg as a forum for evaluating decisions made the previous day by the mayorales. Attendance at the mandos was good--sometimes up to three or four hundred heads of families. While Holmberg was gratified by increasingly vocal participation during the first year of the project, he felt that it was not yet fulfilling its potential:

> Everyone is invited but as yet there has been little participation by women, because of ancient Indian practice in matters of this kind where women play a subordinate role. We do not yet have the response from these meetings that we would like to have but feel that we have made fair progress in approaching the problem of greater group participation in our program (1952b:7).

In 1956 plans were made for the abolition of the last vestiges of the hacienda authority system in Vicos and for the gradual transfer of hacienda administration to Vicosinos. Vicos was divided into ten zones, each electing a delegate and a subdelegate to the Council of Delegates, the new governing body for the community. The ten zones were not only electoral districts but administrative entities.

After 1956, communal fields were assigned to different zones, and work parties were organized by zone. Zone delegates assigned and kept tract of communal labor obligations. The delegates replaced the mayorales, with the important difference that each delegate was responsible to and for his own zone.

The function of the delegate as an individual was to supervise all aspects of cultivating his zone's share of communal lands. He had to supervise labor and keep accounts. The subdelegate, the runner up in the election for delegate, was charged with substituting for the delegate when the latter could not assume his roles either in the fields or on the Council.

Community-wide elections were held for president, personero and secretary-treasurer of the Council of Delegates for the first time in 1960 (Tuohy, 1961). From 1956 to 1960, these officers were elected by the ten delegates. After 1960, nominations for council offices were made at a community meeting, following considerable private discussion. According to Tuohy (1961), three or four men were nominated. He who received a plurality of votes from the three hundred or so Vicosinos present at the meeting would be elected.

The Council of Delegates as a body decided on the nature and scope of communal labor activities. The presiding officers of the Council, supervised by PNIPA officials, took responsibility for keeping community records, borrowing, lending, and saving money for the community treasury. In 1961, the system designed by the project was operational. The Council seems to have functioned as a real decision-making body; meetings were animated and, although considerable weight was given to the opinions of acknowledged leaders and to the advice of Mario Vásquez, true consensus was forged (Tuohy, 1961).

With the abandonment of the hacienda institutions in favor of a democratically elected Council of Delegates, a certain shift in power occurred. Knowledge of Spanish, computational skills, and the ability to deal with Callejón mestizos and Peruvian program respresentatives became more important criteria for leadership than age or prestige. Veterans began to assume great importance in the community and often dominated communal affairs. Montoya (1963) points to a broad identification of democratic elections with progress and modernization, but notes that the Vicosino concept of authority was charismatic. The delegate had to know how to give orders, how to make himself obeyed. His successes and failures were seen as a consequence of his abilities or lack thereof. According to Montoya, due to the burden of this mystique, Vicosinos were somewhat reluctant to assume office.

In conclusion, the Cornell-Peru Project, and later the Peace Corps under the supervision of Cornell-Peru Project personnel, undertook a wide range of activities, all of which were designed to implement the project's major goals of integration, improvement in quality of life, and self-determination. Some projects, such as the institution of the school, and the new seed potato program, encouragement of military service, and the creation of the Council of Delegates, had a

major impact on community development. Other efforts, such as public health programs, met with little success. Almost all of the project's interventions were to some degree improvisational efforts, designed to achieve a set of general goals in the context of specific limiting conditions--e.g. low budget, cooperation with Peruvian institutions, the local social and cultural context. Where they can be assessed, the long range consequences of these activities will be discussed in the following chapter.

IV. IMPACTS OF PROJECT ACTIVITIES ON VICOS

Identification of the impacts of the Cornell-Peru Project on the basis of a literature review poses a number of problems. First, while critiques of the project have been written in recent years, there has been no systematic field work done in Vicos since the mid-1960s. There are excellent baseline anthropological studies of Vicos in the early 1950s, but only two theses have been written more than ten years later (Garrido-Lecca, 1965; Himes, 1972), and these are limited to considerations of agricultural productivity and the role of the project in Peruvian agricultural development. Stein's three monographs which appeared in the 1970s are largely based on data gathered in the 1950s.

Second, it is very difficult to distinguish the impacts of the project from the impacts of Peruvian development in general. I have noted in the first chapter that the project occurred in a context of increasing attention to the "Indian problem" and decreasing productivity on highland haciendas. Had the hacienda system in the Callejón been in vigorous health, it is doubtful that Holmberg could have even secured the Vicos lease. If Vicos became a showcase for reform, it was at the pleasure of the Odría and Manuel Prado governments. Thus, the conduct of the project was deeply affected by Peruvian and international attitudes toward development in the 1950s. The question of how different the lives of Vicosinos, or for that matter Peruvian campesinos in general, would have been without the project remains to be answered. In 1970, an earthquake and landslide devastated the major mestizo towns of the Callejón, leaving Vicos and Marcara relatively unscathed. Thus, after 1970, Vicos had a developmental advantage that had nothing to do with the project.

Finally, while the archives include materials published in Peru, they are written by project personnel. It would be useful to have access to documents prepared by SCIPA and PNIPA workers and reports by Peruvian students. While self-criticism on the part of project participants is not lacking, it would be useful to have a different perspective on project activities and their impacts. With these limitations borne in mind, I will attempt in this chapter to outline the intended and unintended consequences of the project for Vicos society and culture, for human development, political organization and the economic system.

Social Relationships

A number of changes occurred in the social structure of Vicos during the first 10 years of the project. Some of these were the result of deliberate interventions (e.g., the increased status of veterans in the community), others were unintentional (e.g., decline in the status of women, return migration after the initial expropriation decree). It is clear that some changes in Vicos society were in process even before the start of the project.

Impact of the project on class, age, and gender relationships. In 1952, Vicos was less a community than an agglomeration of population bound to the hacienda patron and administation and to the mestizo society of Marcará through a series of unequal personal ties (see Chapter I). Within Vicos, land and animal wealth were distributed unevenly. Vásquez (1971) distinguished three classes on the basis of animal ownership. He defined approximately 8 percent of Vicos families as very wealthy. These families owned more than 11 cows or their equivalent. Because of their wealth, members of this upper class tended to hold high offices in the varayoc and to eventually become mayorales. Some members of this wealthiest class were richer than most residents of Marcará. Their wealth and prestige placed them in a brokerage role between town mestizos and the bulk of the Vicos population. They lent money to other Vicosinos and as a result were able to command a labor force.

Several project activities contributed directly and indirectly to changes in these class relationships. The importance of wealthy Vicosinos as money lenders declined when credit became available to more individuals in the form of share planting and, later, as input loans. The new seed potato program not only generated cash income for the hacienda (and later the community), but made cash more widely available within the community. Thus, the power of the wealthiest Vicosinos was diminished to some extent by the availability of credit from the hacienda and cash in the private sector.

The decision on the part of Vásquez and Holmberg to retain the mayorales and let the varayoc system continue to decline in importance had some impact on class relationships. Ascendancy in the varayoc hierarchy was no longer a key to becoming a mayoral. As old mayorales were retired, they were replaced by younger men chosen for their experience in the world beyond Vicos rather than for their wealth and status in the community. The role of the mayoral became more bureaucratic and less clientelistic under project administration. In other words, while a mayoral was invited to take a more active role in policy making, he was less able to secure favors for himself or for other Vicosinos. This reduction in brokerage capacity is likely to have limited to some extent the ability of the wealthiest 8 percent to consolidate power and accumulate more wealth.

The diminution of power among the old Vicos elite and the spreading of wealth among a larger segment of the population did not

necessarily reduce inequality. No attempt was made either to reallocate lands on a more equal basis or to adjust the labor tax to reflect holding size. Responses to the new seed potato program (Stein, 1972) indicate that not all Vicosinos were able to take advantage of the share planting system or other credit arrangements.

One respondent expressed admiration for hacienda potato yields and showed an understanding of the need for good guano, pesticides, and seed. He had hoped to plant on shares, but said,

> I wasn't able to plant like that because I just have a little land. Others have more land and some have less. It depends on whether or not they gave people a larger amount of land in the old days, while those of us who signed on more recently were given less land. Because of that we're going to petition that they give us a larger amount, equal to others. Otherwise, I think we won't be able to plant potatoes on shares with the Hacienda as others have done. Moreover, we won't even be able to buy potatoes from Vicosinos who have planted them here because they'll be selling them at a good price to traders who come from outside (Stein, 1972:34).

A second informant reported,

> In my field I have planted the common potatoes that we have. I probably won't plant the paltaj potato because I don't have enough money to buy the seed. In any case I would rather buy common potato seed from my neighbors because they sell us enough of them at a lower price, whereas the hacienda sells them to us high and measures the amount exactly (Stein, 1972:38).

For those with little wealth and small fields, participation in the seed potato program was too risky. A third Vicosino said that he would like to plant with the new package, but that he didn't have enough land:

> I just plant on a small scale in the Quebrada Honda. I don't plant with the Hacienda's new seed there because I don't have a fence. It's a lot of watching because the cattle get into the fields (Stein, 1972: 47).

Interest in the new seed potato technology was high at Vicos, and after the successes of the first two years, there seemed to be considerable pressure to participate in the program, but not all Vicosinos could afford to do so. A substantial number of hacienda families had too little land to be able to plant on shares or to switch from corn and <u>haba</u> (broad bean) cultivation to potatoes. This segment of the population was probably not only growing relatively

poorer within the community, but found it relatively harder to get potatoes.

Stein's informants indicate that with the change in administration, customary redistribution through violation of hacienda regulations was no longer taking place on the same scale. It was becoming increasingly difficult to collect a sizeable portion of the hacienda harvest through gleaning; animals caught grazing on hacienda fields were confiscated; and small potatoes were no longer left in the fields for peons.[8]

As Vicos potato production increased, a larger portion of the potato crop was being sold off the hacienda. Vicos potatoes commanded high prices on the Lima market because they matured at a time when few potatoes were available. The project marketed private sector potato crops along with the hacienda crop in its effort to achieve commercialization of Vicos agriculture.

As a result of the program, a number of Vicosinos were becoming involved in the cash economy, planting on shares or on credit and selling at least part of the crop. Those too poor to participate in the program were not only unable to reap the benefits of commercialization, they probably found their own access to hacienda resources becoming more precarious.

No attempt has been made to analyze inequality in Vicos since the transfer of the hacienda, and no comparison has been made with Vásquez' analysis of 1952, but some tentative generalizations may be drawn from a comparison of animal ownership in 1952 and 1963. Table I shows both the number and percentage of families owning various domestic animals. Unfortunately, data on herd size are not available. It is interesting that the animal populations showing gains relative to the number of households were only kept by a minority of families (horses, donkeys, goats), while those animals owned by the greatest number of households appeared in fewer families in 1963 than in 1952.

The increases in horse and donkey populations reflected a growing cash reserve in Vicos and the ability of a larger number of Vicosinos to use this reserve to invest in beasts of burden. Donkeys and horses were used to transport seed, fertilizer, and crops to and from distant fields, and by a growing number of entrepreneurs who transport goods to and from the mining communities of Chacas and other communities in the Conchucos region across the Quebrada Honda trail (Barkin, 1961). If seventy-five more families owned donkeys in 1963 than in 1952, it can be assumed that some redistribution of wealth occurred, resulting in an increase in the size of the upper middle and middle classes.

At the same time, however, the numbers of households owning cattle, chickens, guinea pigs, pigs and sheep declined. The implications of this are more ambiguous. The 1963 data may not reflect actual ownership patterns. It could be that the commercialization of agriculture reduced the need for keeping animals as a form of savings.

Table 1. Vicos households possessing domestic animals.

Animal	Number of households 1952	Number of households 1963	Percent of households 1952	Percent of households 1963
Chickens	352	406	97	88
Cattle	328	388	90	84
Sheep	320	338	88	73
Guinea pigs	308	360	85	78
Pigs	293	353	81	77
Goats	122	163	34	35
Donkeys	38	113	10	25
Horses	40	62	11	13
Total number of households	363	461		
Total number of domestic animals	1,801	2,183		
Mean number of animals per household	5.0	4.7		

Source: J. Oscar Alers, Population, Attitudes and Development: The Case of Vicos, Dissertation, Cornell University, 1966.

Possibly, increased seasonal migration to the coast reduced both the need for and the convenience of keeping livestock, but, according to Mangin, livestock remained a very important form of accumulation. Poor Vicosinos with little land and few animals were in a poor position to take part in the new seed potato program, and would thus be more dependent on the sale of animals or their own labor to meet cash needs. While seasonal migration may have made animal ownership less convenient, share ownership (medieria) is common throughout the Andes, and existed in a wide variety of forms in Vicos.

It would not be unreasonable to assume from the reduction in the proportion of families owning the most commonly owned animals, that the poorest 20 percent of Vicos households were growing poorer, while at the upper end of the scale wealth was becoming more widely spread in response to new entrepreneurial opportunities.

A number of project activities were designed to increase social mobility. Education was theoretically open to all Vicos children, although some Vicos families were better able than others to make do without their children's labor. Adult literacy classes and military service increased the number of adults who could speak Spanish. The project placed a high value on literacy, ability to speak Spanish and computational ability. Vicosinos who learned these skills found themselves occupying prestigious positions--as mayorales and later officers of the Council of Delegates.

The project fostered a shift in the criteria for elite membership and encouraged social mobility through education (1) by providing schooling at Vicos, (2) by encouraging gifted students to continue with their studies in secondary and eventually normal schools, and (3) by establishing a scholarship fund after Holmberg's death which would allow children who could not otherwise afford it to go to secondary school. Leon (1980) reports an ambivalent attitude toward educational opportunities and mobility on the part of Vicosinos. She notes "concern and difference of opinion about the relationship between scholarships and the community as a whole." Some Vicosinos looked upon the opportunity for some Vicos youth to complete their secondary education as a benefit to the entire community, while others noted that scholarship students tended to leave Vicos after graduation. It was argued that secondary schooling changed their personalities, and there were few job opportunities for agronomic technicians in Vicos.

Increased mobility did not necessarily reduce inequality or eliminate conflict within the community. Although the scholarship fund may have encouraged some children to complete school who otherwise would have remained in Vicos, for the most part only families who could hire labor were likely to be able to release a child to attend school beyond sixth grade. Thus, mobility may have been less than changes in criteria for high status would indicate. Second, secondary school graduates could not always make a comfortable reentry into the Vicos community. Most received training as agricultural technicians and found that even if they wanted to return to

Vicos, no jobs were available. Leon (1980) noted that one graduate who expressed a wish to return to Vicos felt that Vicosinos would not want him. As more and more Vicosinos have made it in the outside world, a new class-related tension surfaced between "insiders" and "outsiders." Those who remained at Vicos resented those who left without relinquishing communal ties and rights. (This antagonism may have been aggravated by increasing pressure on the land.)

In sum, the literature suggests that the basis of class differentiation has shifted from ownership of livestock and officeholding as a high level varado or mayoral to wealth based only partly on livestock ownership and partly on an ability to manipulate the symbols of the dominant society. It is likely that this change in the criteria for leadership promoted equality to the extent that Vicosinos with experience in the outside world (as a result of education or the draft) were better able to assume positions of leadership even if they lacked inherited or accumulated wealth. Elite and upper class membership may have become somewhat broader as a result of the project, but this does not mean that widespread redistribution of either wealth or power occurred. There were, however, manifestations of tensions between the conservative old elite and the more outward-oriented elite created as a result of project activities.

While individual mobility probably increased as a result of project emphasis on education and military service and the availability of credit for commercial crop production, there has been no indication of a reduction in inequality. No thorough study of wealth and inequality has been undertaken at Vicos since 1952, but comparison of livestock ownership data combined with questionnaire responses relating to the new seed potato program suggest that while the upper and upper middle classes may have been growing, the relative poverty of the lowest class was probably worsening.

Related to the shift in criteria for assigning prestige was a shift in the relative status of the old and the young. Once again, this shift was primarily a result of project emphasis on education and military service. The position of the elderly in Vicos at the outset of the project is summarized by Mangin:

> There is a tradition of respect for the aged which is very widespread on a verbal level, somewhat less so on a behavioral level. In relation to one's own kinsmen, age is the basis for respect in most cases. Otherwise, personality and situation seem to determine how much deference is to be shown. There is a rough correlation between age, wealth and power, consequently in many cases the respect shown to an older person is not exclusively due to his age (1954:III-45).

While the elderly, yayas, continued to be treated with respect and deference in the later years of the project, their status on the community was weakened by the assumption of power by younger, literate

and Spanish-speaking members of the community. Doughty (1971) suggests that the identification of the yayas with hacienda authority may have weakened their position in the community, but this effect should have been temporary.

Weakening of the authority of the elderly occurred both at the communal level and within a family. Before the transfer of the Vicos lease to the Vicosinos and the creation of the Council of Delegates, project personnel began to attack the correlation between age and power by replacing retiring mayorales with younger men who had not necessarily risen through the ranks of the varayoc hierarchy. When the Council of Delegates was created in 1956, literacy was a requirement for its presiding officers. As a result of this stipulation, candidates in the early 1960s tended to be younger men--between 20 and 40 years old (Doughty, 1971).

De facto as well as de jure power transferred from the old to the young. Delegates from each zone were often older men, who could mandar--give orders and make themselves obeyed (Montoya, 1961). They were often illiterate and depended upon the aid of school children for record keeping. This meant that these young leídos kept records on fulfillment of communal labor obligations and on various aspects of crop production which they alone could read. According to Dobyns,

> The leído necessarily became the final arbiter of disputes over labor tax payments, citing his work records as authority for saying that a person did or did not still owe labor time. Schoolboys thus attained a kind of power in the fledgling community that would have been impossible for youths of comparable age under the traditional manor system (1971:6).

According to Stein (1975) this shift of de facto power from the old to the young created strains in the Vicos social fabric. He sees the noisy session which ended with the expulsion of Peace Corps volunteers from Vicos in 1964 as an expression of the tension between young and old. Doughty (1964 field notes) saw the expulsion as a victory of "older men and traditionalists" over "the more progressive elements" in the community, who supported the restoration of the thermal baths and hotel at Chancos as a community activity. If the expulsion actually represented a victory of traditionalists, it was short lived. Within a few weeks, Vásquez returned to Vicos, poured oil on troubled waters, and the Peace Corps volunteers returned. The Chancos project continued and in 1969, the hotel and baths were still open to the public, under Vicosino management.

Increasing power of the leídos was manifested within the family as well as in the community at large. According to Stein (1975), many Vicosino families tried to make at least one family member literate as a strategy for coping with the wider society. This member was called upon to interpret legal documents, to handle

correspondence and to help carry out economic dealings. Doughty (1971) and Barkin (1961) find that skill in arithmetic and basic Spanish enabled children to help their parents hold their own in commercial interactions, preventing them from being shortchanged or swindled in the market. As a result, the leído gained new status within the family, was consulted in important economic decisions, and began to shoulder responsibilities unusual for children of his age. This elevation of the status of literate children is likely to have affected the authority of older members of the household.

Education and the integration of Vicos into the national society have contributed to a decline in the status of women in Vicos society. At the outset of the project, Mangin wrote,

> Men do not order women around and wife beating is rare and can bring serious repercussions. Participation in work around the home and in fiesta and political activity includes men and women in more or less equal roles, although a woman often seems to bask in the glory of her husband's performance since he is the public representative. Men and women drink together at fiestas, and in contrast to Mestizos, are genuinely interested in the activities of one another in other than the strictly sexual sphere (1954:III-44).

By 1961, the roles of men and women were diverging and the status of women declining. Price found that "there is a striking contrast in contemporary Vicos between the degree of sophistication of the most acculturated men in Vicos and their wives and there is little evidence among the more acculturated men that they desire to extend to their wives the social change which they themselves espouse" (1961: 13). He also noted a disparity between qualities desired in the ideal husband and those sought in the ideal wife. The perfect husband would have high status, speak Spanish, and be a good provider. Army veterans were the most sought after men in Vicos. A good wife, in contrast, needed only to be a good worker and in good health--nice and plump.

The absence of women from politics was a basic difference in gender roles at the outset of the project. This difference contributed to a reluctance on the part of Vicosinos to send their female children to school. Emphasis on education as a result of project goals was a major contributing factor in reducing the status of women in Vicos. Enrollment figures for 1954 show 120 boys and 33 girls attending (Blanchard, 1954). Females constituted 22 percent of the registered students. It is likely that girls constituted a smaller fraction of the average daily attendance of 80 pupils. By 1959, with 35 percent of all school aged children attending school, only 6 percent of the pupils enrolled were girls (Vásquez, 1961). Stein's (1975) data show that out of a total enrollment of 378 children in 1972, 82 (22 percent) were female. (Given the consistency

of the Blanchard and Stein figures, it is safe to assume either that 1959 was an aberrant year or that Vásquez' data were incomplete.)

Female children thus constituted a small minority of the school population. Furthermore, most of the female population is concentrated in the lower grades. Stein argues that with the growing emphasis on education, the gap between the best educated men and the best educated women in Vicos has widened substantially (1975). Educational inequality was exaggerated by inequality of facilities. After the initial upgrading of the school and until annexes were established in remote zones, girls and boys were taught separately. The girls' school had a single teacher-director. At least in one instance the women's school director seems to have been thoroughly incompetent. In an educational system where resources were scarce and where few of these resources were directed toward rural education, the slice of the pie left for educating women was meager in the extreme. Thus, the quality of education is likely to have deterred women who might otherwise have been encouraged by family and friends to complete their education.

The result of gender inequality in the education system was a further dichotomization of gender roles in the community. Mangin's picture of the role of women in Vicos society has probably been replaced by one closer to the mestizo model which he set up as a contrast. As men learned Spanish and computational skills, they gained greater competence in dealing in the mestizo world. According to Stein, the result of this was "increased dualism and the deteriorating capacity of women to exercise decision-making roles" (1957:18).

This deepening of gender inequality as a function of integration into a westernized national society is a common phenomenon in the Third World and its occurrence in Vicos is not surprising. Gender inequality certainly existed in Vicos before 1951, but it was far deeper in mestizo culture than in Quechua communities. By making literacy and military experience a prerequisite for power, the Cornell-Peru Project fostered a shift toward mestizo values. An attempt in 1963 to teach women sewing and Spanish in adult education classes was economically successful, but once again reinforced the separation of roles through differential education.

Family and household: changes in composition and dynamics. Changes in family composition and dynamics are less apparent than changes in class, age status, and gender roles, but they are in some ways interrelated. Changes in the status of literate children in the family have been noted in the previous section. Stein (1975) points to other changes in family structure as a result of education of children: Schooling seems to negatively affect the household economics not only of the child's nuclear family, but of the maternal grandparents' household as well. As a wife took on the duties of a school aged or adolescent child in addition to her own, she would have less time to attend to her own parents. As her parents grew

older and were less able to care for themselves, her inattention may have deprived them of subsistence. He also notes that grandchildren had duties and owed reciprocal obligations toward other members of their parent's castas. It was difficult for school children to fulfill these obligations.

Stein also sees formal education as a substitute for informal education by grandparents. The dimunition of this grandparental role may have undermined the status of elders and deprived them of the respect and deference which they had expected to receive in their old age. Respect and deference are also owed, although to a lesser degree to oldest and youngest siblings. Stein criticizes the system of formal education for disrupting the traditional status order among siblings. In sum, the education of children--in particular, sending a child to Carhuaz for secondary school--may have increased tensions within both the extended and the nuclear family.

Emphasis on military service has also had a disruptive effect on family life. Men who were unwilling or unable to bear the responsibilities of marriage and fatherhood could use the army as an escape. Households were deprived of sons' labor just when they are in their physical prime. Once again, this forced family members to add to their domestic chores, reducing their ability to carry out obligations owed to extended kin, compadres and others. Blanchard (1956a) noted that veterans refused to participate in local la república projects, claiming that they had already done their work for the government. This meant that the burden of local public works fell increasingly upon those members of the kin-compadre-neighbor group who had not completed military service.

Finally, commercialization of the Vicos subsistence sector had an impact on family life. First, it led to a decline in the use of reciprocal labor obligations. The minka was used only as a last resort. Vicosinos with cash on hand preferred to pay labor rather than participate in reciprocal obligations (Fried, 1960). Dobyns (1971) points to the project's achievement in training skilled carpenters and masons, noting that building trades specialists replaced "intoxicated minka laborers" in local house construction. Reduction in the capacity to perform reciprocal services and in the need for them can only have a disintegrating effect on a family structure based on these ties (Barnett, 1960).

Impact on local organizations. As I noted in Chapter I, social organization on the hacienda, except as it related to the fiesta cycle, before the project was diffuse. Vicosinos were linked to wealthier Vicosinos, to hacienda administrators, and to Marcará mestizos in a series of clientelistic bonds which made the formation of horizontal networks difficult. The primary social unit beyond the family and casta was a loose neighborhood grouping of kin, compadres, and neighbors, which was bound by reciprocal obligations and affective ties. This unit continued to be important after Holmberg took over the hacienda and was strengthened considerably by the political reorganization of Vicos in 1956.

The new political system was a system of economic organization as well. Hacienda fields were divided among the ten zones, and production was organized on a competitive basis. The elected delegate in charge of each zone formed work groups from his constituency. This constituency was composed of one or more social groups. Whereas under the hacienda system, the composition of work groups fluctuated, under the new system they were constant and consisted of members of a single group. According to Price "though mobility may be greater and the possibilities of getting to know people from opposite ends of the community increased, the constant day by day, year by year contact between the same small group of people at work in the new system is an important narrowing influence" (1961:17). Price notes that while a greater number of exogamous marriages have taken place since the inception of the project, in 1961 endogamy was still the rule and courtship was increasingly taking place within the confines of the work group.

If neighborhood cohesion was reinforced by the political reorganization of 1956, it may have been weakening by changes in residential patterns during the course of the project. Alers (1971) reports that since 1952 an increasing number of houses were built along the main road, close to the school and administration buildings. These houses were western-style structures--rectangular, adobe, two-room buildings with tile roofs, rather than the circular, thatched roofed dwellings that had previously dominated the landscape. The new settlement along the road was occupied by the new middle class, created largely as a result of the project. Members of this new group were often veterans and residents of Vicos' lower zones who, as a result of project activities, had increased cash incomes. While the road near the hacienda became a new focus for neighborhood activity, it marked the beginning of the formation of neighborhoods along class lines and a step toward the disintegration of traditional neighborhood ties that transcended class lines. This shift was more pronounced in the lower parts of Vicos than in the outlying zones.

According to Martínez (1963), compadrazgo ties had already weakened by the time he did his field work in 1954. It is not clear whether the weakening of these ties can be attributed to project activities, but Martínez feels that the loss of padrino authority may be attributed to the influence of the army and the increased power and prestige of veterans and to the increasing use of mestizo compadres. Compadrazgo relationships between Vicosino and Marcarino were more likely to be a clientelistic bond than an assumption of moral authority and responsibility on the part of the padrino, although even here, the moral components of the bond should not be underestimated. According to Martínez, "The growing use of mestizo compadres can be explained by the more continuous contact with mestizo elements, motivated by the Cornell-Peru Project, the school, the activities of enganchadores and the military" (1963:23). While it is likely that project activities contributed to the weakening of compadrazgo as an institution, it is equally likely that, as with the varayoc system, debilitation had already begun to occur before 1952. It is doubtful that the institution could have been dramatically weakened in a three year period.

Two forms of local organization present at Vicos during the 1960s and 1970s were in a large measure the products of project interventions--the veterans, and the parents of students association. Not only did the veterans' greater familiarity with the national society place them in positions of power as individuals, their common experience was the basis for a certain esprit de corps. Aware of their prestige within Vicos, they participated as a group in fiestas and church projects. They took part in parades with mestizos of the Callejón on the Día del Ejército (Armed Forces Day) and afterwards reinforced ties with these veterans by drinking together in the Carhuaz bars, recounting anecdotes of army life (Martínez, 1963). Thus, the veterans were unique in having horizontal, equal ties with mestizos. Parents of school children were united by their common faith in the value of formal education and their interest in providing the best possible experience for their children. In 1961 and 1971 this group exerted control over the appointment of teachers, and in 1963, parents in the zones of Ullmey and Wiash built or rehabilitated buildings to be used as sectional schools for young children unable to walk into the central school (Dobyns, 1971).

Migration. The project actively sought to stimulate migration to the cities and plantations of the coast, both as a means of integrating the Sierra and the coast and thereby improving the national well being, and from a more practical standpoint, as a safety-valve to reduce pressure on available land. To argue that migration did not take place before 1952, either on a seasonal or permanent basis, would be inaccurate. Furthermore, the rate of migration from the Sierra to the coast accelerated throughout Peru in the 1950s, and just how much of this movement from Vicos was directly attributable to the project is uncertain.

Vásquez (1963) distinguishes between migratory experiences before 1952 and after. When Vicosinos migrated as enganche laborers or domestic servants in the towns of the Callejón before 1952, they moved within a defined, inferior social stratum, from servitude on the hacienda to servitude on a coastal plantation or in a Huaraz household. Social mobility did not accompany geographic mobility. Between 1952 and 1956 migration rates increased sharply. Most migrants were adolescents rather than heads of households. By 1956, one hundred Vicosino families were living on the coast (Alers, 1966).

Migration to the coast from Vicos resulted from a combination of push and pull factors. According to Vásquez, while most migrants gave increased economic opportunity as the reason for their move, social factors often played an important role. The school, for example, became an important push factor in migration after 1955. Vásquez observed that "the majority of adolescents would migrate when they lacked two or three years toward completion of their studies and used it as a means of avoiding attending school, the censure and criticism of adults of the community and the admonitions of the teachers for their absences" (1963:96). Children who completed their primary schooling did not migrate to the coast. Beginning in 1956,

a movement of adolescent women to the coast began, related to the migration of adolescent men. Other social factors responsible for migration were not directly associated with the project. Migration, like enlistment, was seen as a means of escaping the consequences of difficult social situations in Vicos; romantic entanglements and strained relations with parents and friends acted as push factors. Migration was facilitated by Vicosinos' increasing command of Spanish and their familiarity with outsiders as a result of the project. According to Vásquez (1963), economic motives became an important pull factor in 1956 when adult Vicosinos began to migrate to the coast to earn money for the down payment on the hacienda.

The project had a significant, but unintended impact on the migratory process that was both gratifying and alarming. Out of the one hundred or so families who had migrated, 30 families (68) persons, or 7 percent of Vicos families, had returned by 1961. All but four of these families had returned from the coast. News of project successes reached migrant families on the coast largely through adolescent migrants. The transfer of the hacienda lease to the community encouraged a return to the land.

Return migration to Vicos from the coast was prompted by push as well as pull factors. Among these, Vásquez cites

(1) high cost of living and low salaries for plantation workers and other jobs on the coast.

(2) lack of economic and social security on the coast. (One returnee explained, "because of my poverty, I am content to remain in Vicos because here nobody dies of hunger" (Vásquez, 1963:100)).

(3) greater opportunities in Vicos to earn cash income (e.g., planting potatoes on credit, raising livestock).

(4) fear of illness, tuberculosis in particular.

(5) family and social reasons--fulfillment of familial obligations and for a richer family and social life.

(6) the abolition of the hacienda system at Vicos, which eliminated one of the push factors for migration.

(7) fear of violence associated with union conflicts and strikes.

Thus, just as migration toward the coast from Vicos was prompted by a complex of push and pull factors, only some of which were directly related to project activities, so return migration was motivated by a range of interacting factors. But the impact of the transfer of the hacienda to Vicosinos in 1957 was an important pull factor in return migration. Return may have been prompted by fears of losing usufruct rights to land as well as by hope for greater opportunity and security.[9]

The flow of migrants from Vicos during the 1950s was just sufficient to balance population growth in a period of high birth rates and high death rates. Reverse of the migratory flow, however, could significantly increase pressure on the land, thus negating the advantages gained from increases in agricultural productivity. Significant reduction in the death rate, coupled with continuation in the return migration pattern could have been disastrous.

In sum, significant changes in social relationships occurred in Vicos since the start of the Cornell-Peru Project. Changes in class composition and in age status may be directly attributed to Project efforts to replace the traditional elite of varados and mayorales with an elite of literate, Spanish speaking Vicosinos able to operate in mestizo society. Gender inequality increased primarily as a result of the introduction of formal schooling, but also with increasing integration into mestizo society, where gender relationships tended to be characterized by greater inequality and role differentiation. Formal schooling of children and the increase in the number of Vicosinos serving in the armed forces had a weakening effect on family ties, as did the commercialization of the subsistence sector and occupational specialization. Compadrazgo ties were changed somewhat as a result of greater participation in the armed forces and an increasing tendency to establish compadrazgo ties with Marcará mestizos.

Local organizations, both formal and informal, appear to have been strengthened as a result of the project. Informal neighborhood groups of kin, fictive kin, and neighbors were strengthened by the organization of communal labor by zone. The number of veterans in Vicos has increased, and veterans as a group played an increasingly important political role in the community. A second group which emerged as a result of the project was the parents of Vicos school children. It, too, exerted considerable political clout on several occasions.

The rate of migration to the coast from Vicos increased noticeably after 1952, but it is not clear to what degree this was affected by project activities. After 1956, migration from the coast back to Vicos became a significant phenomenon. Although motivated by a number of push and pull factors, Vicos' change from a hacienda to a community seems to have been an important factor in return migration.

Economic Organization

While it has been argued that the new seed potato program has been given more than its share of attention by commentators on the project, there can be no doubt that its direct and indirect impacts on Vicos as an economic system and as a society were profound. However, not all changes in economic organization could be attributed to the new seed potato program. Construction projects, the presence of

large numbers of outsiders in the community, and the school all had an impact on economic organization, as did experimentation with labor obligations on hacienda and later communal lands and the project's protection of Vicosinos from la república labor in mestizo towns.

Productivity and production. Changes in production at Vicos were not merely quantitative, but were to a large degree qualitative, both in agriculture and in other sectors of the economy. In agriculture, the new seed potato program was accompanied by a decline in the production of crops with lower market value--e.g., flax, barley and tarwi (chocho). Since 1952, there has been an increase in the number of non-agricultural occupations, in the total number of specialists and in the number employed in each occupation, with two exceptions--curanderas and musicians (Alers, 1966).

Adoption of the new seed potato technology in 1952 and its rapid spread into the subsistence sector meant that other less profitable crops were being cultivated on a smaller scale. Barley, for example was cultivated by 98 percent of Vicosino households in 1952 (Stevens, 1954) and only 73 percent in 1963 (Alers, 1966). While this shift was not in itself troubling, there are indications that the program has focused less on the non-market properties of Vicos crops than it should have. Rotations adopted were based on previous hacienda practices, and the insecticidal and fertilizing properties of Andean plants with low market values were not carefully considered in their planning. The result was that the new seed potato technology was less sustainable than it might have been.

The potato bonanza lasted for more than a decade, but not indefinitely. The advantage that Vicos potatoes enjoyed in the Lima market diminished as competition increased (Garrido-Lecca, 1965), and in time new pathogens appeared to reduce yields even on the new varieties. While Vicosinos continued to use fertilizer and improved seed on their own, they quickly abandoned pesticide applications. Vicosinos were dubious about the use of poisons on crops in the first place, and when overuse gave their crop a metallic taste, rendering them unfit for sale, they were quick to abandon them altogether.

Thus, while in the short run, the project accomplished amazing results by putting all of its technological eggs in a single basket, in the long run concentration on a single crop left Vicos agriculture more vulnerable than it would have been had a greater investment been made in improvements of alternative cash crops such as corn, onions, and wheat and if more attention had been paid to the establishment of maximally beneficial rotation systems.

Similarly, success with potato cultivation may have turned project attention away from the execution of the livestock and range management programs proposed by Holmberg. A branding program was initiated to reduce the number of disputes over livestock ownership brought before the project director. Several small-scale immunization programs were undertaken, but no substantial investments were

made in either animal breeding or pasture management until the late 1960s.

Thus, as a result of the project, agricultural production was increasingly focused on the potato as a major cash crop, while other commercial and subsistence crops received little or no attention. On the other hand, productivity per man hour of labor appears to have increased markedly, especially on hacienda lands, as a result of the new technology and changing labor relationships. Unfortunately, yield data are lacking for the period immediately preceding the introduction of the new technology. However, it is known that potato yields were reduced severely by blight; and it was for this reason that Vásquez chose to intervene first in potato cultivation. By 1954 Luna estimated yields at 6,054 kg. per hectare. In 1957, supervised communal fields yielded 10,700 kg. per ha. By 1964, they were down to 7,199 kg. per ha. on private land and 6,368 kg. per ha. on communal lands (Garrido-Lecca, 1965). The phenomenal yields of 1957 have been attributed to Vicos' change in status from a hacienda to a community (Holmberg, 1959; Vásquez, 1971). While it is safe to say that potato yields increased, accurate information is still unavailable. Data for communal holdings are often incomplete and depended on the diligence of the delegate and his literate assistant. Individual cultivators rarely kept track of the amount of land they planted each year in a particular crop; this figure may have varied considerably from year to year.

Increased productivity on hacienda (later communal) lands was due in part to technological innovations, in part to changing labor relationships, and in part to closer supervision of production. Vicosinos found that under project administration, they were less able to stash a portion of the harvest, to steal crops, or to take advantage of gleaning rights. On the other hand, the project established a dual pricing system for crops produced on hacianda lands. Crops were sold at high prices on the open market, but at cost to Vicosinos. In addition, low grade potatoes were distributed among Vicosinos at harvest time.

Comparing productivity on communal and private lands, Garrido-Lecca (1965) found that yields on both types of holding were similar in 1964, but that costs per hectare were about twice as high on communal lands as they were on private holdings. The use of pesticides on communal lands contributed to the increase in cost, but the main reason for the difference was that returns to labor were higher on private holdings. A major factor in increasing the return to labor on private lands was that Vicosinos lived closer to their own fields and could spend more of their work day engaged in agricultural work.

Garrido-Lecca also notes that while returns to labor were highest for potatoes returns to all inputs were highest for <u>ollucos</u> (an Andean tuber) and for corn. What this means is that, although according to a number of Vicosinos the new potato package increased labor requirements for potato production, potato cultivation

remained less labor-intensive than either olluco or corn cultivation. Shifts from these crops to the more easily marketable potato maximized returns to labor rather than returns to all factor costs. Given Vicos' rapid population growth and the steady reduction in the average number of hectares per person, this may not have been the optimal strategy for increasing agricultural productivity. Vicosinos found themselves increasingly dependent upon purchased inputs and more closely tied to a sometimes volatile national market, while at the same time the need for an abundant labor supply was decreasing. Had there been abundant employment opportunities outside of Vicos--in the region or even on the coast--this labor saving strategy would have made sense; it was somewhat inappropriate in the context of Peruvian demographic problems.

In sum, the project achieved significant increases in agricultural productivity as a result of the new seed potato program, but not all the unintended consequences of the program were positive. Potato cultivation was emphasized at the expense of other cash and subsistence crops.[10] Furthermore, the program failed to implement a rotation sequence designed to maintain soil quality or to maintain the sustainability of potato production. Finally, given the problem of overpopulation and undercapitalization in Peruvian highland communities, it was a mistake to maximize returns to given inputs of labor. It would have been more beneficial in the context of rising man-land ratios to concentrate on technologies which would have maximized yields per hectare and minimized cash requirements.

Increased productivity of labor outside of the agricultural sector was in part the result of an increased division of labor brought about by the influx of cash into the Vicos economy. It was also a result of a reduced need to work for extremely low wages for mestizos in Marcará and of the reduction in time spent in coerced, unpaid labor. The project directly fostered the division of labor by creating employment opportunities on construction projects, and by paying for service previously rendered as hacienda obligations. The project also initiated sewing classes in 1960. By 1963, over 4,500 garments had been made by Vicosinos (Dobyns, 1971) and Vicos became nearly self-sufficient in the production of certain types of clothing. Vicosinos were apprenticed to mestizo carpenters and masons; some learned enough to build not only in Vicos, but in other communities in the Callejón.

The number of weavers and basketmakers--traditional Vicos production specialties--increased during the first ten years of the project, but data on output of both specialists are lacking. Similarly, a greater number of Vicosinos were ice haulers,[11] firewood dealers and charcoal makers in 1963 than in 1952 (Alers, 1966). Increase in the number of Vicosinos engaged in off farm occupations does not mean that they were released from agricultural labor. These specialities were sidelines. Vicosinos were primarily subsistence cultivators and secondarily employed in artisanal production, transport, or selling. Basketmaking and weaving brought cash into the community; other occupations probably served more to keep cash from

leaving Vicos. This increase in off-farm production was partly fostered by the project and was partly a result of increased cash flow within the community as a result of the new seed potato program and the constant presence of relatively wealthy outsiders.

Labor relationships. Four changes in labor relationships occurred as a result of the project. First, labor obligations on the hacienda were regularized and reduced. Second, coerced labor off the hacienda--in the Pati linen factory, in the mines of Conchucos and the Vertientes haciendas, and in the mestizo towns of the Callejón--was abolished. Third, cash generated by the new seed potato program and employment opportunities created on the hacienda by the project made it unnecessary tor Vicosinos to work in Marcará for extremely low wages. Finally, a combination of increased cash availability and a reduction in the man-hours available to perform reciprocal labor obligations meant that paid day labor was used more and more to perform tasks that had once been performed as reciprocal obligations.

Hacienda labor relations changed in two stages. At the outset of the project, the three-day-a-week tarea was maintained, but all other customary hacienda obligations were abolished; these services, when required, were paid for at the going rate for manual labor. All tarea labor after 1952 was performed on the hacienda. During slack periods in the agricultural calendar, Vicosinos were employed repairing terraces and in construction. The elimination of coerced labor off the hacienda meant that Vicos heads of households were able to spend more time on their own plots and helping their families. However, performance of tarea labor was still a condition for holding usufruct rights to Vicos land.

In 1956, in preparation for expropriation of the hacienda and its change in status to a community, the tarea was replaced by a communal labor obligation. Performance of this obligation was supervised by a zone delegate elected by members of the zone under his supervision. Failure to fulfill communal labor obligations was punished by a fine. This gave Vicosinos a certain amount of direct control over the use of their labor on communal fields. The three-day work week was replaced by seasonal collective work periods, corresponding to the need for agricultural labor. Thus, because labor was only used as needed on community lands, the number of days spent working on communal lands was reduced from 156 to somewhere between 50 and 60 days (Garrido-Lecca, 1965).

Regularization and reduction of hacienda (communal) labor obligations made it possible for Vicosinos to compete on a wider labor market. Because they were no longer restricted to the hacienda and Marcará, they could choose between wage work in Marcará, work on the hacienda, and seasonal migration to the coast. In an expanding economy, this freedom of choice exerted upward pressure on wages and Stein reports, "Countrymen are thus freed to seek wage labor in towns on a larger scale than ever before, even with inflation taken into account" (1975:54). He notes that out of 31 Vicosinos surveyed in

1971, twelve worked in Marcará two or more days a week, five worked at least once a week, six worked in town less than once a week, and only eight never worked there (1975:66). Thus, Vicosinos still performed wage labor for Marcarinos, but the "terms of trade" had improved at least somewhat as a result of project activities. La república labor outside of Vicos was no longer required and project directors tried to see to it that Vicosinos worked on outside construction only at the going wage rate.

Mechanization. Several gifts of farm machinery were made to Vicos, but there was no major shift toward mechanization. This was largely due to the rugged terrain, but mechanization seems to have been unadvisable for a number of other reasons: (1) the supply of gasoline in the Callejón was erratic and seldom assured, (2) spare parts were expensive and often unavailable, and (3) capital was a scarcer factor of production than labor and is likely to remain so.

In 1963, in their first act as an independent community, Vicosinos invested in a six-ton Ford truck in order to haul their own potatoes to the Lima market. The truck was not an economically profitable investment. It hauled insufficient volume to pay for itself. Because potatoes were harvested during three months of the year, one truck was insufficient during peak periods. The truck was idle between the end of the harvest and July when food was shipped into Vicos. After that the truck would once again remain idle until potato harvest began in December. Furthermore, it was seldom loaded for the return trip, and cost more in gas and maintenance than it saved in freight charges. But the truck was a source of community pride (Doughty, 1971). The "Cry of Reform" became a symbol of Vicosinos' control over their own destiny, however shaky that control might have been. Its economic cost was outweighed by its social benefit. The tractor broke down and remained inoperable; power tools broke or disappeared (Himes, 1972).

Cash flow and capital formation. The Cornell-Peru Project had sufficient funds at the outset to rent the hacienda, to staff the project and to carry out research activities, but had no funds for capital improvements. Thus it was immediately faced with the problem of generating capital. The hacienda had been milked dry by previous renters. Hacienda lands were degraded, terraces were destroyed, and buildings were in poor shape. Flax production had earned little income for the Santa Corporation. The new seed potato program was not merely an intervention to improve the diet and well-being of Vicosinos, it was an attempt to make hacienda agriculture profitable and to accumulate capital.

The project had an advantage over previous renters in the process of capital formation. It used the hacienda labor on the hacienda. Investment of Vicos labor on hacienda lands combined with the new seed potato technology made Vicos agriculture profitable for the first time in about a century. Profits from crop sales were

invested on the hacienda, in the school and other public works projects, but it did not overextend its resources in this direction. To the project's credit, investments in the community were made on a scale that the community could be expected to afford.

After 1956, profits from sale of communal crops were invested in a fund for the hacienda down payment. The fund was augmented by a small tax collected from all households. During the five years that intervened between the first expropriation decree and the sale of Vicos to the community, the capital fund was used to make loans to individuals and communities. These loans were in the form of supervised agricultural credit, modeled on loans made to Vicosinos. The community also used low interest CRAS loan money to increase their capital fund.

In general, the project left the community with a legacy of conservative investment and small-scale experimentation. A willingness to experiment on a small-scale in order to increase cash flow was accompanied by a conservative attitude toward the assumption of new debt. The Peace Corps expulsion incident of 1963 was in large measure due to a reluctance on the part of Vicosinos to take on new debts, even at very low interest rates, before they had finished paying for their hacienda lands (Doughty, 1965; Patch, 1964). The failure of a feed lot experiment in the 1970s was met with a reaction against having to pay for sick and dead cattle. The debt was cancelled by the government (Mangin, 1979).

While management of communal funds was not always honest, Vicosinos demonstrated a pragmatic attitude toward the use of capital. Leon (1980) notes that the scholarship fund had been misappropriated and used to buy fertilizer for the community; the debt was never repaid. The immediate benefit of investment in fertilizer seemed to be of greater utility than the dubious benefits of secondary education.

If the new seed potato program provided the basis for capital accumulation, its application to the private sector vastly increased the cash flow within the community. As I have pointed out earlier, participation in the share planting program meant that a number of Vicosinos could market their crops. The cash loan program that followed served as an incentive for commercialization. The project also contributed to the cash flow inside the community by paying wages for hacienda labor over and above the tarea, and indirectly by bringing a number of outsiders dependent upon Vicosinos for food, lodging and services.

As is usually the case when circulation of money increases in poor rural communities, consumer spending in Vicos increased. Improvements in diet were followed by the purchase of store bought clothing and small appliances. Levels of fiesta consumption and frequency of fiestas increased with prosperity (Martínez, 1963). Increased cash flow attracted itinerant merchants to Vicos, and encouraged Vicosinos to open small shops to provide neighbors with alcohol, coca, and other necessities. In 1961 Vicosinos accounted

for approximately a third of the volume of trade in Marcará stores (Barkin, 1961). Some Vicosinos invested in burros to carry ice, firewood and goods to Vicos, Chacas and Marcará. Finally, cash was used by a number of Vicos families for new house construction.

This does not mean that commercial activities have replaced subsistence cultivation. According to Barkin (1961), Vicos shopkeepers invested in coca or alcohol as a service as much as for gain. Selling and sharing coca and alcohol were instruments for gaining prestige and achieving recognition. Investing in alcohol and coca made generosity possible. The use of surplus cash to set up shop also increased contacts with mestizos in Marcará and Huaraz. This too, according to Barkin, conferred prestige upon the seller. Thus, cash flow as a result of the new seed potato program and other project activities both weakened and reinforced ties within the community. It weakened them by reducing the need for reciprocal labor obligations and reinforced them by increasing the number of fiestas and by creating new opportunities for displays of generosity..

In sum, the project's impact on economic organization in Vicos was on balance positive. These activities helped to alter the terms of integration to a certain extent. However, there was a limit to how much the project could accomplish in the absence of major structural changes in Peruvian society. The standard of living in Vicos has risen since 1952; labor relations within Vicos and in the Callejoń were improved; agricultural productivity increased; and Vicosinos learned to accumulate and manage small capital reserves. On the other hand, inflation reduced the value of agricultural products relative to manufactured goods, and to the extent that Vicosinos became dependent upon external markets, their condition has deteriorated. Also, employment opportunities even for educated Vicosinos are still severely restricted and occupational mobility is still limited.

Political Organization

The Cornell-Peru Project sought to achieve three major political goals--the integration of Vicos into the national political system, the devolution of power to the community of Vicos, and, on a regional level, a shift in the balance of power between Vicosinos and mestizo authorities. A number of formal and informal activities were designed to break the clientelistic power relationships prevalent under the hacienda system, and to replace them with a more rational authority system within the community.

Authority system. At the outset of the project, Vicosinos were subject to the authority of the varayoc and priesthood in religious and moral matters, to the authority of the prefecture in criminal matters (including draft evasion, performance of la república

labor, theft, assault, homicide), and to the authority of the hacienda administration, usually exercised through the mayorales and the varayoc, in matters related to land tenure, livestock ownership, and grazing practices, and the fulfillment of hacienda labor requirements. This division of authority was seldom clear-cut. Often Vicosinos had a choice of whether to lodge a complaint with the district authorities, local authorities, or the hacienda administration. This choice often reflected the Vicosino's perception of who his best allies were likely to be at the time. A third source of authority was the national Patronato de la Raza Indigena and other Indian agencies which offered a weak counterbalance to the authority of the hacienda.

Locally, the authority of the varayoc had been declining in non-religious matters, except insofar as its authority derived from the power of the patron. Thus, the varados were required to mete out penalties imposed by the patron for failure to fulfill labor obligations, for damage to hacienda crops by animals, and in disputes between Vicosinos. The varados had at one point been both judge and executioner (Vásquez, 1964) and had authority to try crimes of infanticide, adultery, physical abuse, slander, rape, breach of promise to marry, and crimes against the patrimony.

When Holmberg became patron, he refused to exercise the patron's judicial role. Disputes brought before the hacienda administration were usually referred to authorities in Carhuaz and Marcará. The unwillingness of the project to assert its authority as patron through the varayoc released the latter from some of its more distasteful duties, but at the same time it weakened its authority considerably insofar as that authority derived from that of the patron. This aspect of the decline in varayoc authority was an intended result of project activities.

Loss of varayoc authority also occurred as behavioral norms showed greater variation. The decline in the status of elders encouraged by the project hastened the decline of varayoc authority. Attitudes toward traditional Andean trial marriage, the role of padrinos, and familial obligations were changing rapidly as a result of the project; the varado could no longer be sure of representing a consensus in his moral decisions, he lacked derived authority from the patron, and he was prohibited by district authorities from applying effective sanctions.

As the authority of the varayoc declined, the office of teniente gobernador (lieutenant governor) became increasingly important. The teniente gobernador was appointed by the sub-prefect in Carhuaz and was low man on the prefectural hierarchy. His duties were to promulgate orders of the prefecture and administer justice in Vicos. He was also a truant officer and administered church funds (Tuohy, 1961). In the 1950s, the teniente gobernador began to assume many of the functions of the varayoc. As the representative of the Peruvian government in the community, he was considered to be an impartial judge. Furthermore, litigants displeased with his rulings

could appeal their cases to officials in Marcará and Carhuaz. Because the teniente gobernador was literate, he was trusted more than the varados, and the fines which he imposed were usually lower (Vásquez, 1964). According to Vásquez (1964), the authority of the lieutenant governor was only nominal in 1951, but a decade later he had displaced the varayoc. In 1959, a police post was established in Marcará. This also limited the role of the varayoc, since the police were often seen as impartial because of their lack of kinship ties with the litigants. Thus, as the authority of the varayoc declined as a result of project activities and its failure to assume the judicial functions of the patron, the authority of the prefectural system and the police post in Marcará became more important in the community.

From 1952 to 1956, the authority of the project was exercised by the field director, the mayorales and Enrique Luna, hacienda administrator. Project personnel attempted to exercise their authority as administrators rather than judges. Attempts to involve the mayorales in the resolution of local disputes, however, were only partially successful. The mayorales would have preferred an increase in derived authority--greater power to give orders and command obedience--rather than more responsibility for problem solving and dispute settlement (Blanchard, 1955).

It proved extremely difficult to dispense with the role of patron. The patron's function as mediator between Vicos and the outside world was maintained by the project staff. Further, Vicosinos were accustomed to regarding hacienda administrators as patrons and often thrust project personnel into that role, despite their reluctance to assume it. There was strong political pressure in the region to maintain patronal authority relationships. Finally, several project and PNIPA staff members had a tendency to fall back into paternalistic behavior patterns, thus perpetuating the role.

This discongruity between Holmberg's goal of establishing a rational, bureaucratic authority system in Vicos and a preference among many Vicosinos, regional officials and certain project staff members for traditional and charismatic authority meant that the shaping of new institutions did not take place exactly as envisioned. According to Montoya, acceptance of democratic institutions in Vicos was due in large part to the personal prestige of Mario Vásquez as field director, and that

> There exists as a consequence, a marked parternalism in Dr. Vásquez's relations with the Vicosinos. Not on his part, it is true, but because the Vicosinos are dependent upon him, upon what he says and what he does. It is interesting to note that this paternalism may create a serious problem when the community, at the end of the Cornell-Peru Project, they will have to make do on their own without his help (1963:73).

Vasquez was seen as a good patron. His authority derived in part from the Vicosinos' misconception of his role in the community and in part from his personal magnetism, and political style. Transition from the traditional authority of the patron and the mayorales to the formal institution of the Council of Delegates and zonal elections may have only been possible because of Vásquez' charismatic authority.

Not only was this type of leadership important in the formation and the acceptance of democratic institutions, it seems to have dominated them. According to Montoya (1963), delegates from each zone were chosen for their ability to give orders and command obedience from their constituents. Within the Council of Delegates, Tuohy (1961) notes that there was a strong tendency on the part of zonal delegates to accept the leadership of a few charismatic figures. Among these, the most important was probably Celso Leon, a relatively young Vicosino whose prestige and authority within the community was probably directly related to his command of Spanish and ability to interact productively with project personnel.

In sum, project activities accelerated the decline of varayoc authority and contributed to the demise of traditional patronal authority and to the increased authority of representatives of the national administrative system--the prefecture and the police--in the community. All these shifts in authority were intended consequences of project activities. Simultaneously a shift in Weberian types of authority also occurred. It was hoped that traditional authority would be replaced by rational authority, exercised through the democratically elected Council of Delegates. Instead, Vásquez, as Cornell-Peru Project director, was invested with an enormous amount of charismatic authority by Vicosinos; this authority legitimized the new political system in their eyes. Charismatic authority was expected in delegates and was the basis for leadership in the community council.

Power. It has been argued (Stein, 1974) that changes in power relationships in Vicos are more apparent than real. Although the power of the patron was eliminated as a ruling force in Vicosinos' lives, the latter were still tied in dependent relationships with Marcará mestizos and regional authorities. It may also be argued that as a result of market and political integration, the dependency of Vicosinos on the coast has grown more severe and that urban-rural cleavages have deepened at the expense of the rural sector. The Cornell-Peru Project was never designed to achieve structural change at the regional, let alone the national level. Conversely, it was forced to operate within the context of regional and national power structures if it was to succeed at all. Thus, any changes in power relationships between Vicosinos and outsiders occurred within this context and were limited, but this does not necessarily mean that they were negligible.

The project changed the locus of power in the national and regional society as it impinged upon Vicos. First of all, the patron

was no longer the sole representative of the national power structure in the community. Power in Vicos was shared among agents of the Ministry of Education, PNIPA, SCIPA (later SIPA), who assumed responsibility for education, agricultural development and supervised credit programs in the community. The prefecture was another locus of power, represented by the teniente governador in Vicos, the subprefecture in Carhuaz, and the prefecture in Huaraz. The police and judicial system exerted political power in Vicos as did the Public Benefit Society of Huaraz until 1961 and the Ministry of Labor, charged with supervision of indigenous affairs. This shift from the concentration of power in the hands of the patron to the diffusion of the power of the state through a number of separate and sometimes competing agencies was probably beneficial for the Vicosinos. This diffusion allowed project personnel, and later community officials to play one branch of the government against another (as in the conflict over la república labor discussed in Chapter III), and to play one level of government against another (for example, in the school closing incidents of 1961 and 1971).

It would be a mistake, however, to overemphasize the benefits to be reaped by manipulating the national power structure at this level. It must be remembered that despite a decree of expropriation of the hacienda in 1956, the Peruvian government did nothing to facilitate the transfer. The power of conservative regional elites was sufficient to block the sale of Vicos to its inhabitants until 1961; even then, in a climate of increasing peasant unrest in Peru, international intervention was necessary to override the power of regional elites.

At the regional level, there was a certain shift in the balance of power owing to Vicos' ability to participate in the national market system, and the increased capital at the community's and individuals' disposal. Vicosinos found themselves somewhat less dependent upon Marcará mestizos for employment, credit and consumer goods. They were able to exert significantly more leverage in the market than they had been able to before the project. This change was in part a result of the new seed potato program and supervised agricultural loans, and in part the result of the increased ability of Vicosinos to speak Spanish, to operate in mestizo society, and to engage in commercial transactions.

This shift did not mean that Vicos was able to assume a leadership role among the hacienda and indigenous communities of the region as Vásquez had hoped. Vicosinos played only a minor role in the extension of credit to other haciendas and communities. They never translated their increased power vis-à-vis mestizo society into a position of political leadership in the Callejón. Himes (1974) relates this failure to assume a powerful role in regional development to weak local leadership and to envy of Vicos' unique status on the part of community leaders in the Callejón. He argues that paternalism in Vicos and on behalf of Vicosinos had an inhibiting effect on the development of leadership in the community.

Within the community there was a noticeable shift in power from older, wealthier Vicosinos--varados and mayorales--to Spanish speaking, literate Vicosinos with experience in the outside world. Specifically, veterans began to play an important role in local politics. The growing importance of this new, younger element in the population has produced increased factionalism within the community. Finally, power over land distribution, land use and labor obligations that had been previously vested in the patron and in the Public Benefit Society of Huaraz was transferred to the community of Vicos. This power was limited by PNIPA and SIPA supervision of agricultural credit and development and by stipulations in the 1962 purchase agreement that Vicos lands be inalienable.

To conclude, power was no less unevenly distributed in Peruvian society after the project than it had been before. In fact, the positions of the sierra relative to the coast and of the rural sector relative to the urban were, if anything, worsening with increased integration. At a regional level, however, Vicosinos found themselves relatively more powerful vis-à-vis merchants, creditors, employers and local authorities. At the national level, they had some ability to manipulate the system because of the increased diffusion of state authority among different agencies and levels of government and because they could depend on Vásquez' support. Within the community, the Council of Delegates assumed some of the powers of the patron and Public Benefit Society. Competition between the pre-project elite of varados and mayorales and a new elite of westernized Vicosinos was still strong in the 1960s, although the new elite appeared to be in a stronger position because of its ability not only to mediate between Vicosinos and Marcará mestizos on more equal terms, but because of its access to the officials of government and lending agencies.

Political activities. The reputation of Vicosinos for being unruly and obstreperous, well established before the Cornell-Peru Project, was in no way diminished as a result of project activities. According to Doughty (1971), after a decade of project presence, Vicosinos were still viewed by local mestizos as aggressive, insubordinate and pretentious. While they had never been as passive and subservient as pictured in the official project literature, there is no doubt that Vicosinos have become increasingly assertive in the political arena. This assertiveness comes from the deliberate effort on the part of most project personnel to interact with Vicosinos as equals, from their increasing contact with outsiders and their familiarity with mestizo society, from their increased ability to understand Spanish, to read and to cipher, and from the shower of media and official attention to the project and the community.

I have mentioned earlier the most dramatic instances of Vicosino assertiveness--the closing of the school in 1961 and 1971 and the expulsion of the Peace Corps in 1964. But this assertiveness has shown itself in other less dramatic ways. According to Doughty, "To date, the community and its elected representatives have demanded

the recognition of their new status by forcing various external agencies to deal directly with them as a free community, instead of through surrogates such as the government agency that is responsible for the conduct of the development program" (1971:106).

In 1963, a Vicosino ran for a post on the Marcará district council for the first time in that body's history. He was placed on the ticket, but was not elected. In 1966, a Vicosino high school graduate won a seat on the council. As late as 1975, Vicosinos were still exerting a certain amount of pressure on government agencies. According to Mangin (1979), Vicosinos built a feed lot and purchased some expensive breeding cattle with help from school agronomists and government credit. The cattle did not adapt well to Vicos, and in 1974 Vicosinos lost their agricultural advisers when the nuclear school was withdrawn from the community. Faced with debt and dead and dying cattle, Vicosinos objected to paying the debt. The debt was cancelled. Since then, Mangin reports, an army major representing the Peruvian land reform agency arrived in Vicos announcing that the government was going to "reform the structures" (1971:81). He was kicked out of Vicos, and subsequently denounced the community.

While Vicos has never had a reputation for docility, as a result of project activities, the commonly employed strategy of passive resistence, non-feasance and the use of a double standard of honesty and hard work (Barnett, 1960) was replaced at least to some extent by a new political assertiveness. This assertiveness should not, however, be confused with leadership. It is more often negative than positive.

The impact of the project on the political life of Vicos was on the whole beneficial but limited by the uneven distribution of power in Peruvian society. Elimination of the central role of the patron enabled Vicosinos to play government agencies against each other, but at the top of the power structure, little attention was paid to the needs of rural communities until the Velasco coup in 1969. Even then the object of rural development was to transfer food to the coast and cities. The establishment of democratic institutions within Vicos was facilitated by the charismatic authority of Vásquez as project field director. Once established, these institutions were dominated by a few charismatic leaders, as the traditional Vicos elites lost power.

Cultural Systems and Human Development

It is difficult to assess the impact of the project on Vicos culture and on the consciousness of Vicosinos as individuals. This difficulty is compounded by the fact that prior to the project, Vicos had not been a highly stable, traditional society, but a society constantly adapting to the changing consequences of its integration into Peruvian national society on extremely unequal terms. It is difficult to tell to what extent Vicosino values, world view, and

identity were conditioned by the hacienda's relationships with the outside world and to what extent they were evolving independently. Before and after comparisons are difficult to make in the absence of ethnographic studies made after 1965. The most recent ethnographic data available are undergraduate reports written in conjunction with the Columbia-Cornell-Harvard-Illinois Summer Field Study Program in the early 1960s. These studies are narrow in focus and provide only spotty coverage, although they are among the most thoroughly researched studies to come out of the project.

Values. There is little indication of major changes in values as a result of project activities. While respect for literacy and ability to manipulate the symbols of the national society appears to have increased at the expense of respect for age, many Vicosinos valued education before the project; they just found it extremely difficult to get a decent education. Respect for the elderly remained a norm after a decade of project activities: yayas were likely to be elected as delegates and were listened to with respect in council meetings and informal gatherings. Although military service and schooling had a deleterious effect on family life, there is no indication that family cohesion was less highly valued in the 1960s than it had been before the inception of the project.

Holmberg (1971) in a post hoc statement of project goals, said "We were concerned with helping the Vicosinos to transform the hacienda on which they lived in a dependent and submissive state into a just, peaceable, morally and intellectually progressive community of responsible men and women" (1971:28). Project personnel were concerned with the development of trust within the community and a reduction in hostility and theft. There was a general feeling that mistrust, suspicion and petty theft could be reduced with an increase in living standards and redistribution of power within the community. While Holmberg (1959) and Alers (1971) reported a reduction in the incidence of theft and pilferage as a result of the project, theft and mistrust were still real problems within the community after Vicos became independent.

While noticeable decline in the religious authority of the varayoc had occurred, this was probably due more to the elimination of effective sanctions for moral crimes and to the changing function of compadrazgo relationships than to an increase in secularism. Church and chapels remained important community symbols, and fiestas increased in number and elaborateness in the 1950s. On the whole, changes in attitudes toward goal attainment seem to have been more important than changes in values or goals.

World view and attitudes toward change. As best I could tell from a review of the literature the Vicos world view and theory of causation are pragmatic. Rather than fitting their understanding of

phenomena into a structured system of causality, Vicosinos have tended to impute a number of explanations to an event until they find one that seems to work. This pragmatic attitude toward cause and effect results in a flexible attitude toward customary practices which Blanchard (1955:12/9), in his frustration, labelled cultural "sloppiness." According to Blanchard (1955:12/9) this same "sloppiness" is manifested in the search for causes. If crops failed or if a person became ill, the Vicosino would typically elaborate a number of hypotheses, experiment with a number of remedies until one appeared to work. Its success was no guarantee that it would work the next time. This attitude was manifested in a trial and error approach to experimentation, and the adaptation and invention of folklore to explain the current state of affairs.

Patch (1964) and others (e.g., Dobyns et al., 1967c) tended to see Vicosino explanations of causality as leading to passivity, and feel that their tendency to blame events on the will of God, on forces beyond their control was an important factor in their powerlessness and in their inability to adapt to modern western society. These assumptions about the Vicosino world view go along with the conception of Vicosinos as backward and isolated and do not seem to me to be consistent with their demonstrated willingness to experiment on a small scale and to adopt innovations where there was a moderate likelihood of success.

If the pragmatic world view is an accurate interpretation of Vicosino beliefs, then Vicosinos probably assimilated project innovations rather easily as long as they didn't directly threaten their well-being. This seems to have been the case with agricultural practices and medical beliefs. The prevailing attitude toward change seems to have been one of caution rather than either total resistance or eager acceptance. The following evaluation of the benefits of pesticide application is typical:

> Possibly the medicine is good, because most of the time the crops the hacienda has planted have been saved, but also there have been cases where the Hacienda's crops have gone bad almost totally even though they used those medicines. Because of that we sometimes say that maybe it depends on God. If he wishes, He can ruin the crops even though they are treated with medicine, and also if He wishes, the crops are not ruined even when no medicine is put in (Stein, 1972:42).

Willingness to experiment was tempered by a conservatism based on Vicosinos' understanding that they did not know what all the relevant variables were and that they could not control them all.

The use of such modern medical practices as were available in Vicos was also accepted on a similar basis, even though the germ theory of disease had not been wholly incorporated into the Vicosino world view by 1962. For example, despite a general disinterest in

germ theory, measles was sometimes viewed as a communicable disease, and at least one Vicosino understood that illness could result from drinking contaminated water (Chadbourn, 1962). It is interesting to note, however, that this same informant did not believe that boiling contaminated water would make it safe.

Monge and Vásquez (1957) see Vicosino medical beliefs as an interesting combination of the traditional and the modern. They note that there was active speculation on the properties of drugs and an attempt to include them in traditional hot and cold concepts of disease and treatment. Resistance to stethoscopes, x-ray machines and injections was substantial, but appeared to be diminishing. Household remedies were often used in conjunction with modern medicines. Again, this was probably an effort to control a maximum number of variables. Doctors and hospitals were used, usually as a last resort, and, according to Blanchard (1955a), this loose, trial and error approach to causation and remedy allowed Vicosinos to accept the failure of modern medical remedies, just as they accepted the failures of curanderas and household remedies.

This flexible approach toward cause and effect allowed Vicosinos to accept and cope with a constantly changing environment. Change could be supported, because it could easily be integrated into this flexible world view. However, the very flexibility of this world view made it quite resistant to change. New ideas were grafted into old thought patterns. Paradigm clash was less likely when paradigms seemed infinitely malleable. Resistance to change seems to have been economic for the most part, rather than cultural. Parents who objected to schooling did so because they needed their children's labor and had little faith that education would produce upward mobility. Vicosinos who chose not to adopt all or parts of the new seed potato package did so because they were too poor or because they objected to its increased labor requirements.

At the same time, there was a growing belief in progress on the part of some Vicosinos. Not surprisingly, young well-traveled Vicosinos who were familiar with mestizo society were more likely to believe in progress and to actively promote technological innovations. This increasing faith was probably a function of the deliberate attempt on the part of the project to identify this segment of the population with progressive attitudes and to invest its members with power and authority previously vested in the hacienda administration and in the varayoc.

Changes in cultural identity, self-definition, and self-esteem. The cultural identity of Vicosinos was defined in part by Vicosinos themselves and in part by the mestizos of the Callejón. In mestizo society, Vicosinos were defined as Indians. This was essentially a class label surrounded with cultural overtones. Definition of rural populations as Indians allowed mestizos to establish a basis for differentiation between the two populations. Indian and mestizo were not categories in a dichotomous variable, but rather represented

points along a continuum of acculturation. For example, while Recuayhuanquinos, residents of an indigenous community adjacent to Vicos, were considered Indians by Marcará mestizos; they, in turn, considered themselves to be less Indian than Vicosinos. Indianness was defined largely by poverty, language, and dress, but both Indians and mestizos identified a number of other characteristics as belonging to the stereotypes associated with both poles.

Thus, distinctions between Indians and mestizos in the Callejón had no basis in race and only some basis in linguistic differences. These stereotypes represented polar types in what was really a complex continuum. These types were reified by mestizos who sought to maintain a precarious social superiority and by hacienda residents who sought to separate themselves from mestizo society in order to limit their exploitation. In his analysis of mestizo-Indian relations in Peru, Stein (1974) substitutes the terms countryman and townsman for Indian and mestizo, thereby accentuating the importance of the urban-rural cleavage in highland and, for that matter, Peruvian class relationships. Countrymen were identified as Indians by town-dwelling mestizos, but the former defined themselves geographically--as Vicosinos, Recuayhuanquinos, Huaprinos, etc. Cultural identity was strengthened within Vicos by participation in the fiesta cycle and through an emphasis on custom and uniformity of behavior and outward appearance. Clothing distinguished Vicosinos from other Indians as well as from mestizos.

It was noted that at the outset of the project Vicosinos did not identify with the national culture. According to Mangin (1954),

> No one knows who the president is, what the national anthem is, who the popular soccer players, bull fighters, or movie stars are, etc. There is no knowledge of the lotteries and horse races which are so important to all classes in mestizo Peru (1954:I-11).

He argues further that Vicosinos did not identify themselves with a horizontal class grouping within Peruvian society. They perceived themselves as Vicosinos rather than as Indians. The localism of this orientation may be part of the "baseless triangle" phenomenon described by Cotler (1970) and others,[12] as the suppression of class consciousness through the use of clientelistic relationships for the exploitation of the rural lower class. But, if this explanation were valid, then with increasing integration, localism would have been replaced by a more generalized class consciousness.

To a certain extent, Vicosinos became less insular as a result of the project. Their willingness to lend money and to give agricultural advice and moral support to other communities in the Callejón was evidence of a more outward orientation. So is the increasing use of store-bought clothes, especially among men (Alers, 1971). However, other indicators reveal that localism remained powerful even after several years of project activities. Increased frequency and

lavishness of fiestas, return migration, return of veterans all indicate an attachment to Vicos even among people who were aware of outside opportunities for individual mobility.

Vásquez' migration data shows that Vicos' change in status from a hacienda to a community was important in the maintenance of cultural identification with the community even among migrants. Doughty (1971) sees the nuclear school, hacienda buildings, and the truck as foci of Vicosino pride and cultural identity. It is also likely that the persistent emphasis on the uniqueness of the Vicos experience by the media, and the attention given to the community by researchers and public officials reinforced this sense of identity.

While their sense of identity as Vicosinos strengthened as a result of the project, Vicosinos were less frequently identified as Indians, either by themselves or by Marcará mestizos. Stein (1974) found that mestizo symbols--food, clothing, transistor radios--were widely diffused in Vicos and that Marcarinos were less likely to refer to Vicosinos as Indians. Use of the word Indian as an epithet was one of a number of grievances brought against nuclear school teachers in 1971 in the action that resulted in their transfer.

In terms of cultural identity, Vicosinos maintained their local orientation throughout. What changed, at least to a certain extent, was their identity as Indians, an identity established by mestizos to take advantage of rural dwellers and to accentuate differentiation and internalized by Vicosinos as a result of continuous unequal exchanges between themselves and hacienda officials and Marcará officials. In part, this change was brought about by Holmberg's and other project worker's efforts to establish equality in both formal and every day interactions with Vicosinos. These efforts were not entirely successful. Project and PNIPA personnel continued to be identified as patrons even after the hacienda lease was transferred to the community in 1957 and disadvantageous relations with Marcará mestizos did not end as a result of the project. However, there was a perceptible change in the cultural identity of the community, in the self-identity of a substantial segment of its population, and in their self-esteem.

Role and Status Conflicts and Ambiguities.

Mangin's dissertation (1954), one of three baseline studies of Vicos, presents what is on the whole a picture of a stable, harmonious Vicos culture:

> The system of roles and statuses through which the individual (male or female) moves in attaining the culturally prescribed goals of Vicos life, 'makes sense' to the Vicosino in two important regards. First, the statuses involved are mutually consistent, and role conflict, although it can occur is rare.

> Second, the statuses involved are consistent over time, so that there are apparently no sharp discontinuities in the role-preparation model (1954: V-30,31).

He adds that goals were attainable, roles could be performed in a number of ways depending upon the individual, and that there was little conflict over either basic values or the individual's need to fill different roles. Socialization was relatively easy, smooth and consistent. He notes an anomolous case of status ambiguity--a teenaged servant for the project, an ambitious boy who rejected his status as son of an impoverished father. The ambiguity was resolved by his "adoption" by his wealthy, powerful maternal grandfather.

It is likely that the type of ambiguity revealed in this dynamic became more commonplace with the increasing importance of formal education. Stein (1975) elaborates on maternal ambivalence toward a son's scholastic success, arguing that a conflict exists between a mother's desire to see her son succeed and her reluctance to lose his labor and his membership in the nuclear and extended families. According to Stein, mothers were also aware that, although formal education could lead to their children's success, it would also lead to a decline in their own status and to an imbalance in power between the literate child and illiterate parent. Maternal grandparents would have been similarly torn because their grandson's absence from their daughter's home would deprive them of their daughter's devotion. In addition, formal schooling would deprive them of or weaken their role as transmitters of culture. Finally, while school attendance enabled increased communication between Vicosinos and mestizos, it also produced a direct confrontation between western values and local norms. This conflict produced role and status ambiguities in secondary school children and graduates. Leon (1980) showed that graduates could not both maximize their careers and maintain their status in the community. The choice was often predetermined, but it was not always an easy one.

In addition to conflicts and ambiguities generated by the possibilities of achievement in the outside world and the consequent weakening of family ties, Vicosinos had to face a series of conflicts generated by their change in status from hacienda peons to campesinos. According to Barnett (1960) and Mangin (1954), a dualism existed in the role of the hacienda peon. He was expected to be hard working on his lands and honest among his peers. In order to avoid being taken advantage of by hacienda administrators and mestizos in the region, he was expected to adopt a servile, passive, lazy and dishonest mien. The latter behavior was in part a rational defense against economic exploitation, and in part a stereotype generated by mestizos as an excuse for the maintenance of unequal economic relationships. Along with this behavioral dualism went an uneasy dependence on the hacienda administration to protect the peon from <u>direct</u> exploitation by the larger society. While Vicosinos resented --and upon occasion actively protested--the predatory behavior of the "bad" patron, they saw as an alternative not self-determination but

the paternalistic leadership of a "good" patron. To the extent that they succeeded, Cornell-Peru Project efforts to replace clientelistic power relationships with rational administration and local government based on consent of the governed may have checked the worst abuses of the bad patron, but they removed the security of clientelism. This aroused resentment among Vicosinos, especially during the early years of the project. One Vicosino, unhappy with the terms of the new seed potato share planting arrangement, complained:

> I think that the government surely sent the medicine (insecticides) as help to us, but just the same here in the hacienda they sell it all to us and then the administrators account for it, possibly by letting the Government believe that they are giving it to us free. In the Hacienda they have forgotten to help us like the other patrons used to do. They always tell us in the Hacienda: 'If you want to eat well, then you'll have to work hard' (Stein, 1972:38).

Another Vicosino felt that the changes in administration carried out by the project had a civilizing influence, that they were bringing about progress. Yet at the same time, he maintained a clientelistic view of political relationships:

> Vicos will progress if the gringos stay on as patrons. Some of the patrons who came here didn't do anything. They wanted to keep the Indians the same as ever, for not knowing how to read or write, so that they'd keep doing everything for them. The Indians can't make Vicos progress by themselves. How are they going to do it? Indians don't think about these things (Stein, 1972:41).

The persistence of a clientelistic framework for the understanding of political relationships in the face of institutional changes was probably what led to the emphasis on charismatic leadership described above (see Chapter III). The unwillingness of the mayorales to take responsibility for policy decisions also reflected this role confusion.

Finally, the mere presence of the project at Vicos created role ambiguity and a growing confusion about norms. One wealthy Vicosino reported:

> Our baby, Cerilo, died about ten years ago. I buried him without music, without anything. . . . It was because I didn't want to have a big wake at that time. Dr. Blanchard was here then. I didn't want to bring drunks along to the cemetery in front of all those people on the project. Dr. Blanchard came to the cemetery and asked why we were so quiet (Stein, 1965:42).

This decision not to have a wake made trouble with the informant's family. His response was that it's bad to carry on in front of new

friends from the project. The family drank at home, rather than at the cemetery. This informant was unwilling to present himself to project personnel as a Vicosino performing an expected and communally accepted role as bereaved father.

Whether status and role conflicts led to aspiration/action/achievement disparities, either on the individual or the community level, is not clear. On the whole, however, Vicosinos levels of expectation appeared to be realistically low, given the structure of class relationships in Peru and in the Callejón. Yet within the context of these class relationships, they appeared ready to capitalize on economic, social and political opportunities, provided that the perceived risks did not outweigh perceived advantages. Mangin (1979) characterizes Vicosinos as willing to experiment with the communal sector, but extremely conservative in the face of any innovation that threatens their hold on their individual lands. The achievements of the community have been a direct result of their willingness to engage in small-scale experimentation coupled with a risk-averse strategy with regard to subsistence activities.

Vicosino perceptions of the program. Vicosinos' understanding of and evaluation of project activities and personnel not only varied among individuals, but changed over time. As I noted earlier, there was initial resistance to the new patrons as they sought to shift from clientelistic hacienda relationships to formal administrative control. Many Vicosinos saw their ability to manipulate the system limited as a result of this shift and perceived project administrators as bad patrons. This perception of course changed with changes in project supervision. Mangin (1979) notes that Holmberg was liked, but sometimes seen as an "easy mark." He is less easily able to evaluate his own position in the community. It is clear that feelings about Blanchard as a patron were mixed. Vásquez, on the other hand, was not only well liked by Vicosinos, but revered. Vicosinos told Montoya, "He helps us with everything, as if he were our mother," and "He is like a father and a mother for the Vicosinos" (1963:73). Montoya adds that Vásquez was asked to help with family accounts, sick cows, and other personal problems. Similarly, reaction to PNIPA staff and teachers varied according to the individual.

In the early years of the project, there was considerable suspicion of hacienda motives and activities. While, by and large, this suspicion seems to have abated, as is shown in the contrast between responses to the new seed potato program elicited by Stein in 1953 (Stein, 1972; Goldsen and Stein, 1955) and by Alers (1966) in 1964, it never disappeared completely. Project emphasis on registration for the draft and the concomitant rise in recruitment fueled this suspicion, as did the stringent requirements of the share planting system early in the project. Use of varayoc-supervised labor on school building rather than church maintenance aroused suspicion and hostility until project personnel were able to convince Vicosinos that the school was an enterprise built to benefit the whole community (Vásquez, 1964).

After independence, the activities of Peace Corps volunteers, trained and supervised by project personnel, were subject to considerable criticism. The efforts of a number of volunteers were bumbling and inadequate, and one entrepreneurial volunteer aroused deep mistrust when he took out a low interest loan in the community's name for the lease and rehabilitation of the hotel and thermal baths at Chancos (originally part of Vicos, but rented separately by the Public Benefit Society of Huaraz). The loan angered fiscally conservative Vicosinos who felt that their capacity to make payments on the hacienda was being endangered; construction activities cast volunteers into the role of patron. The result was the temporary expulsion of the Peace Corps discussed above. It must be noted that the effects of another volunteer to establish a primary school in one of Vicos' outlying zones met with spectacular success (Doughty, 1966). This volunteer spoke Quechua, lived apart from the other volunteers, and treated her pupils in a warm, maternal manner. She was able to enlist active support from local parents; support for this volunteer, coupled with Vásquez' return to Vicos, led to the speedy reinstallation of volunteers at Vicos.

According to Patch (1964), the Peace Corps volunteer's strategic error was to have negotiated the Chancos loan without taking enough time to explain fully and completely what he was doing. He noted that in the early years of the project, administrators understood this suspicion of contractural agreements and openly explained and discussed new activities in Quechua at weekly meetings. The inability of volunteers to communicate in Quechua and their haste in promoting development activities played into the hands of those who felt their status threatened by the development process. Yet the Peace Corps conflict may have been more than just a reaction against Peace Corps methods and an assertion of power on the part of a threatened elite. Patch argues that there was no necessary congruence between the goals of North American development agencies, their Peruvian counterparts, or the new local elite, and warns that

> The unquestioned superior-inferior positions of the developers and the developed facilities an easy relationship in which the superior-status developers can ignore the usual status distinctions without endangering their status; but one must beware of the facile identification of this easy relationship with what North Americans generally understand by friendship (Patch, 1964:7).

Acceptance of and participation in project activities did not mean that Vicosinos had developed an unlimited capacity for tolerating all kinds of interventions on the part of all kinds of agents. While there seems to have been genuine appreciation of the diffusion of educational opportunities, of the availability of credit, and of the opportunity to gain control over hacienda lands as a result of the project, the admiration bordering on reverence for some project personnel, this was not to be interpreted as a carte blanche for all development activities. By the late 1960s, it had become clear that

North Americans were no longer unequivocally welcome in the community. By the end of the following decade, several representatives of Peruvian agencies were also rebuffed.

To conclude, the impacts of the project on cultural stability and human development were noticeable, but do not appear to have been disastrous, at least according to the data at hand. There seemed to have been no cataclysmic change in values, although increased contact with the outside world may have generated a certain amount of role and status conflict and ambiguity. This conflict was probably most marked in the area of education and career choice. Educational success almost always led to a decreasing ability to fulfill family obligations and to a distancing of the graduate from the community.

Significant changes in community identification and self-esteem took place as a result of project activities. Vicosinos no longer saw themselves as Indians as frequently as they did in the past. While they maintained their sense of local identity and local pride, they would no longer accept so readily inferior status vis-à-vis Marcará mestizos. This change in self-perception was reflected in a change in attitude toward North American and Peruvian development agencies. In the early years of the project, field directors were seen as patrons and even powerful Vicosinos were reluctant to take an active role in making policy decisions. This perception of powerlessness was replicated by an acceptance of charismatic leadership from both within and without the community, and by an increasing willingness on the part of Vicosinos to manipulate the system and to be selective in their acceptance of outside intervention.

Lack of severe social dislocation was undoubtedly due in part to the small scale of project activites and to the project directors' understanding of the need to work within the context of the local, regional and national social systems. It was also due to the fact that Vicos was not culturally isolated at the outset of the project, but integrated into regional and Peruvian society on extremely disadvantageous terms. Finally, the flexibility of the Vicosinos' world view--its qualified optimism about innovation, set against a backdrop of pessimism about their ability to have a decisive impact on political, natural and supernatural events--made for a certain resilience in the face of change.

V. CONCLUSIONS

Achievement of Project Goals

The realization of Cornell-Peru Project goals came close to completion in certain areas, less so in others. The success of project activities depended to a great degree on the compatibility of project goals and community aspirations, on the level of funding required for a particular intervention, and on the cooperation of Peruvian government agencies. The project operated within a power structure over which it had no control. In order to exist, its goals and activities were shaped so that they would conflict only minimally with the interests of that power structure. Within this limiting context, the project made some notable achievements in raising agricultural productivity. The relative success of project activities in relation to stated development goals is evaluated below.

A. Improving agricultural productivity

1. After what appeared to researchers as a slow start, the new seed potato program--a technological package of nematode-resistant improved seed, natural fertilizers, pesticides, and cultivation techniques--was adopted on hacienda fields and by a large number of individual cultivators. The new techniques doubled potato yields when applied to hacienda production and substantially raised yields in the private sector. Individual cultivators tended to adopt fertilizer and improved seed but did not use pesticides, and frequently ignored spacing and cultivation instructions because they seemed too labor intensive.

2. Agricultural credit to both the private and communal sectors accelerated the push toward commercialization. The share planting system, modeled on familiar credit arrangements in the Callejon, allowed a number of Vicosinos to realize a marketable surplus. Starting in 1956, credit was extended to individuals in inputs, with repayment to be made in cash. Cash repayment provisions stimulated market participation. Loans made to the community for crop improvements on communal lands were used to extend credit to individuals and other communities. Capital from communal production was saved for a down payment on the hacienda in 1962.

3. The nuclear school became a focus for agronomic activity directed at improving diets and at finding new potential

commercial crops. The plot supported the school hot lunch program, which both raised nutritional levels among a segment of the population and attracted pupils to the school. Experimentation with a variety of vegetable crops showed that onions had commercial potential. It is not known whether this result has been reflected in increased onion production in Vicos.

4. After two largely abortive efforts, a massive reforestation program was undertaken in 1964 with the support of the Peruvian Ministry of Agricultural and Alliance for Progress funds. Large stands of eucalyptus were reaching maturity in the early 1970s and should have generated both employment and revenue. The reforestation program itself was a source of employment for a number of Vicosinos.

5. In the late 1960s and early 1970s dairying and a feed lot were introduced in the communal sector. The feed lot program was a failure. Whether or not dairy products have commercial importance is not known.

6. Land improvement programs have not been undertaken to the extent that they should have been. In the first years of the project, terraces on hacienda fields were improved. As late as 1965, the irrigation system was still a major factor in soil erosion and nutrient-leaching on cabecera fields. Water delivery was infrequent, untimely and applications were usually too heavy. Little effort was made to establish optimal rotation patterns for maintaining high levels of productivity over extended periods of time. Too little attention was paid to the cultivation of sod crops and crops with low commercial value, but pesticidal and soil-restoring properties. By 1971, however, alfalfa was increasingly being used in rotations.

7. Agricultural programs, in particular the new seed potato program, by making a substantial contribution to the commercialization of Vicos agriculture, increased the flow of cash within the community and stimulated mercantile activitiy.

B. Integration into the national society.

1. Project personnel sought to broaden the horizons of Vicosinos and to regularize their legal status in Peruvian society by insisting that they register for the draft. As a result of increased registration, the number of recruits from Vicos increased rapidly. In 1952, out of a population of 369 adult males, 33 (9 percent) were veterans. By 1963, 102 out of an adult male population of 464 (22 percent) had served in the military (Alers, 1966: 64). Veterans constituted a new power group in Vicos society. This group generally favored activities which promoted economic development and social integration into the wider society; veterans were unique in Vicos in having horizontal ties with mestizos in the Callejón de Huaylas. They also took an active role in fiesta sponsorship and church activities.

2. The project collaborated with the Instituto Indigenista and the Ministry of Education in increasing the level of educational opportunities available to Vicosinos. Improvement of the school program began at the outset of the project. Throughout the 1950s, grades were added and curriculum was enriched through the addition of Peruvian professionals and through volunteer efforts on the part of project personnel. In 1957, the Vicos school became a nuclear school --the central unit of a larger system--but Vicosinos seeking secondary education had to board in Carhuaz. The project was responsible for building and, to a large extent, equipping the school. The teaching staff was, with few exceptions, poorly trained and lacked interest in the community. Protests lodged by Vicosinos about the quality in the teaching staff in 1961 and 1971 resulted in replacement of teachers.

School attendance increased from 15 percent of the school-aged population in 1952 to 35 percent in 1959. The majority of registered students were male. Only 6 percent of school-aged girls attended school, and these tended to be concentrated in the lower grades. Literacy and command of Spanish were not viewed as important skills for women, and attendance was not encouraged. The facilities for girls were significantly worse than for boys; this may have further discouraged girls from attending school.

As a consequence of educational activities, literacy rates rose from nil in 1952 to 13 percent in 1963, while the number of Spanish speakers in Vicos increased from 2 percent to 13 percent of the population. School trips were incorporated into the curriculum, bringing Vicosino children into contact with mestizo children and exposing them to new environments. The school hot lunch program raised nutritional levels and acquainted children with new foods. In the early 1960s, a limited number of boys went on to secondary school in Carhuaz. Some dropped out, but others completed their education. At least two Vicosino normal school graduates returned to Vicos as teachers. Other graduates, trained as agricultural technicians, were unable to find jobs in Vicos.

3. Integration into the national political and legal system was increased as a result of project activities. Project field directors tried to abandon the traditional hacendado role of funnel for interactions between Vicosinos and the outside society, but were only partially successful. Contacts with various governmental agencies were regularized:

a. Vicosinos were encouraged to register for the draft at the Carhuaz prefecture.

b. The teniente governador was increasingly called upon to mediate disputes that had formerly been resolved by the patron or the varados.

c. After 1959, the police in Marcará were frequently asked to assist in criminal matters;

Vicosinos considered them more impartial than the varayoc.

d. Officers of the council of delegates dealt directly with government agencies in matters concerning education, credit, and agricultural assistance.

4. Migration was encouraged by the Cornell-Peru Project, both as a means of achieving integration and to improve the man-land ratio. Regularization of hacienda labor requirements made migration easier. The most important source of out-migration in the mid-1950s was the adolescent male population, many of whom left in preference to remaining in school for another year. The flow of migrants from Vicos to the coast was offset by a smaller, but significant returning stream after the hacienda became a community in 1957. A number of factors contributed to their return, including hacienda independence.

5. Economic integration increased as a result of commercialization of Vicos agriculture. By 1954, Vicos had become the second largest potato producer in the Callejón and trucks picked up the marketable surplus for delivery to the Lima market. Vicosinos increasingly took part in the marketing process, and in 1963 bought their own truck to deliver their produce. Agricultural products from Vicos were also marketed in Huaraz, the department capital, and in the district capital of Marcará. Several Vicosinos invested in horses and burros to transport goods from Marcará and Vicos to the mining communities of Conchucos on the eastern slopes of the Cordillera Blanca. They bought eggs and other agricultural products in Conchucos for resale at higher prices in Marcará. Market integration took place at the local, regional and national levels, but the greatest volume of trade was potatoes. The terms of market integration deteriorated as Vicos potatoes faced more competition for their niche in the Lima market and as potato yields declined by 1970.

C. Improvement of health and standard of living.

1. While Vicosinos were not starving, or even seriously malnourished at the outset of the project, their diets included almost no animal protein and were deficient in several vitamins. Project efforts to improve diet included distribution of powdered milk through the school and to pregnant women and nursing mothers, and the development of the hot lunch program. Diet improvement was a result of crop and cash surpluses rather than direct program activities. Income from the sale of potatoes allowed more Vicosinos to consume their own livestock rather than sell it. Reduction in hacienda labor requirements increased time available for cultivating individual plots, and produce from communal fields was made available to Vicosinos at far less than market prices. It is not clear whether the goal of self-sufficiency in food production was achieved, but it appeared closer to realization in 1965 when the project ended than it had in 1952.

2. Public health programs were by and large a failure. Efforts to teach the germ theory of disease failed to replace traditional etiology based on concepts of hot and cold. The use of modern medicines was accepted when they were available and was incorporated into the traditional etiology. Doctors and hospitals were increasingly used when medical problems failed to respond to household remedies or the ministrations of folk practitioners, but the former never replaced the latter.

A latrine-building campaign does not appear to have met with appreciable acceptance, nor did Vicosinos appreciate the value of boiling water. Parasite counts remained high, and epidemic diseases continued to decimate the population--particularly infants and small children, even in the 1960s.

In 1954, a clinic was established with UNICEF funding and Peruvian government supervision. When the post of physician was added to the nuclear school, clinic funds were withdrawn. Since that time, the presence of medical personnel at Vicos has been erratic. A Peace Corps nurse attempted to establish a clinic in 1963, but was unable to forestall deaths from whooping cough because she lacked medical supplies. An earlier innoculation program failed because it was unaccompanied by an adequate educational program.

3. Housing quality improved in Vicos for at least a segment of the population. Masons and carpenters were trained as apprentices on hacienda projects. They were increasingly employed in the construction of tiled roof, rectangular two room houses built to replace small, round, thatched roof buildings of informal construction. There was some concentration of population in zones close to the hacienda center and on the main road, and some loss of population in outlying zones.

4. An increasing number and variety of consumer goods were being used in Vicos with the increase in circulation of cash. As a result, the number of part-time merchants and traders in Vicos increased as did their stock. The demand for woven goods also increased, as did the number of weavers, dyers and basket makers. Store bought clothes were increasingly used by men. While project officials regarded this as a sign of progress, this shift did not improve either quality or warmth. There is no indication of the extent to which imported consumer goods replaced locally manufactured items. If this process was occurring, its effect on the local economy was not analyzed.

D. Devolution of power.

1. Sharing patronal authority was the first step in the elimination of the role of the patron in hacienda administration. At the outset of the project, Cornell and the Instituto Indigenista Peruano were joint patrons, represented on the hacienda by Holmberg, Mangin, Blanchard and Vásquez, project field directors, and Enrique

Luna, the hacienda administrator retained from the previous administration. The mayorales (older, influential men in the community appointed by the patron) were retained as straw bosses and encouraged to participate in dispute settlement and policy making at weekly meetings. Decisions made at these meetings were announced and held open for discussion at the mando, a weekly meeting of the entire hacienda work force.

It was difficult to get mayorales to participate in the decision-making process. Their major interest was in acquiring sufficient authority from the project to be able to give orders and command absolute obedience. In other words, they hoped to be able to maintain superiority in dyadic relations with other Vicosinos because of their association with the power of the patron. Second, project personnel sometimes exercised paternalistic authority, falling back into the patron's role.

2. A council of delegates was instituted in 1956 to replace the mayorales and hacienda administration as a decision-making body. The council was comprised of ten delegates, each elected from one of ten newly created Vicos zones. The delegates were usually older men who could command a good deal of respect in their zone. The presiding officers of the council were appointed by project personnel until 1961, when they were nominated and elected by a meeting of the community at large. Delegates had responsibility for the supervision of production on communal lands allotted to their zone. The presiding officers, under the supervision of PNIPA officials, were responsible for keeping community records, borrowing, lending, and saving money for the community treasury--in short, for performing the functions previously carried out by hacienda administrators.

3. A shift in power from the old elite of varayoc and mayorales accompanied the transition from hacienda to community. The new Vicos elite was comprised of men who understood Spanish, who successfully engaged in commercial transactions outside of Vicos, and who had familiarity with the national society. With the transition from an old elite of wealthy Vicosinos whose authority was vested in them by the patron to a new elite whose authority was granted to it by the Cornell-Peru Project, there was a shift in types of authority from traditional to charismatic. Leaders at all levels were expected to be able to command and expect obedience. They were held responsible for both successes and failures in communal production. As a result, office holding became onerous and the pool of candidates limited.

E. <u>The realization of basic human dignity</u>.

1. The transformation of Vicos from a hacienda to a community was a basic project goal. Holmberg had originally set a five-year timetable for this transformation, and it was agreed that the hacienda would be expropriated by the government and transferred to the Vicosinos. In 1956 an expropriation decree was signed, and the

hacienda lease was transferred to the Vicosinos until a purchase agreement with the Public Benefit Society could be reached. Changes in the Peruvian political climate resulted in a stalemate. The transfer took place only after Senator Edward Kennedy interfered on the project's behalf. The negotiated sale price was high, but Vicosinos made a substantial down payment and eventually completed mortgage payments on the hacienda. Vicos also absorbed Chancos, a lower lying tract which had once been part of the hacienda, but which had been leased separately by the Public Benefit Society of Huaraz.

There is no doubt that this change in community status had a positive effect on community pride and on the standing of Vicosinos in the region. As a community, Vicos provided supervised agricultural credit and advice to indigenous communities and to individual mestizos. They offered other hacienda peons advice on self-liberation. Media attention and the attention of public officials to the project contributed to Vicosinos' sense of self-worth.

2. Class relationships within the Callejón de Huaylas changed perceptibly as a result of the project. Vicosinos were increasingly able to deal on a more equal footing with mestizo employers, merchants and creditors. The creation of off-farm employment opportunities on the hacienda and increased migration strengthened the position of Vicosinos in the Marcará labor market. As a result of project intervention, Vicosinos were able to avoid compulsory labor on public works projects in Marcará and other mestizo towns. There was somewhat greater reluctance on the part of both mestizos and Vicosinos to refer to the latter as Indians. Nonetheless, relations between Vicosinos and mestizos were still unequal, and were frequently characterized by dependent, clientelistic bonds. Regional landowning elites showed no increased respect for Vicosinos and were inclined to regard them as pretentious troublemakers.

3. The position of Vicos in the national society improved in that official relations were no longer channeled through the patron, but were handled by the community's elected representatives. Vicosinos exercised limited clout in the national society by securing the transfer of its worst schoolteachers and, in the international world, through the expulsion of Peace Corps volunteers. Total dependence upon the patron's largesse was replaced by a limited ability to manipulate representatives of a number of government agencies.

4. Inequality within Vicos remained a problem, and became worse in some respects than it was in 1952. With the growing importance of literacy and education in the community, the status of women declined markedly. The flow of benefits from the new seed potato program did not affect all Vicosinos equally. Vicosinos with too little land to participate in share planting or credit programs found themselves relatively worse off than they were in 1952. This was reflected in a reduction in the number of families owning chickens, cattle and guinea pigs. Inequality in Vicos, however, has never been systematically studied.

Unintended Consequences of the Project

The process of social change always produces effects which are not anticipated in the development model. Vicos was no exception. However, it is not always possible to distinguish the impacts of the project from the general effects of Peruvian development in the 1950s and 1960s. The process is made more difficult by the scarcity of community studies in the wake of project activities that are in any sense comparable to the baseline studies made by Mangin and Vásquez at the outset of the project. A summary of the unintended consequences of the project follows.

A. Changes in social relationships.

1. Within Vicos, wealth appears to have been distributed more unequally, primarily as a result of the new seed potato program. The new seed potato technology was theoretically available to all Vicosinos under the share planting arrangement. However, only Vicosinos who owned sufficient land to cultivate potatoes (rather than corn, the principal Vicos subsistence crop) and to share half of the harvest with the hacienda were able to take advantage of the new technology. Thus, while Vicosinos who claimed usufruct rights to moderate to large land holdings were able to benefit from the program, Vicosinos with little land were not. A comparison of livestock ownership shows a smaller percentage of all Vicos families owning chickens, cattle, sheep, guinea pigs and pigs in 1963 than in 1952. While this comparison does not take into account numbers of animals owned or other forms of wealth, livestock was the most important form of wealth both before and after the project.

2. Project credit programs led to an increased commercialization of agriculture on individual holdings. With commercialization, there was an increased tendency to use hired day labor and to market a larger proportion of the crop. While good data are lacking on this phenomenon, accounts of the project indicate that the importance of reciprocal obligations at Vicos declined, and that redistribution of produce to the less fortunate family members, compadres and neighbors has probably declined.

3. Increased opportunities for individual social mobility reduced the ability of more mobile Vicosinos to fulfill family obligations.

4. The authority of the elderly at the community level was weakened as a result of the decline in varayoc and mayoral authority. A similar decline in the authority of older family members occurred as literate, Spanish speaking children were placed in decision-making roles, both within the family and in the community.

5. The increasing importance of education in Vicos and integration into mestizo society led to a deterioration in the status of women. Vicosinos tended not to value education of women as much as the education of men. Furthermore, the Peruvian school system

placed less emphasis on women's education than on men's. As a result, during the course of the project, more and more Vicos men gained competence in Spanish and arithmetic. These educated men enjoyed greater individual mobility and were more likely to engage in transactions in the outside world. In contrast, most women remained monolingual and gained little or no facility in dealing with mestizo society. The result was a growing differential between male and female mobility.

6. Compadrazgo relationships changed as a result of project activities. Padrino authority was weakened by the growing prestige of veterans and the increasing formation of compadrazgo ties with mestizos.

7. Ties based on neighborhood were reinforced through the local composition of communal labor groups. This in turn encouraged local endogamy.

8. Increasing emphasis on education prompted migration on the part of adolescents who were tired of school. Their contacts with migrants already living on the coast encouraged return migration, which in turn increased pressure on the land.

B. Impacts of economic organization.

1. An increase in the number and types of occupational specialties resulted from increased cash flow within Vicos.

2. A shift in the pattern of livestock ownership took place. A smaller percentage of Vicos households owned chickens, cows, and guinea pigs--animals once owned by almost all of Vicosinos. A greater proportion of the population, but still a distinct minority, owned horses and burros, which were used as beasts of burden in Vicos and in trade with communities on the eastern slopes of the Cordillera Blanca.

3. Increases in potato production occurred at the expense of other crop improvements. Very little was done to increase yields of corn, the major crop for domestic consumption, although corn eventually became a cash crop.

4. A significant proportion of the increased wealth in Vicos was consumed in almost ritual acts of generosity. Fiestas increased in frequency and fiesta spending increased. An increasing number of Vicosinos set up shop on a small scale by investing in sacks of coca and flacons of alcohol. These purchases were viewed more as an opportunity for generosity than as a profit making activity.

C. Changes in political organization.

1. Traditional authority was supplanted by charismatic rather than rational authority.

2. As the power of the varayoc declined, the importance of the office of teniente gobernador, the local representative of prefectural authority in Vicos increased. The teniente governador not only promulgated the orders of the prefecture and administered justice, he served as a truant officer and administered church funds.

3. The paternalism of Vásquez, thrust upon him to some extent by Vicosinos, injected personality into into Vicos politics to a degree not envisioned by Holmberg.

4. Vicosinos have become increasingly assertive in their interactions with government and international agencies. Their expressions of self-determination have often been effective, but have sometimes resulted in strained relations with government agencies.

5. Assertiveness was manifested in negative acts, rather than in the assumption of a position of leadership among communities and hacienda populations in the Callejón. Weak Vicos leadership has been attributed to the paternalism of project and PNIPA staff and to envy on the part of other community leaders.

D. Project impact on cultural systems and human development.

1. The project's impact on Vicosino values and on traditional attitudes toward causation was considerably weaker than anticipated. The project was not a major force for secularization. The weakening of padrino and varayoc authority had begun before the project, as had changes in trial marriage customs. While theft appeared to decline during the course of the project, it remained a problem. There is no indication that suspicion and mistrust became less pervasive as a result of the project.

2. The Vicos world view allowed for the incorporation of new phenomena and views of causality into the existing system. The adoption of Western agricultural and medical practices did not produce major changes in Vicosinos' approach toward the understanding of natural phenomena.

3. While Vicosinos' cultural identity (and, as a corollary, self-identity) changed as a result of project activities, localism remained strong and was even strengthened by project activities. Thus, the hacienda population was less frequently regarded as "Indian" but its Vicosino identity became stronger.

4. Role and status conflicts became more severe as a result of project activities:

a. Educational and career maximization conflicted with family obligations.

b. Women were forced to choose between maximization of their male children's careers and their own status as women.

c. Some Vicosinos saw a dichotomy between appropriate behavior among neighbors and family and appropriate behavior in front of project personnel.

d. Vicosinos accustomed to playing a subservient role in clientelistic relationships with hacienda administrators and mestizos often found it difficult to relate to outsiders as equals. On the one hand this resulted in dependence upon charismatic leadership, and on the other a feisty, arrogant stance toward government agencies that did not always foster cooperation.

5. Vicosino perceptions of the Cornell-Peru Project shifted over time, with experience and with perceived needs. Project field directors continued to be seen as patrons even after the devolution of power to the community council. A decade of project activities did not result in an atmosphere of trust that extended to all development agencies. The expulsion of the Peace Corps in 1964 indicated the necessity of winning broad based community support for all development activities, no matter how beneficial they appeared.

Lessons Learned

In sum, between 1952 and 1965, the years of Cornell-Peru Project involvement in Vicos, a number of far-reaching economic, political, and social changes occurred. It is not clear how many of these changes would have occurred in the general context of Peruvian development, nor is it known to what degree the Vicos project affected the course of Peruvian rural development. It is reasonable, however, to assume that Vicos experienced changes in the 1950s that it would not have undergone for another decade or two without the project. Furthermore, the "test effect" in Vicos development should not be overlooked. The fact that Vicos became a showcase for development clearly affected its treatment at the hands of Peruvian government agencies and undoubtedly had an impact on Vicosino identity and self-esteem. While a number of lessons may be learned from a study of project impacts, they may not all be equally generalizable.

A. On the positive side, the limited funds available to the Cornell-Peru Project and its need to work through regional and national governmental agencies reduced the potential for serious, large-scale social or economic dislocation.

B. The anthropological approach to development had a mitigating effect on the dislocation that often comes with planned, exogenous change:

1. Vásquez' two-year baseline study of Vicos allowed him to gain insights into Vicosino culture and attitudes. He gained acceptance in the community by his willingness to move in with a

Vicos family and to adapt to local customs. His control of the local idiom was excellent and he had developed some ideas of how to initiate change by the time the project began. His presence was of paramount importance to the success of the project.

2. Holmberg's and Vásquez' strategy of working within the framework of existing social institutions lessened disruptions and dislocation.

3. Holmberg's deliberate openness about programs and persistent attempts to forge a consensus on new activities minimized active resistance to project activities. When Peace Corps volunteers failed to secure community support for development activities, they were expelled from Vicos. When it became clear that Vicos schoolteachers were not behaving in the interest of their students or the community, they too were expelled. Thus, the success of development activities, even those perceived as desirable, depended on openness, careful explanation of projected costs and benefits and the mobilization of grass roots support.

C. Attempts at integration of Vicos into the larger society reproduced the inequities of that society in the community where they had previously existed in a less pernicious form.

1. The introduction of the Peruvian educational system into Vicos created significant disparities between opportunities for men and for women and reduced the decision-making capacity of women in the family.

2. Introduction of a western technology package and credit arrangements fostered the commercialization of subsistence agriculture. Because the new technology could only be used by Vicosinos with more than minimal land holdings, existing inequality was deepened as a result of the program. The new technology aggravated existing inequality because the package was not accompanied by land redistribution or by a shift in the burden of the labor tax so that it would fall more heavily upon larger landholders.

D. Concentration of commercial production in the absence of activities designed to produce a sustainable agriculture led to the eventual decline of Vicos commercial production.

1. More careful attention to irrigation and to crop rotations would probably have delayed the reintroduction of potato pathogens and reduced dependence on commercial fertilizers and pesticides.

2. Commercial potato production was achieved at the expense of improvements in major subsistence crops. Corn, broad bean, and wheat yields showed little improvement as a result of project activities.

3. Concentration on potato production maximized returns to labor. In the context of Peruvian development, labor was in plentiful supply relative to cash and land. It would have made more sense to concentrate on crops which maximized returns to scarcer factors.

E. The project operated in the context of regional and national social, economic and political structures which acted as severe constraints on the development process.

1. As long as the Public Benefit Society of Huaraz owned Vicos, no activites could be undertaken which would undermine the position of the regional landowning elite which dominated the society.

2. The project was dependent upon the support of government institutions for education, agricultural development and public health programs. Its achievements were limited by the willingness and the ability of these agencies to commit resources for Vicos development. Failure of public health programs was in no small measure the result of an inability to maintain funding for the Vicos clinic. Expropriation of the hacienda would have been impossible without the backing of high level Peruvian officials.

3. Vicos development was constrained by development problems both on the coast and in Ancash. The failure of the Santa Corporation to complete its hydroelectric facilities stifled industrial development in the Callejón. This, in turn, reduced off-farm employment opportunities in Vicos and increased pressure on the land. Migration to coastal haciendas and industrial towns did not improve the quality of life for most Vicos migrants. Only insecure, poorly paid jobs were available to them, and they lacked the cushion of subsistence agriculture. Thus, as conditions at Vicos improved, a large number of migrants returned, only to aggravate population pressure within the community.

4. Upward mobility became more common in Vicos as a result of the project, but this mobility affected individuals rather than the community as a whole. Only one secondary school graduate, a schoolteacher, was able to apply his training in Vicos.

Thus, the project was a highly qualified success. The terms of Vicos integration into Peruvian society became somewhat less exploitative as a result of project activities. In general Vicosinos became better fed. Housing and education improved for some. Increasing command of Spanish allowed a larger segment of the population to engage in economic transactions with Huaraz and Marcará merchants on more equal terms. The standard of living in Vicos rose faster than that of neighboring communities and towns, and Vicosinos became less diffident and more confident about expressing their needs and demanding their due.

On the other hand, the creation of local industries in and around Vicos has not occurred on a significant scale. As living conditions on the coast deteriorate, and the Vicos birth rate continues to increase it will be progressively harder for the community to meet its subsistence needs. While the terms of integration of the community into the national society have improved in some respects, the relative position of some segments of the population--notably women, the aged, and the poor--has deteriorated noticeably as a result of

this integration. Mangin's (1979) evaluation of the success of the project is validated by this review of the literature:

> I believe that if we had had more money and greater local resources we might have done more damage. The budget was never high and we were constantly forced to operate within the Peruvian system in such things as getting technical assistance from local agencies and teachers from the ministry. . . . No government in Peru since the coming of the Spanish has been willing to allow Indian communities autonomy and none is in sight that will. The Vicos-Cornell project was one of many outside interventions in Indian local affairs and, unlike most, it is hard for me to see that the community is worse off for it (1979:82-83).

In conclusion, the successes of the Cornell-Peru Project may be attributed first of all to the anthropological sensitivity of project staff members--notably Holmberg, Mangin and Vásquez--who understood the necessity of working within the context of existing local values and institutions. Second, Holmberg understood the necessity of establishing a consensus among Vicosinos for development activities. Without frequent meetings of staff members, staff and mayorales and of Vicos workers, it would have been impossible to allay suspicion of project motives. As it was, this forging of consensus was a necessary, but slow and tedious task.

Holmberg's willingness to work within the framework of existing Peruvian institutions increased the replicability of innovations within Peru. It is significant that the Vicos land tenure system, with its communal and private holdings, was used as the basis for the land reform of 1969. If working within the framework of Peruvian institutions contributed to the project's effectiveness, it also produced some negative side effects and acted as a brake on social change. While development projects cannot ignore the wider society, it must be understood that integration has its costs as well as its benefits.

Equally ambiguous was the role of a few dominant personalities in the project's impact on Vicos. Holmberg's skills in working with bureaucrats in a conservative political atmosphere was essential to the establishment and continuation of the project. On the other hand, the ties which he established limited the range of social innovations which could be undertaken on the hacienda. Similarly, Vásquez' skill at communicating with Vicosinos and at interpreting their needs to staff members who had no Quechua skills was essential to the success of the project. At the same time, this ability placed him in the role of patron and probably delayed the emergence of effective leadership within the community. In all likelihood, the assumption of the role of patron by some project staff, whether willingly or unwillingly, was inevitable in the context of Vicos social structure. However, there is little doubt that a richer set of interactions between Vicosinos and project staff members would have been possible had the latter possessed a working knowledge of Ancash Quechua.

A major drawback of the project was its failure to achieve an integrated program designed to achieve a sustainable agriculture. Emphasis on the production of a cash crop obscured the need to establish rotations with long-term viability and to improve production of livestock and subsistence crops. Similarly, this commercial bias diverted attention from the equity consequences of new technology. The faith of the project in the diffusion of benefits of the new technology to all Vicosinos has not proven well founded; failure to anticipate the consequences of innovations for the distribution of wealth in the community was perhaps the most serious shortcoming of the project.

It would appear impossible to avoid the pitfalls associated with personalities and collaboration with national institutions. It is clear that anthropological sensitivity is likely to have a beneficial effect on development projects if it is accompanied by an understanding of environmental and technological factors and of the equity consequences of development activities.

NOTES

[1]The railroad, designed in the 1880s to connect the port of Chimbote with the city of Recuay, south of Huaraz, was completed as far as Huallanca in 1922. In 1970 it was destroyed by an earthquake and landslides.

[2]When Vicos was a hacienda, these plots were not owned by Vicosinos. Rather, the latter held usufruct rights in exchange for a guarantee of their labor for the hacienda. Work assignments were made on a household basis and did not vary with size of holding. They could be performed by members of the household other than the head. Parcels were usually inherited by youngest sons (ultimogeniture), but exceptions to this norm were common.

[3]Indications are that with demographic increase, marginal lands came into cultivation that had previously been left fallow or used as pasture. Alers' statistic may also include Chancos fields.

[4]Legendary accounts attribute ownership of at least part of the hacienda to the Colonia family, which still resides in Vicos (Mangin, 1954; Barnett, 1960). According to Barnett, this association of the Colonias with Vicos ownership helped to defuse early Vicosino efforts to gain control of the hacienda.

[5]The work day on hacienda fields was punctuated by a break for lunch and breaks in the morning and afternoon to chew coca, a mild narcotic which reduced hunger pangs. Coca and lunch breaks were both longer and more regularized for workers on hacienda fields than they were for the same individuals working on their own plots.

[6]These appointed elders were derisively called "chicken mayors" because they were required to confiscate chickens from households as punishment for infractions of hacienda regulations.

[7]Collection of stool samples apparently caused consternation among Vicosinos, who never before witnessed strangers who had such an inordinate interest in collecting their feces.

[8]When the hacienda became a community, small and poor grade potatoes that were not marketable in Lima were distributed among the Vicos

population (Garrido-Lecca, 1965).

[9]Guillet (1975), in a study of return migration in another Andean community, notes that the return stream increased after the enactment of the 1969 land reform. Urban migrants feared that they would lose their land if they did not take up residence in the community.

[10]In the late 1960s and early 1970s, after the termination of the project, corn became an important cash crop as well as the chief subsistence crop. In addition, an abortive attempt was made to upgrade Vicos dairy and beef cattle. A government sponsored feedlot experiment failed because weak and sick stock, or at best cattle not bred to withstand the rigors of the Andes, were sold to the community. Alfalfa production increased with the new emphasis on livestock.

[11]Several Vicosinos earned additional income by walking up to the snow line of Nevada Copa, a peak in the Cordillera Blanca, to get ice which they resold to the hacienda, to project personnel, and in Marcará.

[12]The baseless triangle is a metaphor for a system of social and political relationships characterized by an absence of bonds between individuals or groups at the base, and an emphasis on vertical, unequal bonds.

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