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EXPERIMENTAL RESEARCH IN THE BEHAVIORAL SCIENCES and REGIONAL DEVELOPMENT

Submitted by

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I. The Proposal in Brief

This memorandum proposes to capitalize upon certain extraordinary opportunities for research and development that have fallen into the hands of the above-named behavioral scientists by establishing a substantially financed organization of behavior scientists to conduct research, chiefly experimental, on modernization of non-industrial communities and cultures.

As part of its program in Culture and Applied Science, supported by the Carnegie Corporation, Cornell University has been conducting a program of field observation and field laboratory experimentation in an Andean Indian community in which, through arrangement with the Peruvian government, Holmberg, as Director of the Cornell-Peru, Project, has become patrón of the hacienda, hence the dominant legal and effective authority in the community. Because his political control over the community has been and can be used to achieve experimental or scientific control over the community, as well as to encourage industrialization, research possibilities are unique. And also

because the community is geographically and chronologically at the edge of industrialization, as well as for other particular reasons to be detailed below, the potential for fruitful research is remarkable.

Just as Kennedy at RAND has improved upon customary laboratory procedures by bringing into his laboratory for study, not single individuals or synthetic small groups, but a real-world organization (air defense centers), so it is proposed to take the further step of making a laboratory out of a community and region, meshing with new laboratory experimentation in group organization and cultural change the continuing opportunities for traditional observation in the field. This requires a staff and technology, again similar to the RAND psychological laboratory, capable of processing a vast flow of data quickly enough to feed the results into the decision process.

The connection between scientific information and the decision process, though not an obvious one, is at the heart of the proposal. By using the results of scientific observation and experiment in the community decision-making process itself, the skills of the community in problem-solving are developed at the same time that implicit and explicit scientific theories are rigorously tested in use. It is therefore possible, through a carefully planned strategy of observation and experimental intervention, to accomplish in one and the same set of acts, a) scientific gains in the study of human behavior in general, b) of the processes of modernization and c) of democratization, as well as d) new insights, empirical information, and improved theory on the technique of modernization and democratization. This possibility will be spelled out in detail below.

Because of overtures made to Cornell by other governments in the Andean region and because of field stations already established by Cornell in

other areas of the world, this program can be extended to other communities.

II. Origin of the Proposal

The collaboration of Holmberg, Kennedy, Lasswell and Lindblom on this project is a product of the interchange among scholars that the Center for Advanced Study in the Behavioral Sciences was designed to foment. Having spent more than two years at Hacienda Vicos, Holmberg came to the Center expecting to pursue his interests in cultural change, and among his other specific plans, to find collaborators for an appraisal of the past and potential future of the Cornell-Peru project at Vicos. Arriving at the Center from his RAND experiments on what might be called cultural change in microcosm, Kennedy looked for assistance in exploring new possibilities for experimental manipulation of on-going social organizations where laboratory and field station might be synthesized. Lasswell and Lindblom shared Kennedy's interest in experimental intervention in social organization, the former to test through use a well developed system of concepts for analyzing social organization, and the latter to clarify concepts for a comparative study of economic and governmental decision-making. In their desire to explore the possibilities of larger and more complex laboratory situations for the study of social organization, as well as in their common view of cultural change as the product of problem-solving activity - or decision-making activity in the broadest sense -- their collaboration was established.

In pursuit of their common interests in cultural change and decision-making, and in the development of operational models of these processes verifiable by laboratory experimentation, the four agreed, even for their preliminary discussions, to eschew premature abstraction and ground their analyses in

empirical detail of some sufficiently complex, yet specific case. Staying close to the facts was a deliberately chosen tactic. With the material that Holmberg and his staff had amassed from Vicos over a period of years, it was possible for the group to share a common empirical experience as a foundation for their discussions, and an experience that encompassed both every aspect of an on-going social organization and great detail on particular aspects.

But, as already indicated, the even more important reason for the group's anchoring its studies in the community of Vicos is that Vicos and, to some extent, the surrounding region, can be made into a full-fledged laboratory by reason of Holmberg's position as patrón. We do not know of any other circumstance in which an entire community -- and here one of 2300 persons -- has been placed in such degree under the political control of a behavioral scientist. Holmberg's power is large at Vicos, both because he has extensive legal authority and because the Indians are traditionally dependent upon the patrón for leadership and authority beyond what the law requires. And through his close cooperation with the Peruvian government, he is in a good position to take control of several commercial enterprises in the surrounding region.

Such an opportunity as this is rare. During their months at the Center, Kennedy, Lasswell and Lindblom have been acting as consultants to Holmberg in developing a strategy for observation and experimentation in Vicos and its environs to make the most of the project's extraordinary possibilities. Recently the four visited Vicos, the immediately surrounding area, several underdeveloped Indian communities elsewhere in Peru, more developed Indian and mestizo communities on the Coast, and Lima. As a result they are

confirmed in their belief that the kind of strategic planning they have been doing at the Center should be continued and that the Vicos project should be transformed into a more permanent, more adequately financed and staffed research and development center organized around an interdisciplinary team of mature scholars from the behavioral sciences.

III. A program for Research and Regional Development

A. A Fourfold Opportunity

Aside from the benefits of intervention to the Vicos region itself, the proposal seizes upon four major opportunities:

1. Modernization studies. The problems of modernization are immense, urgent and recognized. The technical assistance program of the United Nations and the various investments undertaken by other organizations testify to the global recognition of the task of spreading the benefits of modern science, technology, and enterprise. The prediction is freely made that the outcome of the rivalry between the "two worlds" will be largely determined by the relative success of the two areas in developing the regions under their control and in building confidence in the capability of one side or the other to universalize the industrial revolution.

At first sight it may appear that there is no dearth of talent engaged in studying modernization. Professional advice is sought from scientific students of agriculture, public health, and business, as well as from experts on public administration, law and social relations. But neither the effort nor the result is commensurate with the magnitude of the theoretical and policy issues at stake or, for that matter, with the size of the budget spent on assistance to underdeveloped areas.

One weakness of the present approach is that experts are employed to consult more than to do research, which means that existing knowledge is being applied to modernization but new knowledge is not vigorously enough pursued. But the present more or less piecemeal approach suffers still other weaknesses. One simple limitation is delay. The data obtained by field workers often has high potential value in

enabling decision makers to execute a program of modernization. Owing however to the antiquated character of the arrangements by which these data are processed and interpreted, decisions have usually been made before the scientific results were known. And science as well as policy suffers from such delay, for opportunities are lost to expose theoretical models to the exacting tests of prediction and control.

The result is malcoordination among the components of a productive science and of a realistic process of decision. The theorist with a contextual analysis is often not teamed with specialists on the observing or processing of data, or on the servicing of a flow of data. Nor are specialists in different methods customarily teamed with each other.

The proposed solution is to substitute for approaches that are piecemeal and relatively indifferent to timing a new mode of attack that is contextual and prompt as well as technical and continuous. The proposal is to study modernization by forging effective working combinations of theorists, experimentalists, specialists on data, and decision makers.

2. Enrichment of behavioral sciences. One program of observation and experiment will often serve more than one purpose. It would in fact be impossible to do research as just proposed on practical problems of modernization without producing a large by-product of empirical information and theory for the general improvement of behavioral science. But the proposal is to do much more than that; it is to cultivate systematically the full potential of the Peruvian field-laboratory for the enrichment of behavioral science.

The relationships between modernization objectives and scientific objectives will be spelled out below. Here one needs only note that: a) experimental work and theory construction do not proceed in a vacuum but must plainly be anchored in some empirical context; b) a community such as Vicos in process of modernization presents every aspect of human behavior and social organization to view for experimental work and theory construction.

3. A new kind of field laboratory. As explained, the innovation stems from Holmberg's political position in Vicos, although it is not wholly dependent on his position. Although the laboratory possibilities cannot be fully explained except in connection with the discussion below of the decision-making process, its most concrete proposed characteristics can be summarized:

a. It is a laboratory-cum-field observation station; hence, no experiments without field implication and

no field study without laboratory-type discipline.

b. It brings into the laboratory, not simply individuals and small groups, but a large, complex, organization -- a whole sub-culture.

c. It does not pose laboratory-made problems but works with the daily-life problems of the community; the laboratory need not attempt to simulate a real world, it is a real world.

d. With respect to finance and equipment, it does not send a boy to do a man's job; its technology is adequate for observing, recording, and processing data, as illustrated on a smaller scale by the RAND psychological laboratory. For reasons already referred to but to be elaborated below, it must be able to process a vast flow of material quickly enough to feed into the decision process in the community.

The proposal for very heavy laboratory expenditures reflects a drastic change in the common ratio of expenditures on economic aid to underdeveloped areas, on one hand, and to expenditures for scientific study of development, on the other. Accordingly, the proposed research is directed at discovering low-cost developmental interventions that can be made available also to underdeveloped areas elsewhere. This project, like the present one, is not to be cast in the role of Santa Claus; it counts on discovering some secrets of bootstrap lifting.

6. Training. As a by-product of research and development, possibilities for training are large, not yet wholly explored, and in part not possible to specify until the proposed project is under way. Some major possibilities are, however, clear:

a. Just as Cornell is presently using the Vicos project as a field training station for graduate students in anthropology, so the expanded project incorporates graduate laboratory-field training of students from all behavioral sciences.

b. Similarly, the project would expand the training of graduate students at Peruvian universities and research institutions already begun by arrangement between these organizations and Cornell.

c. The proposal also contemplates incorporating competent South American behavioral scientists and ultimately devolving the responsibility for research and development in their areas to them. The project would be expected to have a major impact on behavioral science in Peru and in any other areas in which work is carried on.

d. Beyond these possibilities, opportunities for training may develop in such fields as: administration of modernization projects, expert consultation on modernization projects, and laboratory and experimental design.

B. Some Special Advantages in Exploiting the Fourfold Opportunity of the Vicos Situation

Certain particular circumstances are especially favorable to the success of the project here outlined. As for Vicos itself, its cultural and geographic isolation are of a degree that make it possible for behavioral scientists both to grasp intellectually the community as a whole and to achieve a high degree of effective control over its development. Moreover, the size of the community is manageable. It is also neither institutionally so simple a community as to limit its laboratory possibilities nor so complex as to run far beyond the experimental capacities of modern behavioral science. It follows from what has been said about the conceded importance of industrialization of underdeveloped areas that it is a significant kind of group to study, and it is a whole sub-culture.

Other advantages flow from the history of the Cornell project. It is a going project; it has established formal relations with the Peruvian government and with the University of San Marcos in Lima; it has cultivated congenial and mutually profitable informal relations with government, business, and academic people in Peru. It enjoys an excellent reputation in Peru. Its position in the Indian community itself has now been well and happily established. And, the reconsideration of the project's potential and the development of a strategy for observation and experiment are already well under way at the Center for Advanced Study in the Behavioral Sciences.

Finally, the proposed project lends itself to the achievement of the

heretofore unattained scientific gains of what might be called a saturation study. Here finally is a near ideal circumstance in which to break through to the first study in one large and complex empirical context of every aspect of human behavior by every kind of scientific method. Because an entire community in all its facets is available for study and because the traditional separation between field observation and laboratory manipulation is broken in this project, the two major obstacles to scientific comprehension or saturation are removed. For once it will be possible, in a given empirical context, to remove all restrictions on subject area and method, to move in any direction, hence to attempt for the first time as complete an analysis as man and finance are capable of. The incidental consequences of this freedom for the traditional disciplines may be less to engage them in cooperation than to merge them into a new intellectual and operational synthesis which deliberately applies every method of empirical observation in a total context.

III. The Underlying Method Contemplated for the Project: Research and Development

A. Relation Between Scientific Objectives and Community Social Goals

In the laboratory work proposed, the experimental subject is a social organization composed of human beings whom the experimenters cannot be allowed to manipulate without restraint. One possible safeguard is to postulate a set of values or goals for the members of the community that the experimenters are compelled to respect regardless of the restrictions they impose upon scientific work. Fortunately the method contemplated for this project makes the community goal structure an essential part of the experimental method in such a way as to resolve the conflict before it arises, though, in any case, there is all the room an experimenter needs even when he is restrained by an ethical concern for his

subjects.

1. In the first place, a careful specification of social goals serves as a rough test of relevance in choosing among alternative observations and experiments in constructing the strategy of intervention into the community. Not all experimental interventions are equally rewarding, and those which move a community to its social goals have a point in their favor, especially, when as is the case, many of the goals of the Indian community are close to the goals of other communities, countries, or cultures. Clearly, for modernization studies, the problems to be studied are the problems of goal realization for underdeveloped communities.

2. Secondly -- and here is the core of the method proposed -- hypotheses are to be tested by comparing actual goal achievement with predicted goal achievement. In the natural sciences, research and development are inseparable. It is common to join them in one formal project, as in many of our technologically advanced industries and in government and other private institutions. But whether formally joined or not, scientific discovery is sooner or later inevitably put to the test of success or failure through the application of research results in engineering and technology. A great strength of, if not a necessary condition for, natural science is feedback through development.

But behavioral science profits from no such unfailing, self-corrective feedback; the feedback from application is intermittent and weak. This is partly because behavioral science is not systematically employed in social decision-making, as physics is employed in building construction. More to the point, where it is employed its results are not systematically fed back to the behavioral scientists, or if fed back at all, fed back too slowly to facilitate rapid scientific advances. Still further, behavioral research and social

development work are not formally joined for the systematic exploitation of their reciprocal benefits as in the research and development laboratories of the natural sciences.

The present proposal strikes directly at these four weaknesses in behavioral sciences when it makes the community goal structure an essential element in the scientific project and thus cultivates a close and continuous interplay between pure science and its application to policy-making in the community. The proposal recognizes that, for feedback, science would need policy even if policy did not need science.

The connection between research and development in the behavioral sciences is even closer than in the natural sciences; and the failure to recognize this fact explains the small fruit on the behavioral science tree. In science, as is well known, every scientific generalization is implicitly both an insight and a prediction, though in its explicit statement it is usually cast in either one form or the other. When a generalization on behavior is made available to the persons who are also its subjects, its insight alters the knowledge and preferences of these persons, and also their behavior. Hence a scientific generalization on behavior, by altering behavior, appears to falsify or obsolesce itself.

While this complication has been viewed as a burden that behavioral scientists must bear, the present proposal siezes upon it as the key to a possible major breakthrough in behavioral science. A generalization about behavior is not actually falsified when predictions based upon it are made obsolete in the choosing process when the chooser prefers to modify himself rather than to conform to the earlier prediction. But this possibility must be taken into account and turned to scientific advantage. In the continuous

close interplay between scientific generalization and goal-seeking behavior, each influencing the other, the insight-feedback of a scientific generalization can be employed both for goal revision in developmental work and as empirical data for research.

At an extreme, it may be that behavioral scientists misunderstand the peculiarities of their own kind of science, in which case a clarification through the proposed laboratory-field experiments of the fact-goal prediction cycle in a human organization may accomplish a significant methodological revision.

3. Still another reason for meticulous attention to the whole range of community goals is that successful modernization or development work requires economy of skills, time and money, all of which represent scarcities. This means that a challenging research problem is to discover, if possible, a few strategic interventions that have leverage on the others or, if this attempts too much, at least minimize the monetary and non-monetary costs of development. To do this successfully requires that decision-makers deal with the whole context of the community or, more specifically, that they see all the alternative moves they might make, all the alternative goals they might pursue, and the interrelationships among moves, among goals, and between moves and goals. For this reason, in their work at the Center this year, the four collaborators have not only given painstaking attention to the goal structure of Vicos but have also developed a kind of map room in which the whole context of goals and interventions, together with possible probes and pre-tests into readiness, have been displayed.

B. Democracy as a Particular Social Goal and Its Relation to the Scientific Objectives

Finally, by postulating the community's capacity to solve its own

problems as the one over-riding goal for the community, a still further meshing of scientific objectives and social goals is achieved. For postulating such a goal as this for the community, a wide variety of experimental intervention becomes not only consistent with but necessary for the achievement of this goal. To give an example, a whole range of studies on small group procedures for adjudicating disputes or reaching agreement on the disposition of collective problems becomes possible because consistent with the goal. But it also becomes essential if the appropriate institutions for self-government are to be discovered. Or, for another example, because a community's ability to solve its own problems through its own decision-making institutions depends upon a wide variety of supporting practices and attitudes in the community, postulating this one over-riding goal permits wide-ranging experimental inquiry into such variables as the distribution of income or the structure of the family and, again, actually requires that these experimental studies be made in order to test the practical possibilities for self-government.

C. Mutual Support, Not Simple Reconciliation

The largest part of the collaboration this year of Holmberg, Kennedy, Lasswell and Lindblom has been devoted to the exploration of the possibilities of pursuing with one and the same set of experimental interventions the triple goals of the enrichment of the behavioral sciences, modernization and democratization. As has been explained, the proposal made in this memorandum is based, not on their conviction that at best these three goals can be reconciled, but on the much stronger proposition that, clearly perceived, these three goals serve each other. In a sense, this is a discovery made in the course of their collaboration; in any case it represents in their eyes the capstone of their

proposal.

IV. The Idea of a Center for Research and Development

Vicos cannot develop to a satisfactory degree unless the surrounding region also moves forward. Hence rather quickly in the Cornell project and in the thinking of the four collaborators, it was apparent that studies of the region, including particular studies of specific communities in the region, were called for. More than that, possibilities of experimental intervention outside of Vicos were explored and found. A second expansion of interest from Vicos to other areas arose from the need for observations in other communities to serve as scientific controls. Lastly, in view of the great gains to be had from developing a workable trans-cultural comparative method, experimental intervention in other Andean areas, in and outside of Peru, has been considered and is possible. In view of all this, the proposal is not simply for a project in Vicos but for a Center for research and regional development and for one flexible enough in design to move to experimental intervention in other areas depending upon progress with the Vicos area, as well, of course, as on availability of staff. At the very outset of the enlarged project, however, it must be capable of maintaining observation facilities in control communities.

The institutional requirements for the proposed Center are tentatively listed as:

A Board of Directors chosen on the basis of scientific, business and civic considerations.

A small, highly integrated core group, consisting, for example, of an anthropologist, sociologist, psychologist, political scientist, and economist, chosen by the Board of Directors, operating as the managing authority for the Center, continuously

and directly in charge of all research and development.

Much enlarged staffs and laboratory-field facilities.

Specialized researchers, available for intensive work in the field for periods of one to eighteen months.

A modern high-speed data-processing facility of the type developed by the RAND Corporation.

PROGRESS REPORT

CORNELL PERU PROJECT

Allan R. Holmberg

This constitutes the first progress report of the Peruvian Project in the Cornell University Studies in Culture and Applied Science which is being carried out on the Hacienda Vicos and environs in Callejón de Huaylas, Peru. For purposes of convenience, the report has been divided into the following sections:

I. Historical Background

II. Development of Project

III. Scientific Studies

IV. Conclusions

I. Historical Background

In June 1951, funds were received from the Carnegie Corporation of New York to initiate a five-year experiment in culture change on the Hacienda Vicos. The Wenner-Gren Foundation for Anthropological Research and the Social Science Research Council also contributed substantial sums to the initiation of this project. Our applied plan, a copy of which is attached, was based on anthropological studies which Cornell University had carried out in this same area since 1949.

II. Development of Project

When funds were received for carrying out the project, it was not certain that the hacienda under study could be obtained for experimental purposes since it was leased by a commercial firm whose contract still had five years to run. Accordingly, on first arriving in Peru in August 1951, it was necessary to see what arrangements could be made to take over the existing contract. Having been invited as a delegate to the Primer Congreso Internacional de Peruanistas and the Conferencia de Sciencias Antropologicas which were held in Lima from August 16

to August 26, I utilized my participation in these congresses to explain the aims of our projected program in Peru. Through these Congresses, I was fortunate in establishing most friendly rapport with Dr. Carlos Monge who as President of the Instituto Indigenista Peruano immediately took a very active interest in sponsoring our project in Peru. Through him contact was made with the Minister of Labor and Indigenous Affairs, General Armando Artola, who also immediately became a very strong supporter of our program. With General Artola, Dr. Julio Pereyra (Chief of Indigenous Affairs of the Ministry of Labor and Indigenous Affairs), and Dr. Monge, a working agreement of collaboration between Cornell and the Peruvian Indigenous Institute, a copy of which is attached, was drawn up and was immediately approved by the President of Peru. On the basis of this a Supreme Decree was issued by the Government which gave the projected program official sanction and which authorized the collaboration of agencies of the Peruvian Government.

This official recognition and support by the Government of Peru was of considerable aid in attacking our vital problem of securing the hacienda for research purposes. Accordingly, contact was made with the company which was leasing the hacienda from the Public Benefit Society of Huaraz, and, after a series of conferences with its General Manager, Ingeneiro Ignacio Macias, an agreement was arrived at whereby the company was willing to transfer the hacienda to us if approval could be arranged with the Public Benefit Society of Huaraz. In this connection, I would like to express my appreciation to Ingeneiro Macias who, in spite of business considerations and commercial plans for the hacienda, became enthusiastic enough about the possibilities of our plan to give up his lease. Mention should also be made of the great interest taken by the Peruvian Minister of Health, Dr. Edgardo Rebagliati, whose ministry supervises all properties of Public Benefit Societies in Peru. A recommendation from him to the Public Benefit Society of Huaraz, as well as a very strong interest on the part

of the local Society itself, made it possible for us to secure their approval of the transfer of the hacienda. Thus as of January 1, 1952, we legally took control of the hacienda for the next five years.

Conditions existing on the hacienda when we formally initiated our work, may be summarized briefly as follows. Vicos consists of approximately 18,000 acres of land of which about 10,000 acres are now under cultivation. It is rocky and hilly rising from an elevation of 9,000 feet to over 14,000 feet. Most of the Indians, of whom there are 2,250 according to a census completed by one of our staff, Mario Vasquez, live in dispersed homesteads on the lower parts of the hacienda and they occupy roughly 85% of the arable lands. For the privilege of living on these lands, the Indians worked 3 days a week for the hacienda without pay except for 20 Peruvian cents (US $0.013) a day as gratification given for the purchase of coca for chewing. Most adult males are addicted to this practice. In addition, by turn they were obligated to supply certain free services to the hacienda and its employees such as cooks, grooms and servants. The lands cultivated by the hacienda and worked by the Indians without pay amounted to about 600 acres, the profits from which were always taken off the land. Previously, the hacienda had been rented to the highest bidder every ten years and each renter had always tried to take as much off the land as possible. Consequently, when we took over in January there was not a building on the hacienda in enough repair to occupy, there were no storage facilities for products, the lands were badly eroded and the Indians had not even been paid their gratification for over a year. Likewise, no services to the Indians in the nature of health or agricultural assistance, etc. were supplied, except that the Peruvian Government maintained a small school whose enrollment seldom exceeded 18 or 20 students. The hacienda renters had always had 3 or 4 outside employees to supervise their interests although for many years no administrator had even lived on

the hacienda. As a result of these and other conditions, the Indians themselves were by no means a united group and conditions on the hacienda had reached such a sorry state that most everyone was looking out solely for his own interests without consideration for those outside his immediate kinship group. Morale was generally low and resistance to outside influence, high.

Before formally taking control of the hacienda, we thoroughly revised our general plans to fit the conditions of Vicos, always keeping in mind our basic theoretical and practical aims as outlined in the enclosed general plan. On adapting this plan to Vicos we found that it was necessary in some cases to initiate drastic changes while in others to make but very few modifications. In as much as our plans were aimed at working as much as possible with the Indians themselves, we dispensed with all outside employees except one, the administrator of the hacienda who had considerable experience in back of him, is from the area, well-liked, and influential in the local situation. On the basis of previous studies done for the most part by graduate student, Mario C. Vasquez, it was found advisable also to immediately dispense with all free services to the hacienda and its employees. In place of these free services, volunteer paid Indian employees were hired for strategic jobs. At the suggestion of the Indian leaders no basic change was made in the methods of work, but it was made clear to them that in consultation with the people all profits from their work would be invested to their interest on the hacienda--in such works as better housing, schools, recreation, medical facilities, and improved agricultural practices. A concrete program for development on the hacienda for 1952-53 was drawn up in consultation with the Indian leaders, thus establishing a series of realistic, concrete goals in which we could work in collaboration with the people. A summery of this plan of work, subject, of course, to change as conditions arise is as follows:

A. January - March

1. Meetings

   a. Vicos - on our plans and the changes to be introduced (once a week with personnel, authorities, mayorales, etc.)

   b. Marcará - on our proposed studies and their possible effect on progress in Marcará.

2. Statistical and anthropological census of Vicos and Marcará.

3. Nutritional survey in Vicos (epoch of scarcity)

4. Continuation of customary agricultural work.

5. Plan buildings for plaza.

6. Construction and re-construction of living quarters, school, first-aid station, etc. - for the Indians as well as for personnel.

7. Have school and improved teaching service regulated by March, if possible.

8. Installation of water system.

9. Plant pasture in Quebrada Honda.

10. Plan work of technicians (agronomist, doctor, male nurse, nutritionist), and employees (administrator).

11. Investigate having Vicosinos do their marching for Army service in Vicos beginning in April.

B. April - December

1. Opening of new school

2. Health survey and open first-aid station.

3. Study and initiation of agricultural activities, under the direction of trained agronomists.

4. Nutritional survey (epoch of abundance)

5. Continuation of construction.

   a. Residential quarters

   b. Storerooms, store, cooperative, etc.

   c. Administration offices

6. Industrial survey

7. Organization of an agricultural fair after harvest time.

8. Introduction of new recreational activities - football, movies, etc.

C. Anthropological studies for 1952

1. Continually study opinions on and reaction to the changes initiated.

2. Establish bases for measuring changes introduced.

3. Initiate a study on the change of social roles of the Vicosinos.

4. Continually observe changes in the native cultural patterns.

5. Test hypotheses in social-psychology relating to the participation of native elements in the progress of the experiment.

6. Initiate a study of the effects of coca and alcohol in relation to work, recreation, etc.

D. Tentative program for 1953

1. Initiate changes in agriculture.

2. Initiate changes in diet.

3. Continued function of a first-aid station.

4. Medical-veterinary study and practical application on findings.

5. Put in effect a social-recreational program.

6. Possible organization of a consumers' cooperative for sale of products.

At present, our method of carrying out this program may be briefly stated as follows. On Mondays, we hold a staff meeting and seminar in which problems of the hacienda are discussed as well as one of the academic studies underway at Vicos or in neighboring areas. On Tuesdays, the staff at Vicos holds another seminar with the Indian leaders, or mayorales, when problems of the hacienda are discussed and new ideas are introduced for consideration. In these meetings, we usually arrive at some agreement or compromise pertaining to our ideas and theirs. On Wednesdays, taking advantage of an ancient custom, that of "mando" when the hacendado told the Indians what they were to do the following week, we hold a meeting with all of the Indians who work for the hacienda and discuss

with them the agreements arrived at with the mayorales the previous day. Modifications can thus be made to best suit the group as a whole. Previously, Wednesday was also the day on which the Indians received their gratification from the hacienda, a custom we have continued, but we also use the meeting as a general sounding board for new ideas and responses to any introductions or changes made. This meeting also serves as a means of reporting back to the people the results of our studies and the progress of our program. In this connection it is of interest to note that at the first of such meetings hardly a voice was raised, while now after five months of reunions most everyone wants to talk at once. Sometimes as many as three or four hundred Indians or heads of families participate in these meetings. 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. I should add that in conducting these meetings the way we would like to conduct them, our personnel is insufficient, for, besides myself, our resident personnel consists of but three people - Enrique Luna, administrator; Mario Vasquez, graduate student and the only bi-lingual social scientist; and Norman Pava, beginning graduate student from Cornell whom I have wanted to keep as much as possible engaged in special scientific studies. 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.

At this point, however, I would like to mention that technical collaboration has been offered in great abundance. The principal reason we have been yet unable to accept all offers of collaboration is that when we began our program

no living facilities were available on the hacienda. We have done all we can to remedy this situation: we have now completed two small modern apartments and will continue our building program as rapidly as time and funds permit. We have also installed a water and sewage disposal system for the plaza of the hacienda. In the case of unmarried students like Vasquez and Pava, they moved in with Indian families and have repaired their quarters as comfortably as conditions permit.

Earlier studies on the hacienda indicated that Vicos was essentially an agricultural society and for this reason our principal technical efforts have been directed toward the betterment of farming. Towards this end we have received excellent collaboration from the Servicio Cooperativo Inter-Americano de Producción de Alimentos. Their resident engineer in Huaraz spends one day a week on the hacienda and is helping us to draw up plans for the rotation of crops, fertilization of the soil, reforestation, introduction of better varieties of seed, development of pasture lands, improvement of cattle, introduction of insecticides, etc. The actual amount of work accomplished in this respect has as yet been insignificant in terms of the total problem, but I would like to list what efforts we have made in this respect: (1) the planting of 500 pine trees, 200 eucalyptus trees, and 250 peach trees; (2) the introduction of eight tons of fine potato seed with the equipment and technique of spraying and protection against local disease conditions; (3) the preparation of a large area for seed beds so that new plants can be grown and distributed to the Indian houses on the hacienda; (4) the building of stone terraces for protection against erosion in an area covering approximately 12 acres; (5) the placing on sale to the Indians at cost price of fertilizer and other items such as seeds and wool; (6) the introduction of brands for cattle so that conflicts over ownership of animals can be reduced and poorer stock eliminated. What further changes will be introduced will depend to a considerable extent on further technical studies. We

hope soon to have the funds available for employing a full-time agronomist.

On the health and nutritional side, we have only begun our work. The Department of Nutrition in the Ministry of Health hasoffered collaboration which we hope to be able to accept in the form of a complete nutritional survey within the next six weeks. In January, February, and March we collaborated with Parke-Davis and Co. and the Peruvian Ministry of Health on a parasitology survey in Vicos. It was the first time that such a study had been made of an Indian community in Peru. The results were rather startling: 99% of the Vicosinos were found to have one or more harmful types of parasites and to have on the average about four. Plans are underway to continue these studies and others in collaboration with the Pan American Sanitary Bureau and the Peruvian Ministry of Health.

With respect to the educational side of our program, we had hoped to have a new school in operation by May of this year. However, due to an exceptionally long rainy season which prevented us from making adobes, tile and other necessary materials, we are only now getting underway in the construction of the new school in collaboration with the Indians. The plan for this school was drawn by Gustavo Tode, Lima architect, and on general matters of primary school education, we have received excellent advice and help from Dr. Raymond Gibson, of the Education Division, Institute of Inter- American Affairs. It is likely that when better facilities are available, that his office, in cooperation with the Ministry of Education, will supply our educational project with well-trained personnel. At present educational and teaching facilities are extremely inadequate. Despite this fact, we have made a number of innovations which have helped to raise the enrollment from about 20 to 60 students. In part this may be due to the providing of a hot plate at lunch time. We have also set aside about 3 or 4 acres of hacienda land for use as a model school garden and the SCIPA agronomist is helping us to establish a Vicos version of a 4-H club for children. In addition, SCIPA now has a nutritionist on their Huaraz staff and she is working

out a series of nutritious menus for the school lunch, based on products available on the hacienda. We hope soon to establish, though nothing has been done about this yet, a local "patronato" or school board to further local interest in educational developments. Through the work of the Indians we have built new desks and from hacienda funds have purchases notebooks, pencils, chalk, equipment for the school lunch, football, etc.

Up to now, the recreational side of our program has suffered for lack of personnel and facilities, but initial experiments along this line indicate that it may develop into one of the most significant aspects of the program. Recreational facilities will be greatly improved with the completion of the new school, for one of the main units of the building will be an auditorium which we hope to use as a community center for movies, an amateur theater and musical programs, etc. There will also be adequate space for athletic events.

For the first time, movies were introduced to the Vicosinos through the facilities of the United States Information Service which has travelling units throughout Peru. A survey taken after the showing of the films indicated that 90% of the people who saw them, and they were attended by about 600 persons, were completely satisfied with the program shown and expressed a desire to have a weekly function. We now feel that this medium may be extremely useful for the development of our program in Vicos and if the profits of the hacienda are sufficient this year, we will buy a unit, so that films may be projected in the school and for recreational purposes.

III. Scientific Studies

One of the first basic studies, and one of the most necessary, after getting control of the hacienda was a thorough census of the population which was completed by Mario Vasquez. Thus we are now in a condition to conduct surveys of all types and to test different methods of sampling. A similar census will be taken in the District of Marcará between June 26 and June 29 in collaboration

with the Inspector of Education and the teachers in the area. When this is completed we will have a sound basis for making comparative studies between mestizo and Indian communities. This census is being taken under the direction of Humberto Ghersi, graduate student from the Instituto de Estudios Etnologios of San Marcos who has been collaborating with the Cornell Peru Project since its inception in 1949.

Basic culture studies of the two communities, Vicos and Marcará, had been made before our present applied program began; nevertheless, it has been necessary for us to gather further cultural information about them in order soundly to plan our work. Consequently, all of the Vicos personnel have been concerned with interviewing informants and in gathering observations on cultural patterns and reactions to the changes we have introduced. In this connection Mr. Vasquez has made preliminary surveys concerned with reactions to our plan in general, to the medical experiment, to the coca experiment, etc. Moreover, a good deal of his and my time has been taken up in matters of general installation, program planning, settling disputes between Indians, regulating the military status of the people on the hacienda, and general administrative matters. In my own case considerable time has also been devoted to the coordination of the program as a whole and to public relations within the Peruvian Government and in the local area which the Cornell Peru Project is likely to affect. In addition, Mr. Vasquez completed his basic study of Vicos which will be published in June, 1952, by the Instituto Indigenista Peruano and for which he was awarded his doctor's degree from the University of San Marcos in December, 1951.

In the case of Mr. Pava, most of his attention, after getting settled at Vicos, has been directed toward the planning and execution of a base line study of status and role. He at present is engaged in taking a status and role inventory in Vicos, after which experimental situations will be developed to test

the uniformity and consistency of his results. We hope that studies of this type can be repeated periodically to observe the effect of the changes we are bringing about.

Mr. Ghersi has finished his basic cultural study of Marcará and is now in the process of writing up his data which are centered around the general problem of differentiating between Indian and mestizo cultures in the region of Marcará. They will be presented as a thesis for his doctor's degree in the University of San Marcos and should be finished within the next few months.

Mr. William Mangin of Yale University has been a member of our group since December and is at present engaged in a comparative study of alcohol and drug (coca) consumption in Marcará and Vicos. He has just received a grant from the SSRC to assist him to complete this study. Relating to his special interest attention should be called to a small preliminary study on coca chewing which we initiated last January in Vicos. Normally, the Vicosino chews coca five times a work day. During the potato harvest, when we were able to keep workers under surveillance for an entire day, we selected some 50 volunteers and offered them the choice of receiving something to eat (supplied by us) during the coca chewing periods or of continuing to chew coca (supplied by them). About 20 of the 50 men volunteered not to chew coca on the first day. All except one or two were young men. On the second day the number of volunteers increased. By the end of a period of ten days which was all the time that we were able to maintain any control of conditions we found that many other people on the hacienda wanted to enter the experiment and that of the original group a fairly high percentage stopped chewing coca (during the day at least) for a 10-day period. While this experiment was carried out under relatively uncontrolled conditions it does suggest the hypothesis that coca-chewing is not as vicious a habit as we have been led to believe and that it may be readily overcome by substituting for it stimuli of high reward value locally--for example, food in Vicos. One

thing seems certain from our observations on coca chewing in Vicos, namely that in attacking the problem too much emphasis has been placed on its biological, and too little on its cultural, aspects. Mr. Mangin, Mr. Pava and I are now planning an experimental design which we hope will crucially test the "viciousness" of the habit as well as the variables related to it.

Miss Joan Snyder who received a fellowship from the Peruvian Government under the Buenos Aires Agreement is now living in the neighboring village of Recuayhuanca, an indigenous community, where she is engaged in the study of relationships between a small local group and larger centers of population. She began her work in the village of Marcará but found it more convenient for purposes of her study to continue it at a lower level. Her preliminary results related to the forces of change within the community of different social organization than Vicos, look most promising. She plans to stay until October.

Mr. William Stein, sponsored by the SSRC and the Wenner-Gren Foundation had originally planned to make a study of modernization influences in an indigenous community within this area, but after surveying the region decided to settle in Hualcan, a small "estancia" near Carhuaz, where he has been engaged for the past six months in a basic cultural study centered around the problem of modern cultural change, resistance to which appears to be extremely high in this community in spite of the fact that many of its members periodically travel to the coast. While the situation in Hualcan appears to be most different from that in Vicos, nevertheless, his discoveries should prove to be of considerable significance to us in planning our applied program here.

Mr. Richard Patch has just finished a year's study in Peru. His major interestlay in surveying the industrial possibilities of Callejón de Huaylas. He completed a number of surveys in the area which gave us a fair picture of what industrial developments have already taken place and what prospects there are for the future. With respect to Vicos, Mr. Patch made a study of the in-

dustrial possibilities of the hacienda which will greatly aid us in planning industrial experiments related to local resources and the native culture.

Most of the students have performed extremely well considering the conditions under which they have had to live and considering the fact that for most of them it was their first field experience. This is the more significant in the case of Miss Snyder, Mr. Pava and Mr. Patch who are all beginning graduate students. During the weekly seminars held here at the hacienda, I have had a chance to observe a growing comprehension of the problems by the students and an increasingly objective point of view.

V. Conclusion

It is much too early to report definitive conclusions. Installation on the hacienda involved more time than was anticipated so that our scientific program could not be started as early or as fully as we had originally hoped. However, rough surveys indicate that more that 50% of the Vicosinos are backing our plan, and we feel that we are gathering significant data relative to the emotional attachment of people to programs like ours in Vicos. In this respect we have been oriented particularly by the social-psychological approach of men like Cottrell and Foote. One of our biggest problems is that of method - of designing experiments which can be carried out under rigorously controlled conditions - to say nothing of the fact that we lack trained personnel to carry out carefully planned designs. I feel that during the first six months of operation that we have formed the basis for a very fine laboratory in applied social science and that if our program can be expanded to include more students and trained personnel the possibilities of some obtaining significant theoretical and practical results are excellent.

ALLAN R. HOLMBERG

June 22, 1952

Hacienda Vicos
Marcará, Ancash
Peru

(Translation from Spanish)

The following agreement has been made between the University of Cornell and the Indigenous Institute of Peru.

1. Cornell University, represented by Dr. Allan Richard Holmberg, will carry out in the Department of Ancash, Carhuaz Province, District of Marcará, zone of Vicos and adjacent areas, the project presented by Cornell University in Applied Anthropology and the Social Sciences to the Peruvian Indigenous Institute, which has been approved and forms an integral part of this agreement.

2. Cornell University will be in charge of financing this project and it will last for not less than five years.

3. Cornell University and the Peruvian Indigenous Institute have celebrated the present agreement in order to apply the techniques of anthropology and the social sciences toward solving Peru's Indian problem. Its principal object is to establish permanent coordination between the two mentioned institutions and to extend this coordination to public institutions and universities interested in this problem.

4. In putting the above project into effect, Cornell University will be represented by Dr. Allan Richard Holmberg and the Peruvian Indigenous Institute will be represented by its Director, or, in place of him, by the President of the Anthropological Commission of that organization who will be assisted by the members of this Commission.

5. The administration of the agreement will be in the hands of the representative of Cornell University and a representative of the Peruvian Indigenous Institute who will be a specialist in social science and whose appointment will be made by mutual agreement between the representative of Cornell University and the representative of the Peruvian Indigenous Institute and he will preferably be a person who speaks the language of the area.

6. The project, when able, will supply facilities for work and living quarters to the members of the Institute or to university professors who wish to carry out investigations on certain points of the Cornell Peru Project. It is understood that these projects will be presented to the Indigenous Institute for approval along with an indication of the time required for investigation.

7. The project, when able, will provide the same facilities to foreign professors who come to the said zone to carry out investigations there.

8. The representative of Cornell University will recommend scholarships abroad for Peruvian students who work on the project who merit further training. Equally, aid will be given to foreign university students interested in field experience in Peru. Also, in the Vicos area, the project will provide existing facilities to young students who wish to specialize in anthropology or other social sciences.

9. The Peruvian Indigenous Institute, in order to encourage the study of applied anthropology will select, through the universities of Peru, students or young professors for training in the Vicos project, for which they will be provided with the necessary aid and facilities. The Peruvian Indigenous Institute will also try whenever possible to extend these facilities to students of other nationalities.

10. The Peruvian Indigenous Institute may request technical advice from Cornell University or its representative for any other anthropological research to be undertaken in other areas of the country, and at the same time, Cornell University may request advice from the Peruvian Indigenous Institute in accordance with its organization and its knowledge of the Indigenous problem.

11. The Peruvian Indigenous Institute will request the Ministry of Labor and Indigenous Affairs to provide the following to Cornell University for carrying out its work.

a) An office in Lima in the Peruvian Indigenous Institute.

b) Request from the Immigration Department permission for permanent residence permits for the research workers in the country without their having to pay the tax levied on foreign residents, because they will be making scientific investigations in the service of the Institute without remuneration from the Institute.

c) Solicit the authorization from the proper authorities for work in the area of Vicos and adjacent areas where the bases of research and practical services will be established.

d) Solicit of the Minister of Finance and Commerce the free importation of baggage and implements, machines, apparatus, vehicles, personal effects and other articles which, by common agreement, are judged necessary for the efficient carrying out of the project.

12. The Peruvian Indigenous Institute will solicit the Ministry of Labor and Indigenous Affairs for the granting of a Supreme Resolution which will raise this agreement to the category of a convenio and which will give to Cornell University the facilities necessary for the realization of its project.

For Cornell University

/s/ Allan R. Holmberg

For Peruvian Indigenous Institute

/s/ Carlos Monge M., Director

Ideal Plan of Action - Vicos Project

I. Personnel

A. Director

B. Field Director

C. Administrator (of Hacienda)

D. Agricultural Specialist

E. Veterinary

F. Physician

G. Nurse

H. Nutritionist

I. Two School Teachers - well-trained

J. Two Social Science Assistants

K. Recreational Director

L. Consultants in Special Fields

II. Changes to be introduced in various aspects of culture

A. Agriculture

1. Work of agriculture specialist

a. Study of quality and condition of soil (irrigation, rotation of crops, conservation of soil, etc.).

b. Study of the insect pests and diseases which affect crops.

c. Direct experimental laboratory on the lands of the hacienda as well as on lands of the peones.

d. Better the quality of basic products of the region such as, maiz, potatoes, barley.

e. Investigate the possibilities of reforesting the hacienda with such trees as eucalyptus, willow, pine, and aliso.

f. Prescribe the introduction of new tools and agricultural implements, seeds, fruit trees, fertilizer, etc.

2. Joint work of agricultural specialist and social scientists.

   a. Organize an adequate use of surplus.

   b. Educate the native farmer in such matters as an adequate system of irrigation, rotation of crops, use of fertilizer, conservation of land, selection of seed, use of tools and agricultural instruments, cultivation and care of fruits and vegetables, form a means of combating insect pests and plant diseases, and the conservation and preservation of the harvests.

3. For the best results in introducing new ideas and practices the best means of contact and propaganda will be employed.

   a. Direct participation of natives in technical experiments.

   b. The use of fairs with prizes and awards.

   c. Use of native institutions as a medium of education; such as, religious fiestas, school, etc.

B. Animal Husbandry

1. Work of veterinary

   a. Survey quantity and quality of animals in the zone.

   b. Study of diseases, parasites and pests which attack domestic animals.

   c. Study the possibilities of bettering pasture lands.

2. Joint work of veterinary and social scientists.

   a. Installation of experimental small animal farm through the means of which it will be possible to introduce to the people new types of chickens, incubators and through which special instructions could be given the people concerning the raising and care of small animals.

   b. Foment the raising and fattening of hogs for eating and commercial purposes.

   c. Bettering local varieties of cattle, sheep and goats.

   d. Educate people concerning care and treatment of domestic animals, the manner of combating plagues and sicknesses in animals and the proper function of domestic animals in a rural home.

C. Industrial and Exploitative Activity

1. Work of special consultants

   a. Study industrial possibilities in such fields as the exploitation of maguey, wool, weaving, basketry, wood working, etc.

   b. Study possible organization of cooperatives of production and consumption.

2. Joint efforts of consultants with social scientists.

   a. Fomenting development of industrial activity in accordance with local facilities and resources.

D. Nutrition and Home Economics

1. Work of nutritionist and special consultants in domestic economy, housing, etc.

   a. Nutritional survey to determine deficiencies in diet and what can be done realistically to remedy these deficiencies.

   b. Study of child care and nutrition.

   c. Diet studies.

   d. Study of housing and possible betterment.

   e. Supervise school lunch program.

2. Joint work of nutritionist and special consultants and social scientists.

   a. Analysis of diet patterns.

   b. Analysis of possible changes in the production and consumption of foods based on diet analysis.

   c. Draw plans for better housing.

   d. Utilization of school for promotion of better diet and housing.

E. Health and Sanitation

1. Work of physician and nurse.

   a. Health and sanitation survey to identify diseases and parasites which attack natives and general sanitary conditions.

   b. Installation of first-aid station on hacienda.

c. Preparation of native personnel who can serve as first-aid attendants.

2. Joint labor of physician, nurse and social scientists.

a. Sanitation and health education.

b. Foment immunization against communicable diseases.

c. Contact native "doctors" and midwives with the idea of educating them in terms of modern health practices.

d. Foment campaign to treat and cure the most common diseases and emergency cases.

e. Investigation concerning effects of the use of coca and alcohol.

f. Campaign for better sanitary conditions.

F. Education

1. Work of teachers.

a. Reorganization of school on hacienda

b. Installation of educational system in keeping with native culture.

c. Study possibilities of visual education for children and adults.

d. Development of curriculum based on needs and desires of people in relation to national educational problems.

e. Organization of clubs in collaboration with specialized personnel with object of diffusing new ideas in agriculture, health, nutrition, etc.

f. Study possiblities of adult education.

2. Joint work of teachers and social scientists.

a. Fomenting interest in education among parents and children.

b. Aid in forming local school board, parent-teacher associations, etc.

G. Social and Recreational Aspects.

1. Work of recreational specialist

a. Study of healthful recreational possibilities in relation to such native institutions as the fiesta.

b. Installation of athletic fields.

c. Installation of recreational facilities for children.

d. Study of possible use of movies as recreational as well as educational means.

e. Study possibilities of suitable types of recreation for the home.

f. Study the possibilities of development of artistic hobbies, music and dramatics.

2. Work of recreation director and social scientists.

a. Re-orientation of social and recreational life of people.

b. Fomenting interest in healthful recreation through games, contests, etc.

c. Diminishing consumption of alcohol and coca through recreational measures.

ARH/1

CENTER FOR ADVANCED STUDY IN THE BEHAVIORAL SCIENCES

202 Junipero Serra Boulevard • Stanford, California DAvenport 5-0026

May22, 1955

Dear Ed,

Thanks for sending me the copies of your memorandum on the comparative method. We are going to discuss it a week from tomorrow and I will arrange to have a copy of the discussion notes sent to you.

Enclosed is a memorandum on a proposed project in modernization using Vicos as a central laboratory that we have sent to Ford, Carnegie, and Rockefeller. It involves the training aspect with which you were concerned in the other proposal. I have sent a copy of this together with rough budget estimates to Lauri. Naturally we would be glad to have your opinion of the proposed project and how it might best be carried out.

All the best,

Allan

Department of Sociology & Anthropology

CIRCULATION SLIP

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Real fancy talking

To		From	To		
	Dean			Nurge	
✓	Cohen			Pustilnik	
	Goldsen			Richards	
	Kaplan			Rose	
	Lambert			Snyder	
	Leighton			Soler	
	Macmillan			Stein	
	McCreary			Thompson	
	Opler			Vazquez	
	Posman			Weightman	
	Rosenberg				
	Sharp				
	Smith			Retzlaff	
	Streib			Riegger	
	Suchman	✓		Simon	
	Barclay				
	Chance				
	Dobyns				
	Fink				
	Fortin				