

IICA
COO
174

IICA
COO
174

"NEW APPROACHES TO COMMUNICATION TRAINING FOR DEVELOPING COUNTRIES"

by Juan Díaz Bordenave, PhD

Inter-American Institute of Agricultural Sciences of the OAS

Rio de Janeiro, Brazil

Paper presented at the Section on Information and
Communication Problems in Development, at the
Third World Congress of Rural Sociology,
August 21-27, 1972
Baton Rouge, Louisiana

00002599

1950-1951



"NEW APPROACHES TO COMMUNICATION TRAINING FOR DEVELOPING COUNTRIES"

by Juan Díaz Bordenave, PhD

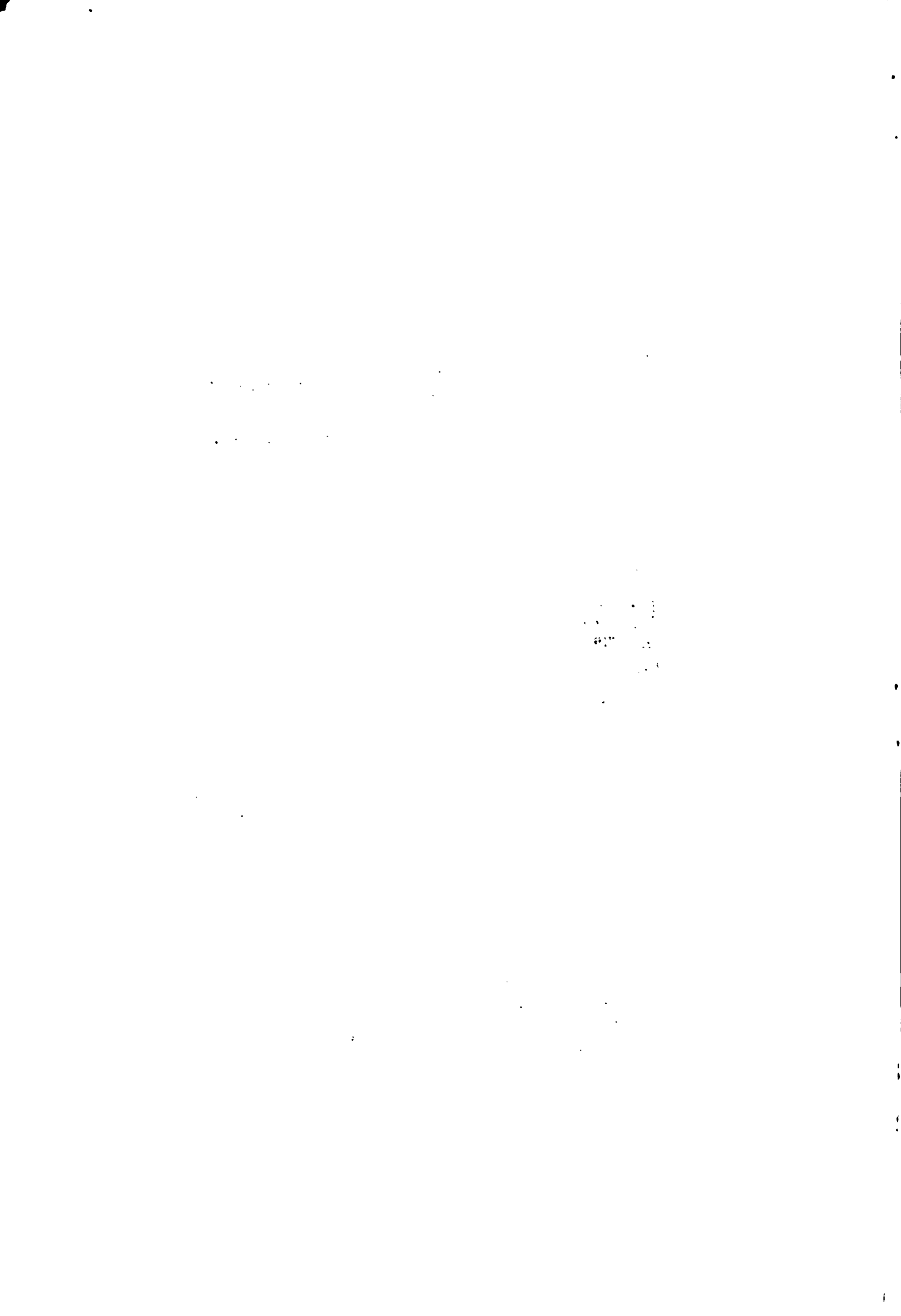
CONTENT

- . Introduction
- . Part I - The evolution of agricultural communication in Latin America
- . Part II - Possible areas demanding communication intervention
- . Part III - Implications for communication training
- . Reference materials

Acknowledgement

The author expresses his deep appreciation to all the persons who contributed ideas for the preparation of this paper. Special gratitude is owed to Armando Samper, Susana Amaya, Ignacio Ansorena, Solon Barraclough, Luis Ramiro Beltrán, Hernando Bertoni, Thomas J. Burke, Hernán Carrera, Francisco Arinos Costa e Silva, Luis Flores, Eduardo Ramos, Max Reindl, Luis Salinas, Plinio de Arruda Sampaio, João Gonçalves de Souza and Mario Yuri Izquierdo.

The ideas contained in this paper are of the author's exclusive and personal responsibility and do not necessarily reflect his institution's positions and/or policies.



NEW APPROACHES TO COMMUNICATION TRAINING FOR DEVELOPING COUNTRIES

Juan Díaz Bordenave, PhD

Inter American Institute of Agricultural Sciences of the OAS

"To be as it is, what does it mean?

In the smallest particle of chalk, what is seen will be always related to the cloud that passes by the window or to the hopes of the viewer. Things weigh more if they are looked at, eight plus eight are sixteen and the person who is counting.

To be as it is, then, may not be as it is, but only to be worth as it is or to advertise as it is or to deceive as it is".

Julio Cortazar, The Prizes

Introduction

Through trial and error, through slowly overcoming our ideological biases, class prejudices and intellectual myopia, we have been learning during the last 30 years what communication really is. We may - as Cortazar says - still "be deceived as it is" but having received recently some significant feedback from experience and also the powerful insights of men like Jean Piaget, Carl Rogers, Paulo Freire and Marshall McLuhan, we may say that our understanding of the communication process has increased considerably.

This is important if we are to talk intelligently about communication training. It is even more important as we try to answer the question Delbert Myren presented to us as the basis for this paper:

"Given the broad acceptance today that a larger portion of income and employment questions must be handled in rural areas, how can action oriented people be trained to be more effective in improving rural life. Looked at in the very broadest sense, what kinds of training - short term, undergraduate, and graduate - is worth funding now and during the coming decade by national governments and by international donors such as AID, IDB and the World Bank".

In order to discuss alternatives for communication training in the coming decade I would like to analyze what communication now means for us.

And this implies reviewing what it seemed to have been in the past, what it seems to be today and what it seems to tend to become in the near future. Therefore, the initial part of my paper is devoted to examining the evolution of rural communication in Latin America, with special attention on its changing emphasis.

To start off our thinking, I will make a somewhat audacious and broad statement: I maintain that communication orientation in the past was focused on content. The focus moved later to codes and then to the means of communication. Then, emphasis switched to communication effects and expanded to the idea of process. More recently the focus moved to the functions served by communication to the receivers. The latter emphasis called our attention to the structural and institutional context in which the receivers exist. Only very recently our interest centered on the receiver as a person and on the community as a group of real persons. Now we seem to be entering a time of searching for a new concept of communitarian humanism and a new image for the human role of communication.

Part I - The evolution of agricultural communication

I will now attempt to clarify the above progression. I will do it from the viewpoint of an observer of the over-all Latin American picture. It is quite possible that a national practitioner of agricultural communication will have a different idea.

When the Scientific Exchange Service (Servicio de Intercambio Científico) of the Inter American Institute of Agricultural Sciences (IICA) was created in 1948, its main goal was to make the content of books, journals and technical reports about experimental results more accessible to Latin American agricultural scientists. IICA's work in agricultural communication started, therefore, with a content orientation. However, inasmuch as content is transmitted through codes, soon an interested developed on matters like technical writing, preparation of abstracts, norms for bibliographical, citations, and the like. We went through a period of code orientation.

In the 50's, Latin America was literally invaded by Point Four programs and technicians. Among other goals of the U.S. International Cooperation Administration the development of agricultural extension services occupied a high priority. This required the use of means to reach more farmers than in the past. So, as part of national extension services, offices, of agricultural information were established or improved. Information personnel had to be trained. The International Cooperation Administration had an agreement with IICA, which included personnel training, advisory services and production of information materials as a backstopping service to

the U. S. Operations Missions. Numerous courses were given at Turrialba and all over Latin America on the preparation of radio programs, leaflets, visual aids, posters, etc. At the time, the campaign, i.e. the intense combination of several means for a specific objective, was preached almost as a panacea. Our previous content and code orientation was replaced by a means orientation. Considerable more faith was put on the means of communication than on their content. Tons of American-made "hardware" equipment and materials were shipped to our countries. Several international audiovisual workshops were conducted by Point Four.

The ideological basis for all this enthusiasm was simple: we must inform and persuade the farmers to adopt better farm practices so as to produce more food and fibers. Now, the persons who know what is best for the farmers are the scientists and the technicians. Let's put their recommendations into radio programs, meetings and demonstrations, using as many visual aids as possible, to persuade them to accept our messages. (I do not eliminate the possibility that manufacturers of projectors, cameras, offset presses, and the like, might have been the behind-the-scene pushers of this enthusiasm).

Naturally, disappointment had to come. Although we knew quite well how to manipulate the means, the effects didn't measure up to our expectations. Critics began to attack the idea of communication-as-transmission-of-information. Luis Ramiro Beltrán (1) echoed this reaction when he wrote:

"Probably, (the concept of communication as transmission) leads to think that a specialist in communication is a sort of expert in the design of messages to be transmitted and in the use of the methods, media and channels to achieve transmission. We have carried this so far as to have many persons expect from communication specialists to be, above all, technicians in the use of the different gadgets available as mechanical auxiliary instruments for men's effort to communicate. The "hardware", useful but accessory, acquires thus an unjustified importance".

The media obsession was eventually deminished as a new obsession replaced it: the preoccupation with effects. Partially as a consequence of the communication "train-the trainer" course, developed by the National Project on Agricultural Communication, with Point Four financial backing, the available knowledge of the social sciences was brought to bear on the general effort of producing effects. For example, results of studies on the adoption and diffusion of innovations, (2) the process of social action (3), cultural consequences of technological innovations (4), and the like, became indispensable knowledge in the information field. The communication

specialist's job began to be considered a "sort of psycho-social engineering of behavior, a science of the generation of types of human behavior" (1)1/

Beltrán expressed the changing concept of the mission of the communication specialist as follows:

"I share the criterion that the communication expert must be, principally, a social scientist specialized in provoking changes in the behavior of persons. Without under-rating the importance of the arts enabling him to prepare messages, to use media and to handle equipment, I believe that these factors are complementary to his basic responsibility of knowing how people are and how they can be lead to think, feel and act in a certain manner"2/

At the same time that our need to achieve effects on people made us appeal to the social sciences, we gained from theory an important contribution: the notion of process. We learned to see communication as less of a black-and-white proposition and more of a multi-variable, dynamic interplay of numerous factors. Thus we learned that "meaning" is more a property of the

1/ We must recognize that precisely this effect orientation was the basics for the first graduate program in communication, established by the Agrarian University of La Molina, Peru, with the collaboration of IICA and the Midwest Universities Consortium for International Activities (MUCIA)

The approach was obviously manipulative. However, at that time our conscience was in peace because manipulation - "responsible manipulation" - was considered not only normal but good. David K. Berlo, (5) chairman of the Communication Department of Michigan State University, and one of our "legitimizers", said in a speech at Fort Collins at the close of a NPAC train-the-trainer course:

"We are manipulators. We cannot be otherwise, we must not be otherwise. I repeat. We are manipulators. We are agents of effect. Whenever we communicate we want our public to know that some things are true and some are -not - as we see them. We want our public to understand that some interpretations are adequate and some are not - as we see them. ... We communicate to manipulate. We communicate to change. The one who says that he has no intention to manipulate, to persuade, to produce changes and alterations in his public, either hides his true purpose or demonstrates lack of awareness of the nature of the communication process. To teach is to manipulate, to write is to manipulate, to transmit through radio is to manipulate".

2/ Emphasis provided

receiver than of the message, and that the receiver is not a blank page where we could write our messages, but a dynamic being whose beliefs, attitudes and values grow of his living experiences. This made us react against a lineal model of communication going from left to right, from change agent to farmer, carrying information like a bucket carries water.

Another concept we gained from the social sciences was the notion of system, and we learned to characterize not only social systems but also message systems, media systems, etc. Although later this notion would facilitate our comprehension of the development process, at that time it did little to diminish our adherence to the transmission ideology. We were still agricultural information men.

It was around this time that the whole idea of economic development exploded on us like an atomic bomb. Schramm and many others hurried to demonstrate that communication is essential to development. Schramm wrote in the preface of his book "Mass media and national development":

"Without adequate and effective communication, economic and social development will inevitably be retarded, and may be counter productive. With adequate and effective communication, the pathways to change can be made easier and shorter" (6)

IICA joined the general enthusiasm and, in collaboration with the American International Association (AIA), in 1964 organized a seminar on Communication in Economic Development at Santiago, Chile. Communication, however, brought to its marriage to development a great deal of the old transmission mentality. Communication was seen as the long arm of the government plan-makers and its main function was supposed to be obtaining the people's support and participation for the execution of development plans. As far as we were concerned, while in the previous years we aimed our communication guns at the farmers in the name of increasing production "for better individual income and family life", we now chased them around in the name of "economic and social development".

At the opening ceremony of the Santiago Seminar, a regional director of IICA said:

"In order to be able to understand better the function of communication in the economic development of Latin America we must be aware of the plans and programs drawn by our governments to accelerate social and economic development and in accordance with them, to offer the contribution of communication as a means to change attitudes, break resistances and help to make decisions resulting in the improvement of the community". (7)

Representing the Chilean government at the same meeting, the Minister of Agriculture (7) was even more explicit:

"In this conception, it is a fundamental requirement that the man, the people of a State, of a continent, be informed so as to know what is desired, for what purpose, how and when. Only this way he will deliver his support because he will understand the objectives, will participate in them and will donate his conscious work in the part that corresponds to him". 1/

Enthusiasm for development communication was at an euphoric state when communication researchers began to explore an area that eventually gave the archi-enthusiasts food for more sober thoughts. Inverting President Kennedy's famous sentence we began to "ask not what you can do for communication but what communication can do for you". Our emphasis was put on finding out how people utilize communication for their own purposes. In other words, what are the functions served by communication for the individual. Two clear examples of research studies centering around communication functions for people were Delbert Myren's analysis of the effects of risk and uncertainty on decision-making and information search behavior of Mexican farmers (8), and my own Timbauba study (9) on psychological and sociological factors affecting the search for instrumental information among farmers of the Brazilian Northeast. The emphasis on function took us naturally to the study of decision-making and the role of communication in relation to that process.

This interest on decision-making factors had very important consequences. We discovered that social structure was at least one determinant factor on information search and reception. My Timbauba study () showed the tremendous differences in access to communication and instrumental knowledge by farmers in different socio-economic strata. And James Gruning in Colombia using a typology of decision-makers, came to the conclusion that:

"... previous studies have generally concentrated on communication behavior and a few accompanying social-psychological variables in isolation from the structural situation in which communication takes place. In most peasant situations, however, structural rigidities must be broken before communication can have an effect. Both communication behavior and these social-psychological concomitants are seen as derived from the situation". 10

In Peru, several theses presented at the La Molina graduate program in Communication, studied the changing role of communication in a rural society undergoing radical structural transformation.

1/ Emphasis provided

Useful as it was to discover the restrictions imposed by socioeconomic structure on receivers' communication behavior, no less important was to unmask the strong influence exerted by socio-economic structure on sources, messages and media. Rodrigues Dias in Brazil (11), Roca in Peru (12) and Mattelart in Chile (13), among others, revealed the extent to which large financial interests controlling mass media impose bias and distortion on content in order to protect their possessions, dominant status and political power. With this we learned that manipulative communication can be a mixed blessing: messages and media can be wholly detrimental to development if they are used to strengthen the ideology and interests of the dominant classes.

Another progress we registered at that time was the realization of the necessary association between communication and infra-structural factors, if agricultural change was to be accomplished. By infra-structural factors we mean the conditions established for production by agricultural policy, such as prices, markets, transport, credit, storage, provision of modern inputs like improved seeds, fertilizers, defensives, and the like. We learned that, if in order to make decisions, a farmer requires motivation, information and power ("to want, to know and to be able") communication could be positively influential only when infra-structural factors were favorable. The necessary association of communication with infra-structural support was dramatized by the Mexican Puebla Project (14). In this Project collaborated research, extension, communication, credit, farm insurance, input supplier and market institutions. The Project showed the need for an adequate overall agricultural policy for rural communication to be truly effective.

The realization of the crucial importance of both structural and infra-structural conditions caused a great deal of frustration among us Latin American communication workers, because we felt impotent to improve those conditions. Our message and media power was insufficient to help out a mass of peasants and farmers, caught in the oppressing structure of a stratified, conservative, sometimes almost feudal, Latin American rural sector.

We badly needed a new philosophy of communication and change, and this was provided by Paulo Freire. Freire is a Brazilian pedagogue, exiled from his country in 1964 because his literacy and conscientization methods were considered subversive. Freire distinguished two types of education in the underdeveloped countries: a "banking" type of education, in which the teacher's knowledge and experience is deposited in a passive student's head by means of autocratic methods (see figure 1), and a "problematizing" type of education, in which active students together with the teacher, go back

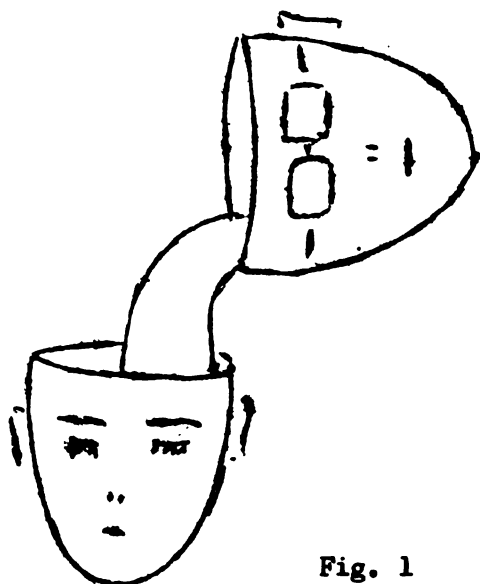


Fig. 1

to reality and by means of dialogue "problematize" the world with fresh eyes. The "conscientization" method eventually was refined and became a "thematic investigation" method. 1/

The fact is, that after reading Paulo Freire's books, most agricultural information men humbly recognized with a mea culpa that our procedures and techniques were pure "banking" education and that we were forever transferring to the peasants our own urban ideas, values, techniques, through persuasive messages that made them dependent from us. This, according to Paulo Freire, is the typical way in which dominant elites all over the world keep the masses under their domination. 15

At the opposite end, the problematizing or "liberationist" type of education, values the peasant personality and culture, helps the individual to take conscience of his situation and to discover cultural tools for his liberation, such as literacy, schooling, syndicalization, political participation, etc.

Obviously, in a reactionary society like ours, this means revolution. Paulo Freire's ideas, however, are firmly rooted on the psychological and pedagogical discoveries of two great living scientists: Carl Rogers and Jean Piaget, who are strongly influencing the orientation of modern education all over the world.

Rogers, a psychologist, discovered through clinical experience that person manipulation does not work in the long range, that if you really want people to change you have to accept them as they are and create an atmosphere

1/ The method itself involves communication at its best, inasmuch as the peasant's "cultural themes" are "codified" in sound or graphic codes which are later presented to the peasants as instruments to discover their own existential and structural situation, to identify their needs and to plan actions to overcome their limitations.

of respect and freedom in your relationship with them. That threat-free atmosphere will permit the person to face himself and undertake self-analysis. This will end in his discovering his genuine self free and unconditioned... a self which according to Rogers - is essentially constructive and good. The importance of a positive "self-concept" or "self-image", which we could call "the assumption of one's own human dignity" puts Rogers theory at the basis of Paulo Freire's ideas and methods. 16

Jean Piaget, a biologist, on the other hand, showed us that intelligence, just as any other biological attribute, develops its increasingly complex structures depending upon the quantity and quality of the stimulation received from its environment. Thus, a child living in a slum, undernourished and growing in a low-stimulation environment, does not develop his intelligence to the same levels that a child growing in a culturally rich environment. 17

A peasant, then, may be ignorant not because he is biologically inferior but because his intelligence was not stimulated enough to pass from the "operatory concrete level" to the "operatory abstract level". Therefore, a type of communication that merely informs the farmer what he has to do, without challenging his intelligence, without demanding from him to understand the problems involved and the possible alternatives for solution, will perpetuate the peasant's intellectual atrophy. Here is, again, another firm basis for Paulo Freire's conscientization methods.

It is encouraging to see how much these ideas influenced the thinking of Latin American communication specialists ^{1/}. Compare Luis Ramiro Beltran's recent words with the ones expressed in the 1964 Santiago Seminar

"Frequently, it is understood by communication the process of transmitting the modes of thinking, feeling and behaving of one or more persons to other person or persons. Generally, it is understood that through such "transfer" the transmitting person

^{1/} The evolution of communication orientation, obviously, is not independent of that of the concept of "development" being but a manifestation of a wider ideological change. The information-transmission mentality goes along with a concept of development as economic growth through technological modernization. The new more humanistic concept of communication as dialogue agrees with the more recent concept of integral development.

has as his main intention to persuade the receiver to adopt these modes of behavior.

This concept of communication is questionable. It is based on a mechanistic analogy whose validity can be questioned. And, what is worse, carries implicitly an autocratic vision of the relationship between human beings. It assumes an active source operating on a passive receiver via the persuasive monologue. It thus suggests a vertical relationship in which the source will tend to direct or dominate the behavior of the receptor".

"Alternatively, it is possible to understand communication as a process of social interaction, based on the use of symbolic systems, by which human beings exchange, on a dialogical transaction affective and cognitive experiences, influencing each other's behavior with various intentions".

"This form of understanding communication supposes a horizontal relationship between source and receiver, based on dialogue. It implies a free and equal opportunity for mutual influence. And it does not recognize the goal of persuasion as the main purpose of the social transaction". (18)

The change in communication orientation did not happen only at the level of ideas; it is being practically implemented, at least in Chile, where the National Communication Project for 1972 (19), drawn by the Institute of Training and Research for Agrarian Reform (ICIRA), includes well planned activities for campesino participation at the different levels of decision-making and management, in communal farming. 2/

2/ The participative approach is not widespread as yet in Latin America. Even in present revolutionary Peru, the National Plan of Agrarian Communication for 1972 explains its objective as follows:

"... Communication, through the Zonal Communication Plans, will coordinate, backstop and dynamize the diffusion of agricultural technologies in each Agrarian Zone, so that the National Communication Plan, which has been prepared with the direct participation of the Heads of the Communication Zonal Offices and the Heads of Zonal Planning, may contribute to obtain the goals established in the National Agricultural Development Plan". (20) No mention is made here of farmer participation.

In Brazil, the state of Piauí is presently the theater of an interesting social experiment in peasant participation for rural development, without structural modification of land tenure, which has the support of the Ministry of Education, the Ministry of Planning, the State Government and the Federal University of Piauí. ()

Summary of part I

The first part of this paper attempted to show that the working concept of communication in Latin America evolved from a simplistic emphasis on separate elements of the communication process (content, codes, means, effects, and receivers) through the comprehension of its processual and systemic nature, to the awareness of the limiting and conditioning influence of socio-structural factors. Although this comprehension is by no means shared by all the communication practitioners, they all face a common dilemma: the need to harmonically integrate two important functions of communication in development: its function as vehicle of technology transfer and its function as promoter of personal growth and social liberation. While both "conscientization" and "technification" are found by most of us to be worthwhile goals, the urgencies of economic development and the resistance of conservative elites put a strain on their compatibilization.

Besides this dilemma, communication as a science and as an art has seen its field of application tremendously enlarged and diversified in the last 10 years. Therefore, in order to discuss the general lines of a training policy, we must now examine what are the present societal demands on communication.

Part II - Societal demands on communication training

The question posed by the chairman of this seminar (page 1) seems aimed at exactly the most serious problems Latin America faces in this decade: how to obtain employment for so many unemployed millions and how to distribute better an income currently so densely concentrated at the small top of the population pyramid. According to Jacob Schatan (22), based on data from ILPES and CELADE:

"... around 1/3 of the agricultural labor force in Latin America . unemployed, including in this concept all persons openly unoccupied, those who work temporally and those occupied in an economic unit working at abnormally low levels of productivity. In some countries that proportion would reach more than one half".

As for income distribution within the rural sector, CEPAL data show that while around 2% of the active population received in 1965 20% of the gross income (which means a per capita income of more than US\$7,000.00), at the other extreme of the social scale, 65% of the agricultural population, involving 19 million active persons or 60 million people, had an income level of US\$290 per active person per year or US\$ 90 per inhabitant. This means that the latter enormous group received 23 times less income than the richer group. Schatan comments (22):

"Considering that in the rest of the region the situation is similar, or even worse, we may conclude that no less than 80 million rural people in Latin America, live in conditions of extreme misery... only comparable to the situation found in the poorest regions of the world".

Of course, unemployment and low income are but two faces of the same phenomenon: marginality. Unfortunately, marginality will probably increase rather than decrease: (Schatan, p. 7)

"...some fragmentary information allows us to state that the process of income concentration and the increase of the misery of large rural masses show signs of becoming more accentuated"

The type of political solution to be given to these problems will depend on the development model adopted by the different countries. Some will choose to accelerate the exodus of rural people to the cities, others

to launch drastic agrarian reform programs, and still others to alleviate through colonization of new lands, the present social tensions.

Nevertheless, independently of the diverse political solutions possible, we may assume that certain actions will have to be taken anywhere in Latin America, which to be more effective will call for communication intervention. Identifying those actions we may have a basis for communication training policy guidelines. An incomplete list of those possible activities follow:

1. "Conscientization" of leaders

Experience has shown (23) (24) that many efforts initiated by rural communities for their own improvement encountered serious resistance from local, regional and national leaders. Because many of these leaders either belong to a previous generation, have vested interests in the maintenance of the status quo, or simply have rigid minds and do not understand the need for change, ways should be found to help them to be more favorable to the general idea of change. A whole new pedagogy is needed to increase the leader's social consciousness.

2. Training farmers in communication skills

Only through genuine participation of the farmers and peasants rural development programs will be truly successful and durable. Rural people, in general, lack the skills necessary to express their ideas, to inform about their problems and to give their opinions about what should be done. Following Chile's example, communicators should find ways to train farmers in the use of the same means of communication that in the past were used on them and sometimes against them.

3. Development of feedback mechanisms

Capacitation of farmers to express themselves is a part of a larger challenge to communicators: the devising of better mechanisms for informing national decision-makers and problem-solving centers about the rural population's situation, achievements and aspirations. Presently very seldom public opinion polls cover the rural, illiterate areas of our countries. Extension and information workers, themselves, more often pass communications from above to the people than from the people to the authorities.

4. Mass education through the mass media

Increasingly we will be called to advise governments and private institutions on the establishment of systems for radio and television education. A new mass pedagogy is being born (25)(26)(27) which may eventually replace many of the traditional schooling systems.

Particularly important will be to imagine new and creative programs oriented to the increasingly large and active rural youth. As for the present, I know of no single radio program specially prepared for the boys and girls, despite the common knowledge that they are open to change and avid for innovation.

5. Rural organization for group pressure

The participation of farmers and farm workers in political and economic decisions affecting their welfare, will only be possible in Latin America if they organize themselves into syndicates, cooperatives and mutual-help societies on nation wide bases. Work in this field requires a special type of communication not much developed among us, but very necessary.

6. Communication participation in program planning

While in the past the agricultural communication workers were utilized only to execute the plans made by other technicians without consulting them in the future they will be called to sit at the planning table with economists, agronomists and administrators, to put their unique knowledge of human variables such as level of knowledge, attitudes, motivation, vocabulary, etc. to work for obtaining participation in the planning process. (28).

The design of communication strategy will then be recognized as a vital part of program planning. This will require a different approach in communication training, which should be based on one side on the theory of planning and on the other on (the facilitation of participation of the people in that process.)

7. Institutional development and coordination

The development process requires changes in men and in social structures, but it also demands the transformation of old institutions and the creation of new ones. Modern organization theory reveals the crucial importance of efficient internal and external communication for institutional productivity. (29) (30) On the other hand, inter-institutional

coordination is also a must for national and regional development and good communication is at the root of it.

Nevertheless, very few communication specialists are competent in institutional analysis and institutional development, despite the fact we now have the help of a new discipline: System Analysis. An example of a possible fertile application of communication and system analysis can be found in the field of agricultural marketing. The marketing system has many communication ingredients within its crop prediction, price information and consumer education sub-systems, to cite only a few. (31) (32).

8. Information organization and distribution

Up to this date, organization and operation of documentation centers and data banks have been in the hands of librarians and documentalists. However, with the movement of those centers from an input to an output orientation for servicing groups working in development programs, communication specialists should enter this expanding field, to complement the abilities of librarians and documentalists with their broader knowledge of behavioral science and message diffusion strategies.

9. Transfer of technology and popularization of research results

Although a large portion of Latin American rural population is still in the stage for which "conscientization" should be the first step toward development, there is another large portion which has already acquired conscience of its needs and which finds the transfer of modern technology the first priority. Both portions of the population, to be sure need to acquire more efficient and profitable production practices.

How to transfer technology in a more dialogical and pedagogical way than was done by the old transmission mentality, is another challenge facing the new generation of agricultural communicators. We insist that massive efforts to increase production and productivity among rural masses are indispensable for development. How to do this without at the same time widening the gap between small family farms and large commercial enterprises, is a matter of concern.

Technology transfer is only a facet of the general problem of popularization of research results, a problem still very poorly dealt with in Latin America. Despite the fact that agricultural extension is carrying to the farmers a substantial amount of research results (when available), there are no consistent communication mechanisms in the majority

of our countries to interpret and deliver simplified versions of these results to the general public via the mass media.

10. Technical training of the agricultural landless labor force

Although we may dream with the day in which every peasant will have his own piece of land and no man will have to hire his sweating arms to others, until that time, however, millions of Latin Americans will keep working for a salary in plantations, ranches and rural industries. If a revolution that would give them land is not possible for the time being, could we help them improve their earning power if we devised effective methods to train them technically? Why wait for industrial trainers to finally pay attention to the training needs of these rural workers? Communication specialists, studying the principles of learning and the modern instructional technology methods, can adapt them for technical training of unskilled farm labor.

This training would also have another objective: to prepare them to move to industrial work if they need to abandon, as they are doing by the millions, their oppressing rural conditions. It is particularly urgent for the young sons and daughters of the farmers who aspire for a better life for their children.

11. Family planning information and education

Last, but not least, communication principles and techniques should be applied to this complex, delicate area, which touches on deeply-rooted beliefs and values. It is an area which demands special training of communication specialists.

Summary of Part II

Should we accept our chairman's statement that for yet some time "a larger portion of income and employment questions must be handled in rural areas", we are faced with challenges of significant proportions in the field of communication at the service of the improvement of rural life.

In this section we attempted to identify certain actions that, independently of the political solutions chosen for the employment and income distribution problems, and no matter what development model is adopted, our countries will have to undertake in the next decade.

The objective of this exercise has been to detect the societal demands on communication, the knowledge of which may orient us in the search for adequate communication training policies.

We would have liked to systematize these societal demands within a unifying conceptual model, but time prevented us from doing it. Therefore, a mere list was presented, of areas which require communication intervention, and consequently, which may have an influence on the selection of communication training objectives, contents and methods.

Part III - Implications for Communication Training

Part I of this paper provided, we hope, a view of the current philosophical orientation of development communication in Latin America. Part II, on the other hand, gave us a view of the possible areas demanding communication intervention.

We propose to base on these two views our suggestions for training guidelines, targets, objectives, content and methods.

1. Training guidelines

- a. The current concept of communication seems to demand from communication training a more structurally-oriented, systemic, problem-centered, interdisciplinary, pedagogical, massive and action-oriented approach.

More structurally-oriented means that trainees should be aware of the past conditions that have historically determined the present socio-economic structures and of the social forces that currently act, either to defend or to alter the status quo, and, as a consequence, to determine the types of relationships prevailing between the urban and the rural sector, and among the different groups composing the latter. Thus, the trainee will be prepared to distinguish communication interventions that will benefit the underprivileged in their change efforts, from those interventions that will but increase the profits of the landowners and the commercial farmers only.

More systemic means that the trainee will see the development of the rural sector as an organic part of the country's general development and the institutions as interrelated sub-systems of a wider system. As an illustration, see what Edward Schuh (33) suggests for the training of agricultural economists:

"What also helps is the technician to think of himself first as an economist and second as a rural economist. This way, agriculture will be studied in relation to the non-agricultural sector and the problems which have their roots in the non-agricultural sector will be more easily recognized".

More problem-centered means that training be based on critical observation of our own reality, with its own peculiar problems and

potentials, and no longer exclusively on intellectual speculations based on foreign realities.

More interdisciplinary means that training should receive in an integrated way, the contributions of the different sciences, so as to enable the trainee to see the different angles of a problem. The biological aspects of a farm practice, for instance, should not be studied as separated from its economic and technical aspects, and the human and social side of the farmer's life. The trainees should always see the wood behind the trees and avoid falling in the blind men and the elephant phallacy.

The interdisciplinary approach requires a radical change in curriculum structure and teaching methodology.

More pedagogical means that communication trainees will no longer put their intelligence and skills, as was thought desirable in previous times, at the service of "human engineering" geared at achieving pre-established economic goals through persuasion and manipulation of behavior. The new communication specialist emerging from a more "humanistic" approach should be considered instead, a professional of Mass Pedagogy and Participative Change.

It also means that the principles of learning and the types of learning should be applied in a more scientific and systematic way. For example, I think that extension methodology should be based on a careful analysis of the learning operations that each type of farm practice or operation requires. Robert Cagne classified learning types in 8 categories, namely: (34):

1. Learning of signals and signs
2. Stimulus-reaction
3. Chain or sequence learning
4. Verbal association
5. Multiple discriminations
6. Learning of concepts
7. Learning of principles
8. Problem-solving

What types of learning operations are involved in the adoption of a new fertilizer formula? Of vaccination against brucellosis? Of contour planting?

The pedagogical approach will also refine our way to establish educational objectives. Benjamin Bloom prepared a Taxonomy of Educational Objectives (35) classifying training out comes in three categories: cognitive, affective and psychomotor. Within the cognitive objective, we find two large sub-group: increase of knowledge and development of intellectual abilities. The second subgroup is further divided in comprehension, analysis, synthesis, and evaluation, and these objectives are finally divided in even more specific educational goals.

This is very important, because we can select our communication methods and media only if we know what our objectives are. In the past, for instance, we may have abused of the objective "increase of knowledge" without paying much attention to objective "development of intellectual abilities".

- b. Communication, being a natural human function and a universal social process, should not be considered the exclusive patrimony of communication specialists. Communication training, therefore, should be provided to all the rural population, as a way to achieve a dialogical relationship. However, the type of training to be provided will vary with the relative "communication density" of the functions performed by different groups. The functions of field change agents for instance, have more communication density than those of farmers. The following figure presents a group of selected training targets ordered by communication density requirement in their training.

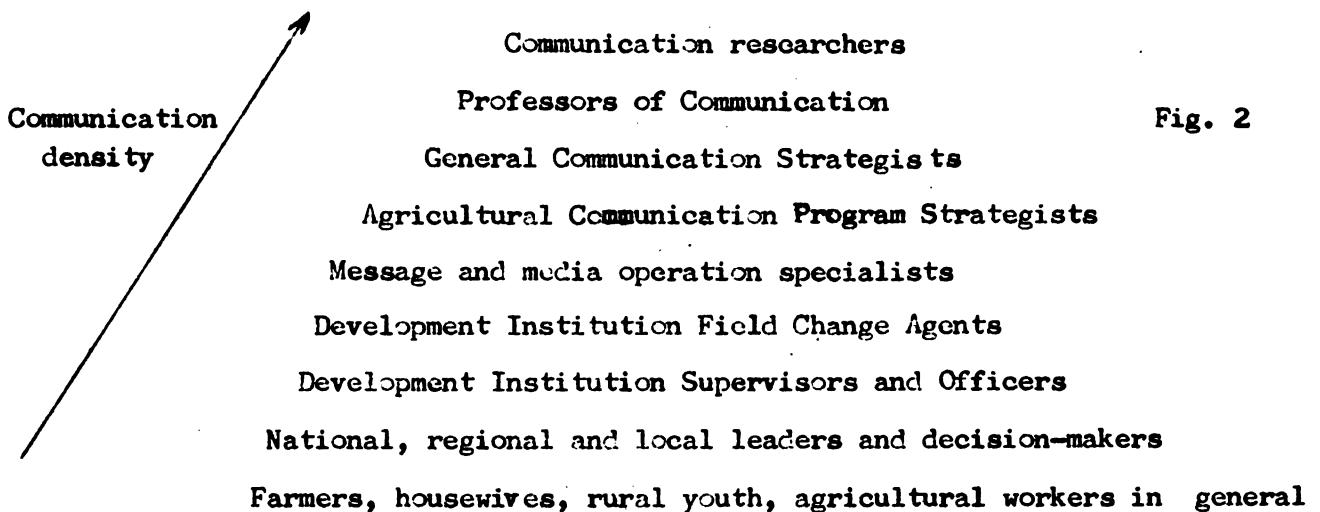


Fig. 2

The spirit of guideline is the need for communication training to be massive. We ought to ~~overcome~~ our past tendency to think, plan and budget timidly when education and communication were concerned, and find the institutional, financial and technical arrangements for a massive uplift of the communication potentials of the rural population. This policy should encourage the establishment of regional training centers and local training mechanisms; production of training literature and materials; extensive and intensive use of radio and TV for group training, and, most important, follow-up systems for the people who have been trained and who now want to use their newly acquired communication skills.

João Gonçalves de Souza proposes institutionalizing the process of rural population training for change:

"To obtain such results more effectively and massively, countries should promote: basic rural extension courses for men, women and children, practical demonstrations, intensive courses, fixed or itinerant rural meetings, etc. All this should be done institutionalizing the work program, which ought to have the character of a continuous activity in which the beneficiaries of the change process would participate, particularly the informal youth leaders, both men and women. The service unions, the rural associations, the agricultural cooperatives are irreplaceable means to receive and transmit agricultural extension methods, rural community development and other techniques to improve living and employment conditions of the campesinos". (36)

- c. This take us to our final guideline: communication training should be action-oriented. It should be undertaken as an organic part of ongoing substantive action programs in which the trainees are or will be participants. Communication competency shouldn't be an end in itself but an instrument to other broader goals and activities. It has been proven that literacy training, as an example, leads to frustration and failure if reading skill does not find a rewarding application in terms of allowing the new reader's engagement in constructive action.

Action orientation is crucial in our age of increasing information exposure. According to Lazarsfeld and Merton (37)

"Constant exposure to this informative flow may serve for narcotizing, instead of activating, the average listener or reader.

... The interested and well informed citizen may rejoice with his own noble situation of interest and information, without perceiving that he has abstained from decision and action ... "

2. Training targets, objectives, content and methods

Let us now analyze one by one the different training target levels indicated in Figure 2.

a. Rural population

Obviously, if farmers and agricultural workers are to be the main agents of their own development - as demanded by a participative approach to progress - they should also be the main targets of communication training. In fact, all the other training levels should but aim at achieving this goal well.

Training objectives for this large and varied group might be summarized as follows:

- To increase the rural population's awareness of their structural situation and its causes, as well as of their cultural deprivation and their social marginality.
- To acquire communication skills that will enable them to discuss, organize and make their aspirations and opinions known by the rest of the population, particularly by the leaders whose decisions are crucial.
- To acquire communication skills to participate effectively in the successive stages of the development planning process: analysis of reality, definition of objectives and guidelines; writing and diffusing the plan; execution; control and evaluation.
- To enable them to pass on to others the technical knowledge and skills they have acquired, so as to make the transfer of technology a massive grass-root process.

This grass-root transfer of information and technology is the key to genuine rural development particularly for those countries lacking the financial means to recruit sufficient number of

professional change agents.^{1/} João Gonçalves de Souza, head of the OAS Technical Cooperation Program calls attention to this when he writes (36).

"Until this moment, the majority of the Latin American countries whose economy and labor-force are predominantly agricultural, have trained their change agents in foreign countries, at the M.S., PhD and other similar levels. Doubtless, until recently this represented a need and a priority; but in the last years it is becoming evident the absolute necessity to train middle level technicians and extend the training effort to the informal level of rural workers and their families. In other words, many rural areas of Latin America lack that intermediate and grass-root element, without which scientific and technological research, as well as the knowledge applicable to the agricultural and social activities of the rural environment, do not reach the mass of campesinos. The latter, for this reason, continue in their inability to improve his work methods, his employment conditions, and, consequently, his and his family's living".

In accordance with the above two objectives, which are the best content and methods?

Plinio de Arruda Sampaio (39), of the FAO/IBD Cooperative Program, formerly associated with ICIRA in Chile, says:

^{1/} The Societe d'Aid Technique et Cooperation (SATEC), France, has experimented successfully the incorporation of farmers to the agricultural extension system. Their scheme consists in assigning one university-trained technician to supervise the work of 10 mid-level agricultural technicians. Each of the middle-level technicians supervises the work of 10 regular farmers recruited to do extension work during the slack season and paid the equivalent of a farm hand wage. SATEC has found that communication between the "extension farmers" and their peers is significantly superior to communication between university-trained technicians and farmers (38).

"If we are dealing with the transfer of knowledge about the nature of the change process, of its conditions and requirements, it seems that the best method is to concentrate instructors/students in relatively isolated place (school, farm, etc) for periods of 10 days to a month. Isolation from daily routine plus permanent interaction among participants and the organization and tasks of collective life, help create an atmosphere favorable to the transmission of values and attitudes. However, experience with periods longer than one month have not been satisfactory, because it seems that long confinement produces a certain fatigue in the participants, causing problems of friction and lack of learning.

If the objective is to transfer techniques and operational procedures it looks as if the best system would be to execute the training activity right on the work place itself in combination with the normal activities".

ICIPA has applied these methods to the training of farmers as well as of local officers of the Agrarian Reform Corporation.

For 1972, ICIRA will innovate its training methods even more imaginatively through the use of modern media, such as TV, radio, newspapers and motion pictures. Let us briefly mention some of their procedures:

TV

ICIRA'S Central Audio-Visual office will produce video-taped training units on farm techniques, administration, social procedures, etc. Through 8 TV teams the tapes will be shown to group of farmers at the Consejos Comunales Campesinos, where feedback on their content will be filmed. The feedback is sent to the central office and incorporated into the original training unit. The revised unit is sent back to the field, together with a new unit needing feed-back. This way, each training situation will include, at the same time, farmer's participation and the evaluation of the results of that participation.

Other visuals to be employed are slides synchronized with narration and sound effects, and single-concept filmstrips and films.

Graphic workshops

The Consejos Comunales Campesinos will be encouraged to make their own wall-papers, posters and leaflets. For this purpose, workshops

will be conducted to train the members on the use of these media, aiming at producing genuine "campesino journalists" to be in charge of everything concerned with activation, communication and propaganda.

Radio

The central office will produce 120 radio programs in 1972 to be broadcast through regional or zonal networks as well as from local stations.

b. Leaders and decision-makers

Training objectives for this group may be:

- To learn how to listen to the voice of the people
- To devise institutional mechanisms for feedback and dialogue
- To acquire communication skills to reach the people in a more democratic and pedagogical way, without paternalism and persuasive propaganda.

It is evident that before attempting to train these leaders in communication they should be exposed to a sort of "sensitivity training" stage in which they would be invited to accept the general idea of change as the very essence of development. In a previous paper I have attempted to design such a sensitivity training experience for opening leaders' minds to the acceptance of change (40)

c. Development institution supervisors and officers

We would keep the same objectives mentioned for the previous group, but adding another one:

- To acquire communication skills for transmitting to their superiors in a convincing way the problems, needs and aspirations of the people.

This objective requires the study of intra-institutional communication channels and procedures, besides that of communication general principles.

Plinio de Arruda Sampaio (39) reports on ICIRA'S methods for training government local officers: "Experience has demonstrated the superiority of group discussion, seminars, panels and other form of pedagogical activities based on free dialogue among participants, over the lecture method".

d. Development institution field change agents

Although the previous three groups are also "change agents", we assume that agricultural extension and health education workers, agrarian reform promoters, and others, who are in close contact with the farmers in the field have a larger "change responsibility" than the rest. Hernan Carrera (41) economist of IICA in Ecuador, describes their situation as follows:

"The professionals at this level, in the rural environment, are the ones who carry the responsibility for making effective the proposed change, because they are the ones who "accept" to live in the rural areas. However, they are, paradoxically, the ones who have less formal knowledge of what has to be done, what they have to do, how to do what they must do and how they can know whether they are doing well or badly"

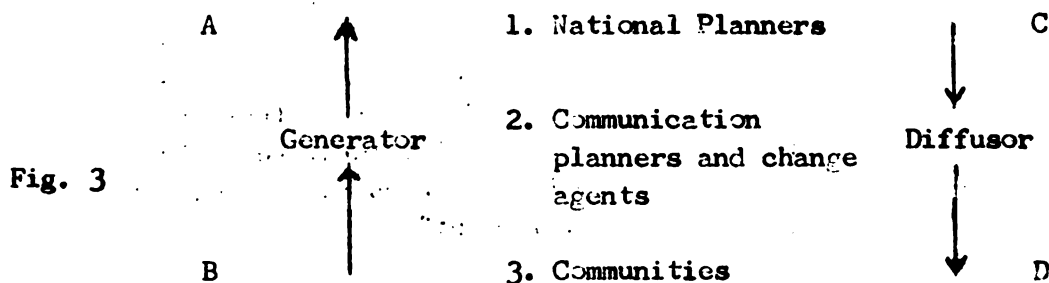
Insofar as Francis Byrnes (42) will present his ideas on the five areas of competency needed by a good change agent, namely:

1. Technical competency
2. Economic competency
3. Science competency
4. Farming competency
5. Communication competency

I will confine my analysis to other aspects of change agent training that may be relevant. I will use as a basis the ideas contributed by a group of colleagues and friends to whom I asked for their (43) opinions:

- "1. Change agents should be trained to be more receivers than sources in their communication with the rural communities; more collaborators than manipulators. This implies that their decoding ability should be developed, so they may perceive adequately the true needs and problems of the people, within a genuine two-way communication. The present image of the communicator as a "diffusionist" should be changed.

2. The change agent has operated so far as an information channel from the decision centers A (see fig.3) to the communities B. If this traditional flow is changed from B to A, the change agent continues in his situation of intermediary, but no longer to persuade B, but A. Therefore, the change is not only one of direction of flow but implies a deeper change in the very system of planning and, consequently, in the type of knowledge required from the change agent and the communicator. He will need, for instance, more knowledge of program planning.
3. Communication's action should be seen within the context of underdevelopment of Latin America and this context must serve as the basis for change agent training. Communication for change and not for maintenance of "status quo" is what is required. Therefore, the change agent should have clear notions of what underdevelopment is, including rural problems vis a vis urban domination.



4. If we look at fig. 3 , we will see that it has four quadrants: A and B in the Generator field, and C and D in the Diffusor field. For each quadrant, specific knowledge and skills are needed. For example: in D (Communicator-Communities) the change agent will need knowledge about motivation, use of audiovisual aids, etc. In B (Communities-Communicator) he will need dialogue methods; in A (Communicator-Planners) he will need a concept of development theories and methods of planning and programing, etc."

For Max Reindl, from Chile (44) farmer's participation imposes on change agents the need to be better trained in Intraorganizational and Inter-Institutional Communication. The reasons:

"Commonly a great deal of emphasis has been put on teaching change agents to communicate with the farmers, but nothing is done to teach them to transmit information from the farmers to the institutions which the agents represent. The consequence is that change agents lack the ability to relate the rural problems to the organizational structure to which they belong, as well as to the structure of inter-institutional communication".

Hernán Carrera (41) presents two interesting ideas: the need to train promoters and the need to train more specialized communicator types

Promoters: Besides the general promotion of the idea of change and development, Carreras think that special promoters should be trained to make people think and discuss about the different aspects of development:

"We could think of promotion of structural changes, of associative production forms, such as the ones created by Agrarian Reform; promotion of campesino organization, of association of users of State services; promoters of colonization; of production increases and crop diversification; promoters of changes in the structure of consumption programmed for increasing demand for strategic products that will accelerate the agricultural sector's development; promoters of social programs such as education, health, housing, community development".

More specialized communicator types: For change agents located at central positions in development institutions, Carrera proposes creating new specializations in the communication field, namely:

Personnel training methodology

Intraorganizational and inter-institutional communication

External institutional communication

Scientific and technical writing

Although most present well trained communicators could, with concentrated effort, master these specific fields, it is true that training institutions seldom make a point of developing focused curricula to make sure that these areas mentioned by Carrera, and others equally needed, are adequately covered.

Another worthy idea was sent to the author by Dr. Hernando Bertoni (45) Minister of Agriculture of Paraguay, refers to the bilingual situation

"We must take in consideration the fact that the rural public in our countries understand messages much better if spoken (or written) in the native language (Guarani in Paraguay). Therefore, their training should be conducted by professors who have this knowledge and not only of the native languages but also of the environment in which the change agents will have to perform".

Dr. Bertoni also states that "it is necessary that change agents should be trained to be able to take initiative and decisions in the opportunities where these were required". This last condition demands realistic practice in problem solving and decision taking by trainees.

We may summarize this segment on change agent training, with a reminder we received from Thomas J. Burke (46) "director of the training center of the Secretary of Agriculture of the state of São Paulo, Brazil:

"The fundamental thing is, both at the level of the organizations in charge of promoting change and at the level of the change agents themselves, to exist an awareness that the nature of the work of the change agent is eminently educational"

Educational, for Burke, means:

"Every change agent must be totally conscious that his social role consists of inducing and unleashing the change process, process that always has a starting point in the farmer himself, through the stimulation of the development of the farmer's potential for modification of his relationship with himself with others and with the environment where he lives".

If these are the requirements, how and where change agents should be prepared for their difficult mission?

The majority of persons consulted seems to favor the position that change agents should be trained at the university level. Some opinions support introducing "communication and/or extension disciplines within the curriculum of the substantive career chosen, such as agronomy, veterinary medicine, economy, sociology, home economics, etc. Other opinions support offering short courses for

professionals who are involved in the promotion of change, so as give them more behavioral science knowledge, planning and communication abilities.

A third group of opinions support specialization on Extension or Communication at the final year or semester of Agronomy, Veterinary, etc.

020 → There seems to be unanimity in rejecting a special university career to prepare change agents.

Says Mario Yuri Izquierdo, specialist on cooperatives of the Organization of American States:

"On the alternatives you mention, I would eliminate from the start the professional level university studies (in Communication), because, although they should not exist as a profession by themselves, they must form part of the regular curricula of various careers related to the social field".(47)

It is now my turn to question all these opinions.

Why can't it be possible, and desirable, to have students prepared at universities with the specific goal of their becoming change agents? Are not rural change agents informal educators of the masses? And are not teachers prepared during 4 years to become educators? Is not the change process complex enough, serious enough, expensive enough, not to deserve a fully prepared professional, who would study 4 or 5 years how to help people accomplish one of the most crucial and difficult processes of our history, which is the process of changing beliefs, attitudes, values, behavior, institutions, and social structures, to achieve sustained and equalitarian national development? Why shouldn't we think of special curricula to form agricultural change agents, public health change agents, animal health change agents, community development change agents, agrarian structure and rural institutions change agents?

It should not be difficult to plan a basic cycle through which all future change agents should go, followed by a specific cycle in which change agents would specialize according to their field of activity. Whether in so doing these students will coincide with agronomy students, veterinary students, etc. in a large number of

courses related to the technical area, is merely an administrative problem. Now that the flexible curriculum is spreading in our countries, the door is open for the new careers that Latin American development requires.

The question is to decide whether we will continue to make the preparation of change agents only a supplementary proposition, with all the superficiality and lack of real competency ensuing, or will make it a full blown professional and academic option. In my opinion, the most convincing reason for the idea of a change agent career is our new concept of participative change. When communication was seen as manipulation of message, media and people, a short course was all that was needed. Today, if we are to engage in genuine education of the masses, in a interdisciplinary and systemic way, we need to study a lot more the relation between communication and human change.

e. General and Agricultural Communication Strategists

Most of the dilemmas of change agent training also come up when thinking of the training of communicators working higher up in the organizational hierarchies.

However, opinion seems to be unanimous in favor of their being prepared at the post-graduate level. At this level also the Communication professors and researchers would be formed (fig. 2), Opinion is also unanimous that graduate training must be carried out in Latin America.

Now, it just happens that in all Latin America there is only one university offering post-graduate courses in Rural Communication and that is Chapingo in Mexico.

The other existing program, established in 1967 at the La Molina Agrarian University, was discontinued for lack of support by the university and by IICA. (48)

I am glad to announce, however, that the University of Brasilia is planning to start an M.S. level Course on "Communication for Development, August 1973.

It is my hope that the Brasilia program builds on the mistakes committed in La Molina, and that the communication strategists and

mass educators needed will be prepared today. In order to achieve this goal, a few considerations may be made:

1. If its orientation will be truly structural, systemic, problem-oriented, interdisciplinary, pedagogical and action-oriented, the curriculum, the methods and the administration of the program should be such as to give the students a living and learning environment in which they will internalize these orientations.

What does it mean operationally?

The curriculum content should be structured in the form of integrated or interdisciplinary modules, instead of in the form of separated self-sufficient disciplines. For instance, a module on Underdevelopment and Development might consist of the whole spectrum of factors determining underdevelopment and development. These will include sociological, economic, psychological cultural, historical, angles, that should be studied as the complex gestalt they are, and in relation to wider gestalts, such as the international power structure, the international market forces, etc. Another curricular module might be, for instance, Non-Verbal Languages of the Peasants. In this module professors of the different disciplines involved will discuss with the students the non verbal signs for economic transactions, for technical conversation etc and the perceptual, cultural and sociological background for these signs and their meaning.

2. The selection of integrated modules to compose the graduate curriculum should be made on final product basis, i.e. what a communication strategist for rural development is expected to do. Curricula should no longer be established on the basis of traditional disciplines and their knowledge content.

In other words, the program should make a list of the terminal behaviors desired for the students at the end of their career, in terms of operations they have to execute competently. If, for instance, one of those operations were: to measure the influence of television on rural audiences there should be in the curriculum an integrated module in which student learn TV different aspects, such as a) the source's intentions, b) the objective communication structures of the TV message, c) the possible reactions of the public in relation to a and b, d) the best tools for effect measurement, etc. (49)

As can be seen, knowledge, in this framework, is treated only as a means to achieve operational behaviors. Thus, the curriculum is built on the basis of the professional services expected to be rendered, and not on all the knowledge accumulated in the already vast field of communication.

3. This approach to curriculum building may seem too pragmatic to some. However, the need to economize on superfluous knowledge should be compensated by the need to study with adequate depth that knowledge which is considered indispensable.

For example: my Communication studies program in the United States covered in the most superficial manner subjects such as:

Theory and methods of learning

Theory of the signs (semiology)

Information theory

Institutional communication

System analysis

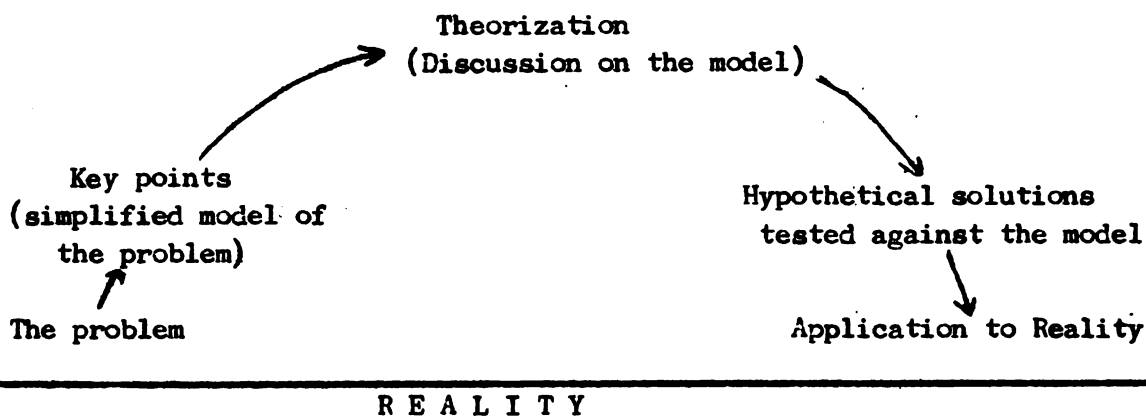
Planning theory and methods

all of them areas of knowledge which I needed badly after graduation.

This deficiency may be attributed, in my opinion, to the fact that neither I as a student nor the faculty had clear objectives in terms of operational competencies for us graduate students in Communication. It may be said that this is up to the student to decide. This may be true in the United States, where universities can afford to offer graduate courses along a very broad spectrum of options. However, that is a luxury we cannot afford in the developing countries, where we must narrow our objectives and work at them in depth.

If our objective is to form a strategist for participative rural development, for instance, we would have to go in depth with curricular modules chosen with view on the terminal competencies pertinent to a communication strategist. Of course, if we later broaden our objective to prepare also personnel for information and documentation centers, we would structure other sets of curriculum modules.

4. Classes ought to be attended by as many professors as are considered relevant with respect to the different angles involved in the curricular module being worked out. The method of class development should follow the problem-centered scheme of the arc, suggested by Charles Maguerez (50)



In this scheme the problems are presented by the professor to the students or are brought by them to the class. The students are first requested to describe their experience and ideas of the problem, and then to abstract its key points. They arrive at a simplified model of the problem, so as to search for an explanation for the key variables and their relationship. Looking for explanations they appeal to theory, research results, etc. task in which the professor participates supplying orientation and probing questions. Out of theory and previous research results the students extract possible solutions, some of which are too wild to be acceptable within the framework of the model.

The final viable solutions are then applied by the students to reality.

The whole process implies planning and decision taking, and requires the constant application of group dynamics, library research, outside consultation, simple research projects. In this scheme visual aids are no longer transmission instruments, manipulated by the teacher, but devices used by the students to understand the problem and communicate about it. Whenever a great deal of factual

information has to be absorbed by the students, programmed instruction or other devices should be used to save the teacher's time for more decisive tasks than acting as a transmitter or information.

5. The graduate program should maintain close constant contact with the out-campus reality. In Latin America graduate students in Communication may have all kinds of institutions as laboratories in which to work and learn. If we take Brazil as an example, ABCAR, the national extension organization, is trying to set up 16 state planning units, each one of them with a communication program strategist. INCRA, the national agrarian reform and colonization organization is worried because its internal communication network is working in-efficiently. The Ministry of Agriculture is re-structuring its research organization in the form of a modern autonomous enterprise with a dynamic approach to biological, technological and socioeconomic research and will need communication strategists to direct technological diffusion and internal information flows. Graduate Communication program should sign agreements with these and others organization for student practice.

6. One pitfall that a graduate program in Communication for Development should avoid is to so exaggerate its accent on Development that its accent on Communication is weakened down to straight incompetence. We must remember that, although there are many specialists in the field of Development, only communication specialists master the science and the art of the Sign and the Symbol and their relation to human thinking, feeling and behaving. Although we may study Social Stratification and Cultural Antropology, we must study even more deeply Semiology and Psychology of Perception, Motivation and Learning. Because this is our metier, our unique field of contribution.

Two concret examples of my experience justify the above position:

- a. As an advisor to the Rural Communication Service of the state of São Paulo, I had recommended that all communication materials should be pre-tested before distribution to farmers. The results of the first tests dramatized the need for communicators to know more about rural people's modes or perception and learning. When a leaflet about brucelosis control was tested, it was found that:
 - . The majority of farmers do not handle the leaflets as expected i.e., from the first to the last page. They started wherever attention was aroused.

- . They did not follow the desired sequence of illustrations, indicated by arrows and numbers. They jumped from illustration to illustration in a totally erratic way, according to the relative attraction of the figures.
 - . They tended to ignore the sub-titles in the text.
 - . They interpreted drawings literally: because a drawing of a cow and a calf on a pasture had a strong black and white contrast, they said: "There must have been a serious drought; sunshine was too strong. There is very little grass, that's why animals get sick". Apparently the artist was concentrated on drawing the cow and did not pay attention to the amount of grass he drew to represent the pasture. But for the farmer this is a serious concern.
 - . They had serious difficulty in reading words out in the middle at the end of a line and continued in the next.
 - . They had trouble relating the text to its corresponding illustration, especially when their relative position changed.
 - . When a colour was used as a code for something, such as red for representing "brucelosis infection", the farmers tended to interpret everything colored red as indicating brucelosis infection.
 - . Abstract symbols were seldom understood. For instance, "crossing out" an object, (i.e. covering the object with a cross to mean "eliminated") was not understood by most farmers.
- b. The high degree of comprehension of literary, flowerish and romantic materials by the peasants has surprised many people. I refer particularly to the "folhetos" popular in the Brazilian Northeast. These are cheap booklets written in verse, sometimes 24-page long, on the most fantastic subjects, such as misterious crimes, social revolts, and romantic adventures.

The wording of the verses is anything but simple. Folhetos do not follow our rational criteria for simplified writing: simple words, concrete meaning, short sentences, straightforward sentence structure, and other Flesch-like recommendations. But they "communicate"! The peasants not only understand the stories but

memorize them and repeat them to their illiterate friends and relatives.

This falls under the general name of Folkcommunication. Should we not study seriously coding and decoding patterns of rural populations?

These two examples show that graduate training should prepare communication specialists with a broad knowledge of development and not development generalists with a superficial knowledge of communication.

Summary of Part III

This part discussed guidelines for communication training as well as possible training targets, objectives, content and methods. The guidelines highlighted the need for more structurally-oriented, systemic, problem-oriented, interdisciplinary, pedagogical, massive and action-oriented approaches to communication training. The targets occupied several levels whose training is considered crucial for the next development decade.

The objectives centered on the goal of dialogical participation of the rural population in the planning and execution of development actions.

Arguments were presented in favor of the professionalization of the career of Rural Change Agent at the university level.

The formation of communication strategists as well as professors and researchers at the post-graduate level in Latin American Universities is recommended, under certain curricular and methodological conditions. The use of "integrated curriculum modules" is suggested to obtain a true interdisciplinary integration around nuclei of knowledge required by the training objectives. With respect to methods, the author recommends a problem-based scheme demanding active student participation in "problematizing" reality, theorizing it and arriving at solutions adequate to the particular conditions of the underdeveloped countries.

REFERENCE MATERIALS

- (1) Beltrán, Luis Ramiro. La formación de especialistas en comunicación. En "La Comunicación en el Desarrollo Económico", informe del Seminario sobre el tema, Santiago, Chile, Octubre 26-31, 1964. p. 88-100.
- (2) Rogers, Everett. The Diffusion of Innovations, Glencoe, Ill. Free Press, 1962.
- (3) Bohlen, Joseph and George Beal. The social action process. IICA, ADECO Course, 1960.
- (4) Spicer, Edward. Human Problems in Technological Change, New York. Russel Sage Foundation, 1957
- (5) Berlo, David K. Speech at Fort Collins, Colorado, August 1958. In Lecturas de Consulta, ADECO Course, IICA, 1960.
- (6) Schramm, Wilbur. Mass Media and National Development. Stanford University Press, 1964.
- (7) IICA/AIA/Ministry of Agriculture, Santiago, Chile. Report of the Seminar on Communication in Economic Development, October, 1964 page 9.
- (8) Myren, Delbert T. The Role of Information in Farm Decisions under Conditions of High Risk and Uncertainty. In the Proceedings of the First Inter-American Research Symposium on the Role of Communication in Agricultural Development, Mexico City, Oct. 5-13, 1964, pp. 94-100
- (9) Diaz Bordenave, Juan. The search for instrumental information among farmers of the Brazilian Northeast. Un published PhD dissertation, Michigan State University, 1966.
- (10) Gruning, James. Information and the economic decision-making process of Colombian peasants. Paper submitted to the internat. Communication Division, Association for Education in Journalism, for presentation at the August 1969 Convention, Berkeley, California.
- (11) Dias, Marco Antonio Rodrigues. Le Contrôle Social dans la Presse Bresilienne. Institute Français de Presse de l'Université de Paris. Mars 1968.

- (12) Roca, Luis. Los intereses económicos y la orientación de noticias sobre el movimiento campesino. Campeño 1 (1): 37-52. 1969.
- (13) Mattelart, Armando. Estructura del poder informativo y dependencia. Cuadernos del Centro de Estudios de la Realidad Nacional (CEREM). Santiago, Chile, N° 3: 37-76, 1970.
- (14) CIMMYT, Mexico. El Proyecto Puebla, 1967-1969.
- (15) Freire, Paulo. Extensión o Comunicación? Santiago, Chile, ICIRA, 1969, 76 p.
- (16) Rogers, Carl. Freedom to Learn. Charles Merrill Publishing, Co, Columbus, Ohio, 1969.
- (17) Piaget, Jean. Seis estudios de psicología. Rio de Janeiro, Fundo de Cultura. 1961. 4a. edição.
- (18) Beltrán, Luis Ramiro. La problemática de la comunicación para el desarrollo rural en América Latina. Presentado en la Reunión Anual de la Asociación Interamericana de Bibliotecarios y Documentalistas Agrícolas, Buenos Aires, Abril 10-14, 1972.
- (19) Funes, Santiago et al. Proyecto de Comunicaciones ICIRA 1971-1972. Santiago, Chile, 1972. 60 p.
- (20) Ministerio de Agricultura, Peru. Plan Nacional de Comunicación Agraria 1972. Oficina de Información Técnica. 110 p.
- (21) Souza, João Ribeiro de. Projeto Piauí, Um Modelo Brasileiro de Desenvolvimento Integral Participativo. Teresina (Piauí), Projeto Piauí, 1971.
- (22) Schatan, Jacob. El problema del desempleo agrícola en América Latina. Trabajo presentado en el Seminario sobre la Marginalidad en América Latina. Santiago, Chile, Nov.23-27, 1970.
- (23) Adams, Richard et al. Cambios Sociales en América Latina. Mexico. Libreros Mexicanos Unidos, 1965.
- (24) Erasmus, Charles J. Man Takes Control. University of Minnesota Press 1961.

(25)	Diaz Bordenave, las masas. IIC				ucación de
(26)	Beltrán, Luis Ra educación para Comunicación,				les en la hanza de
(27)	Bernal Alarcón, de comunicaci				y medios ar, 1971.
(28)	Carvalho, Horac un published				Planejamento
(29)	Havelock, Ronald Utilization of Institute for				semination and f Michigan,

(30) Axinn, George. Paper presented at the Center for Economic Development and Administration Conference on Institution Building and Development, Tribhuvan University, Katmandu, Nepal, June 1971

(31) Woods Thomas and Judith G. Fender (editors). Conference on Institution Building, Washington D.C. Dec. 4-5, 1969.

(32) Smart, Lyman, F. (editor). Proceedings of the Conference on Institution Building. Logan, Utah, 1970.

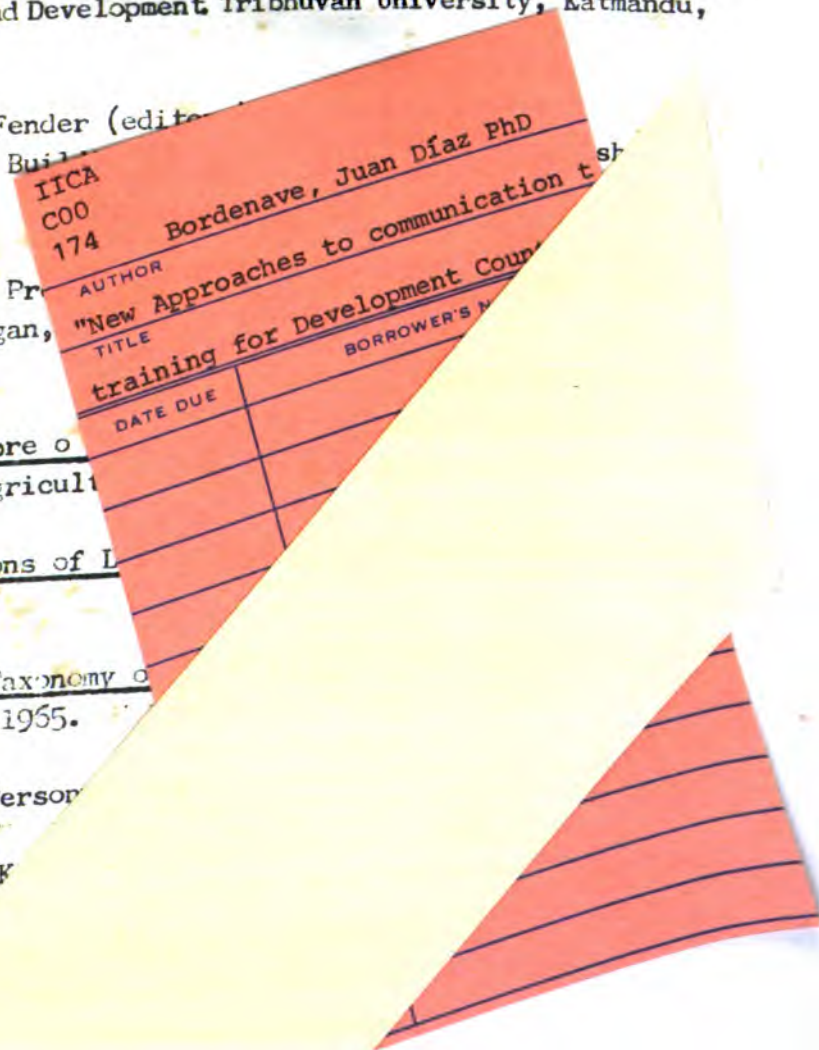
(33) Schuh, Edward. Pesquisa sobre o desenvolvimento da comunicação em Brasília, Ministerio da Agricultura, Brasília, 1965.

(34) Gagné, Robert. The Conditions of Learning. Englewood Cliffs, New Jersey, Prentice-Hall, 1965.

(35) Bloom, Benjamin (editor). Taxonomy of Educational Objectives. New York, David McKay Co., 1955.

(36) Souza, João Gonçalves de. Personas e grupos. Rio de Janeiro, 1965.

(37) Lazarsfeld, Paul and Robert K. La industria de la cultura. Mexico City, 1965.



- (38) Ferragut, Casto. Un sistema de extensión agrícola orientado al incremento acelerado de la productividad. Desarrollo Rural en las Américas, Vol. II N° 2, Agosto 1970.
- (39) Sampaio, Plinio de Arruda. Personal letter to the author.
- (40) Diaz Bordenave, Juan. Bases tentativas para un curso sobre la idea del cambio. Paper presented at the meeting of the Asociación Latinoamericana de Fitotecnia, en Bogotá. Nov. 22-28, 1970.
- (41) Carrera Andrade, Hernán. Personal letter to the author.
- (42) Byrnes, Francis C. and Kerry J. Byrnes. Agricultural Extension and Education in Developing Countries. Chapter B. 9. of the book Rural Development in a Changing World, edited by Raanan Weitz, for MIT Press. May 1969.
- (43) Ramos, Eduardo. IICA-CIRA, Memorandum to the author. April 1972.
- (44) Reindl, Max. Personal letter to the author.
- (45) Bertoni, Hernando. Personal letter to the author.
- (46) Burke, Thomas Joseph. Personal letter to the author.
- (47) Yuri, Izquierdo, Mario. Personal letter to the author.
- (48) Salinas, Luis. IICA memo to the author, may 1972.
- (49) Eco, Umberto. Para una indagación semiológica del mensaje televisivo En Umberto Eco et al Los Efectos de las Comunicaciones de Masas, Editorial Jorge Alvarez, Buenos Aires, 1963.
- (50) Maguerez, Charles. Elementos para una pedagogia de massa na assistencia técnica agrícola. Relatório de assessoria prestada à Coordenadoria de Assistência Técnica Integral, Secretaria da Agricultura, Estado de São Paulo, Campinas, 1970.

DE EVOLUCION

1987

rt p
cial o
de la cult

