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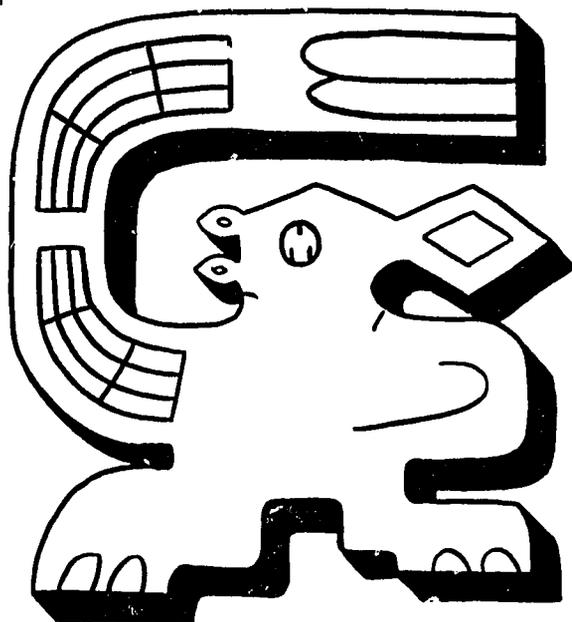
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Communication and the Economic Decision-making Processes of Colombian Peasants

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Communication and the Economic Decision-making Processes of Colombian Peasants

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The process depicted by the "revolution of rising expectations" is a deeply attractive one. It conjures up the image of a peasant in some primitive land, leaning on his crude plow and looking to the horizon, where he sees dimly, but for the first time (and that is what is so revolutionary about it), the vision of a better life. From this electrifying vision comes the necessary catalysis to change an old and stagnant way of life. The pace of work quickens. Innovations, formerly feared and resisted, are now eagerly accepted.

[Robert L. Heilbroner]¹

The idea that a revolution of rising expectations is at the heart of the modernization process has long been popular among social scientists in general and communication theorists in particular. It is especially attractive to communications theorists because it is through mass media exposure and interpersonal communication processes that the peasant is generally assumed to gain the information needed to create rising expectations and motivations for modernization.²

* The author is assistant professor of journalism, University of Maryland. This study was conducted while he was assistant professor, Land Tenure Center, University of Wisconsin. Financial support came from the Land Tenure Center, supported in part by the Agency for International Development, and from the University of Wisconsin's Center for International Communications Studies. Herman Felstehausen, Lloyd Bostian, and William Thiesenhusen made valuable suggestions on an initial draft of this article, which was first presented to the International Communications Division of the Association for Education in Journalism at the August 1969 convention in Berkeley, California.

¹ Robert L. Heilbroner, "Counterrevolutionary America," *Commentary* (April 1967).

² One of the first references to the revolution of rising expectations, as well as the foundation for much of the communications research conducted among peasants, comes from Lerner's study of communication and modernization in the Middle East (see Daniel Lerner, *The Passing of Traditional Society* [New York: Free Press, 1958]). For a recent review of communications studies dealing with peasant modernization and presenting results of several studies conducted in Colombia, see Everett M. Rogers in association with Lynne Svenning, *Modernization among Peasants: The Impact of Communication* (New York: Holt, Rinehart & Winston, 1969). Another important study of peasant communication in Colombia is Paul J. Deutschman's "The Mass Media in an Underdeveloped Village," *Journalism Quarterly* 40 (Winter 1963): 27-35.

In continuing the above passage, however, Heilbroner states that much is delusive in this view. "For the buoyant appeal of its rhetoric conceals or passes in silence over by far the larger part of the spectrum of realities of the development process."³ The most important of these realities are the structural, institutional and social rigidities that must be broken if meaningful development is to ensue. It is, however, these aspects of development in which communication seemingly has the least effect. Because of insufficient attention to structural factors, most studies of communication and peasant modernization have tended to oversimplify and overestimate the role and effect of communication.

This paper will argue that communication is a complementary factor to modernization and development—that it can have little effect unless structural changes come first to initiate the development process.⁴ Data from a study of Colombian minifundistas (small farm operators) will be analyzed in order to substantiate this conclusion.

Communication among Peasants

Studies of communication among peasants have generally focused on mass communication exposure and other types of communication behavior as phenomena isolated from the structural situation. A number of social-psychological antecedents and consequences have been used to explain communication behavior.

According to McNelly, "The antecedent variables tend to be factors such as education, socio-economic status, literacy, age, and family background. The consequent variables often include knowledge, attitudes, and motivations regarding modernization, empathy, opinion leadership, and innovativeness."⁵ Rogers states that "modernization is essentially a communication process"⁶ and further that answers to "questions about the development and modernization of traditional peoples lie embedded in the interrelationships of a series of conceptual variables such as literacy, innovativeness, interpersonal and mass media communication, empathy, achievement motivation, cosmopolitanism, and fatalism."⁷

Most of these communications theorists acknowledge that structural rigidities impede the effect of communication on peasant modernization. But few have systematically studied the interrelationship of communication variables with these structural variables. The hypothesis presented here

³ Heilbroner.

⁴ This position has been substantiated in a previous study of communication and decision making of Colombian latifundistas (see James E. Grunig, "Information and Decision Making in Economic Development," *Journalism Quarterly* 46 [Autumn 1969]: 565-75).

⁵ John T. McNelly, "Perspectives on the Role of Mass Communication in the Development Process," in *Mass Communication and the Development of Nations*, ed. David K. Berlo (East Lansing: International Communication Institute, Michigan State University, 1968), pp. 1-11.

⁶ Rogers, p. 43.

⁷ *Ibid.*, p. 2.

Economic Development and Cultural Change

is therefore quite different from that currently in vogue. The order of causality is reversed to state that structural change is the essence of development and communication a complement—after structural change has taken place—and not that development is a communication process complemented by structural change.

In other words, both communication behavior and accompanying social-psychological characteristics are derived from the situation in which the individual is found. Unless we consider the structural situation in which communication takes place, we are merely engaging in a vicious circle of relating characteristics of development to other characteristics of development while ignoring the reasons which brought them into existence. Unless the situational structure is favorable for development (i.e., opportunities are available), communication can be of little use in the development process and the social-psychological attributes of modern people will never come into existence among the peasantry.⁸ The complementary function of communication is thus to provide situationally relevant information⁹ needed by the individual to understand and adapt to new conditions resulting from a modernizing situation.¹⁰

The principle hypothesis of this study is, therefore, that two factors are necessary for peasant modernization: (1) the existence of opportunities (decision alternatives) and (2) the individual capacity to perceive and solve the problems which the existence of decision alternatives implies. Seeking and using information are hypothesized to be important components of the capacity to solve problems.¹¹

⁸ This is essentially an operant conditioning point of view (see B. F. Skinner, *Science and Human Behavior* [New York: Free Press, 1953]; see also John H. Kunkel, "Values and Behavior in Economic Development," *Economic Development and Cultural Change* 12 [April 1965]: 257-77).

⁹ Information is a loosely defined concept in most communications research and is generally used as synonymous with a message. The definition used in this study is that of McDonough, who breaks the general concept into three components: *data* are unevaluated messages, *information* is data evaluated to apply in a specific problem situation, and *knowledge* is data evaluated for future use in general (see Adrian M. McDonough, *Information Economics and Management Systems* [New York: McGraw-Hill Book Co., 1963], p. 76). The concept of information used here thus refers to any message generally related to a specific problematic situation. Situationally relevant information is information about attributes of alternative solutions (opportunities) to the problematic situation—solutions which are relevant to the individual. The concept of situational relevance comes from Richard F. Carter, "Communication and Affective Relations," *Journalism Quarterly* 42 (Spring 1965): 203-12.

¹⁰ For a conceptualization of the function of communication as the promotion of understanding or coorientation, see Richard F. Carter, "On Defining Communication," paper presented at a session on "Human Communication Theory Building" sponsored by the National Society for the Study of Communication, Chicago, December 30, 1966. Also see Steven H. Chaffee and Jack M. McLeod, "Sensitization in Panel Design: A Coorientational Experiment," *Journalism Quarterly* 45 (Winter 1968): 661-69. Their views can be contrasted with Rogers's implicit assumption that the function of communication is persuasion (see Rogers, p. 7).

¹¹ Given the position that information is useful only to individuals for which opportunities exist, then the "climate for modernization" hypothesis can be given

James E. Grunig

In short, a more adequate role for the communication scholar involved in development questions would be to study communication in the context of the situation in which it takes place. He would determine the structural changes which must precede effective communication and then determine the type of information which would be situationally relevant to an individual in a changing situation. This means that the development-oriented communication scholar cannot concentrate on communication alone or he will overlook basic problems which determine the effectiveness of communication. It usually means he must study economic and political institutions and related individual variables which are generally not included in communications studies.

Structural Rigidities in Colombia

Up to this point, "structural, institutional, and social rigidities" have been referred to only in general terms. What are some of the specific situational restrictions which must be overcome before the modernization process ever begins? These structural rigidities of course vary from country to country, but for Colombia several examples can be provided.

The research on which this paper is based indicates that the Colombian peasant generally cannot make much use of information because of: (1) highly unstable markets at the village level; (2) a land tenure system which concentrates the best land in the hands of large landowners; (3) insufficient roads and poor-quality transportation facilities; (4) poor distribution of modern production inputs; (5) insufficient education and a type of educational system which provides training of little practical use; (6) an institutional credit system which excludes most peasants; and (7) sources of information which seldom provide situationally relevant information.

The reasons why these situational blocks exist cannot be substantiated from the research results presented here, but they can be inferred from other studies of Colombia.¹² All seven factors are structural variables which cannot be controlled by an individual peasant; they can be changed only by group action. Group action is generally unlikely, however, because of

more substantive content. This hypothesis was formulated to explain why mass media has been found to have few specific effects on individual behavior in underdeveloped countries. The explanation proposed has been that mass media exposure creates a generally favorable attitude toward new ideas, or a climate for modernization. But a reversal of the causative direction of the hypothesis is also plausible. Media exposure does not create innovative individuals; rather, innovative individuals have opportunities and a need for information and thus expose themselves to the media in hopes of gaining new facts. But since the media in a country like Colombia generally contain little information which is situationally relevant to the peasant, few direct effects of exposure can be found. For the origin of the concept, see John T. McNelly, "Mass Communication and the Climate for Modernization in Latin America," *Journal of Inter-American Studies* 8 (July 1966): 345-57; see also Rogers, p. 110.

¹² See especially Robert H. Dix, *Colombia: The Political Dimensions of Change* (New Haven, Conn.: Yale University Press, 1967), pp. 42-55, 176; and Orlando Fals Borda, *Subversión y cambio social* (Bogotá: Ediciones Tercer Mundo, 1969).

Economic Development and Cultural Change

two factors: (1) a political system controlled by a small, elite "oligarchy" which excludes most peasants and whose primary function is to maintain this ruling class in power and (2) a dominating religion and community organization which maintains the status quo and discourages the peasant from pressing his demands upon the political system. From a communication viewpoint, an extremely important accompanying factor is that control of the mass media and other sources of information lies with these groups who have little desire to modernize the peasantry.¹³

We will return to the implications of these last two factors for studies of communication and peasant modernization after documenting the principal thesis of this study: the limited effect of communication in the face of structural rigidities.

A Decision-making Approach to Communications

As stated above, the principal hypothesis of this study is that communication has little effect in modernizing peasants until opportunities are available within the situation. When a peasant has several alternatives among which to choose, then communication plays an important complementary role by defining the attributes of these alternatives—or, more accurately, their expected consequences. This hypothesis can best be tested by focusing attention upon the decision-making setting within which individual Colombian peasants have to operate, and upon their cognitive decision processes within that situation.

Five different cognitive decision processes were conceptualized. The characteristics of the decision types are based upon both the nature of the antecedent situation (number of opportunities) and the differing behavior of individuals acting on these opportunities (ability to solve problems). Communication behavior differs for each of the decision types. The five decision types conceptualized are problem solving, constrained decision, ignorant habit, routine habit, and fatalism.¹⁴

Problem solving consists of the recognition that alternatives, and therefore a problem, exist or have existed, and of weighing and choosing

¹³ See, for example, Dix, pp. 172, 389. Rogers assumes that the bulk of media content in developing countries and in Colombia in particular is "pro-development" (Rogers, pp. 99, 122). In a superficial sense, this may be true in that the ruling class generally favors "development"—especially development which improves its own level of living. Thus, newspapers and other media generally talk about development activities. But a more careful analysis of media content and development programs would indicate that both the programs and the information provided about them are carefully designed to maintain the status quo and not to develop the peasantry in any real sense of the term "development."

¹⁴ For a complete conceptualization of these typologies, see James E. Grunig, "Information, Entrepreneurship, and Economic Development: A Study of the Decision Making Processes of Colombian Latifundistas" (Ph D. diss., University of Wisconsin, 1968), chap. 2.

among alternative solutions. Volition, or perceived volition, in making the choice exists. Decision rules or intelligent habits which have solved the problem before, and, upon consideration, continue to solve the problem, are important elements of this decision behavior. Because the individual evaluates alternatives, information is useful; thus, information seeking is an important aspect of problem solving. Decision rules, however, reduce the amount of information seeking needed. This is the only decision behavior which is "modern" in nature.

Constrained decision is characterized by physical and institutional blocks within the system which rule out all but one alternative. There is thus no perceived volition. Because alternatives do not exist, overall information seeking will be low, although information concerning presently excluded alternatives will not be avoided.

Ignorant habit is much the same as constrained decision, except that alternatives are ruled out by a lack of mental capacity, knowledge, education, or experience. Because information generally cannot be utilized, overall seeking will be even lower than in constrained decision.

Routine habit is characterized by a lack of consideration of all but a habitual alternative. It is a rigid cognitive process in which problems are not perceived and where there is little thought or recognition of alternatives. Information seeking is negligible and directed toward information relevant to the habitual alternative.

In *fatalism*, alternatives are not considered because the individual believes that he cannot control his destiny, but instead thinks it is controlled by supernatural or other outside forces. Information seeking does not occur.

By measuring these modes of decision and determining their antecedents and consequences within the Colombian context, it is possible to test the principal hypothesis presented above. Modern decision behavior—problem solving—should be preceded by structural opportunities, characterized by the seeking and use of information, and should lead to consequences expected of modern peasants—such as increased income, innovativeness, and modern attitudes. The other decision modes should be preceded by the specific situational blocks conceptualized above and should not lead to modern consequences.

The Study Method

Since the hypothesis presented here specifies that a process takes place—structural opportunities lead to a given type of decision and communication behavior and subsequently to specified consequences—a methodology is needed which can isolate the time order of the variables. Experimental procedures would be most adequate but would require much more time to test the hypothesis than is normally available for a project of this type. Therefore, the basic methodology chosen was *Q*-methodology, as

Economic Development and Cultural Change

described by MacLean, Stephenson, and Cattell,¹⁶ but adapted to make use of survey data rather than *Q*-sort data.

In *Q*-methodology (as opposed to standard *R*-methodology), a limited number of case studies of people are conducted, and the people are correlated and grouped into typologies on the basis of all variables included in the analysis. This study measured seventy-six variables which covered a large number of economic, social, political, physical, and communications aspects of the situation as well as personal characteristics of the individual.

Specifically, the methodological operations used in the study were the following:

1. A number of variables are measured for each person in the sample and converted to standardized *Z*-scores. *Z*-scores are necessary because all variables must be on a standard scale to make correlation of people possible when a variety of measuring techniques are used. Each variable score thus represents the relative variation of each person around the mean for that variable.

2. A matrix is developed in which each person is correlated with every other person in the sample using the standardized scores for all variables. This step is the reverse of standard correlation techniques in which two variables are correlated on the basis of a sample of people; here two people are correlated on the basis of a sample of variables.

3. This matrix of intercorrelations is submitted to factor analysis in order to abstract underlying factors—that is, factor analysis places each person into one or more groups on the basis of his intercorrelation with other people. The factor represents a grouping of people around a common set of attributes—a type of person. The loading (between 0 and 1.0) of each person indicates how strongly he represents or is typical of the group.

4. The importance of each variable in describing the type of person is determined by computing factor scores for each variable on each factor. This computation is made by weighting the variable score of each individual in a factor by his loading on the factor and summing the result for all individuals in the factor. The factor scores are then standardized into *Z*-scores to allow comparison across factors.

5. Comparison of the *Z*-scores for all attributes on one factor indicates which variables are most important for each factor or group of people. Comparison of the *Z*-scores for each attribute across factors indicates their relative importance in distinguishing one factor from another. Thus, for example, it would be possible for a traditional and a modern typology to emerge. Comparison of differences in factor scores on all the variables would indicate the important characteristics of the modern as opposed to the traditional group.

¹⁶ Malcolm S. MacLean, Jr., "Some Multivariate Designs for Communications Research," *Journalism Quarterly* 42 (Autumn 1965): 614-22; William Stephenson, *The Study of Behavior: Q-Technique and Its Methodology* (Chicago: University of Chicago Press, 1953); Raymond B. Cattell, *Factor Analysis* (New York: Harper & Row, 1952), pp. 90-102.

The *Q*-methodology makes it possible to test a process model because all of the variables are grouped together as a contextual whole. The relationship of each variable to all others is immediately apparent, and a logical deduction of the time order in the process is possible. At the same time, the variables measured here are of such a nature that the typologies of people which emerged are more accurately typologies of decision situations which include individual characteristics of the person. Each type of situation represents a different structural stage along a continuous dimension of structural opportunities. Thus, time order is effectively isolated.¹⁶

In *Q*-methodology, a purposive sample of case studies is used.¹⁷ In this study, cases were chosen to represent the principal variations of minifundistas believed a priori to exist in Colombia.¹⁸ The sample was first divided into four representative regions of the country: Valle del Cauca (an area where minifundistas were believed to be dependent on work on large farms for income); Boyaca (an area of subsistence-level minifundios); Caldas (the most important coffee region where commercial, market-oriented minifundios exist); and Meta (an area of frontier settlement and also of dependent minifundios).

Within each of these representative regions, the sample was further divided to select participants in various agrarian reform and development projects. In addition, attempts were always made to interview both innovative and traditional peasant farm operators. This was achieved by asking credit and extension agencies for names of innovative and traditional peasants and by studying the external appearance of the farm and farmhouse. Within all regions and within special categories within the regions, an attempt also was made to include some medium-size farmers. Finally,

¹⁶ In this sense, the methodology used here incorporates some of the characteristics of Cattell's *P*-analysis. In *P*-analysis, the person is held constant and a group of variables are factored on a sample of times. Varying the situation is essentially the same as varying time. This study is more like *Q*-methodology, however, in that different persons were factored on a sample of variables. Many situational variables were included, so at the same time the situation was varied along with the person (see Cattell and MacLean, as well as Raymond B. Cattell, "The Data Box: Its Ordering of Total Resources in Terms of Possible Relational Systems," in *Handbook of Multivariate Experimental Psychology*, ed. Raymond B. Cattell (Chicago: Rand-McNally & Co., 1966), pp. 67-128.

¹⁷ *Q*-methodology explicitly avoids a random sample on the grounds that it is not necessary and is often wasteful of time and money. The important types of people can be chosen purposively rather than accidentally. Many fewer people are thus needed, and these can be studied in more detail. Also, there is no guarantee that a random sample will yield enough cases of each type to study their differences thoroughly. In order to determine differences among types of people, *Q*-methodology is interested as much in extreme cases as in modal cases. Thus, a structured sample allows those extreme cases to be overrepresented and hence studied more carefully.

¹⁸ Adams and Schulman have listed three types of Colombian minifundios—dependent, independent (subsistence), and commercial (Dale W. Adams and Sam Schulman, "Minifundia in Agrarian Reform: A Colombian Example," *Land Economics* 43 [August 1967]: 274-83). However, the "dependent" minifundios were rarely encountered in this study.

Economic Development and Cultural Change

cases were also selected to represent different tenure types and access, or lack of access, to a road. A total of 105 interviews were completed; all were conducted jointly by the author and a Colombian assistant.

Of the variables reported in this paper, most were measured using standard scales and measuring techniques. However, a few explanations are necessary. The theoretical modes of decision described above were measured by asking the respondent why he used or did not use various alternative markets, means of transportation, credit sources, and agricultural practices. He was also asked what he would do in hypothetical situations where decisions could be made. Each of the questions was coded as one of the decision modes, and an average score was computed for each of the modes for each person.

Information seeking was measured by asking: "When you face a problem on the farm do you solve it through your own intuition or personal knowledge or consult friends, technicians, or bulletins?" Perceived usefulness of information was measured by two questions asking whether the respondent believed it important to obtain information from outside sources and what type of information he would like most to receive. Situational relevance of all content received was measured by asking, for each source from which information had been received, whether that information had been useful in solving problems on the farm and then summing for a total score.

The Typologies and Their Communication Behavior

The *Q*-factor analysis of people resulted in six typologies of minifundistas. These typologies, ranging from a low to a high degree of modernity, were given the following names: (1) Apathetic Campesinos, (2) Subsistence-Level Campesinos, (3) Noninnovative Coffee Growers, (4) Frustrated Entrepreneurs, (5) Frontier Settlers, and (6) Entrepreneurs. Of the 105 case studies, these typologies contained 15, 19, 13, 10, 21, and 27 cases, respectively.

These types will be briefly described and then their communications behavior will be interpreted to show how it has been derived from the total situation. For all types it is possible to show that, as hypothesized, communications behavior generally does not take place until opportunities are available. Table 1 presents the relative importance of the five modes of decision in determining the six typologies, expressed in terms of standardized *Z*-scores.¹⁹ A total of twelve communication variables were included in the *Q*-analysis; their scores for each typology are given in table 2. Other variables are not presented in tables although their relative scores are referred to in describing the typologies.

It was predicted that when the situation is restrictive with few available alternatives, communication behavior would be limited or nonexistent.

¹⁹ All computations were conducted at the University of Wisconsin Computer Center using the *QUANAL* program for *Q*-factor analysis developed at the Mass Communication Research Bureau, University of Iowa.

TABLE 1
THE RELATIVE IMPORTANCE OF FIVE TYPES OF DECISION BEHAVIOR IN DETERMINING
SIX Q-TYPOLOGIES OF MINIFUNDISTAS

Q-TYPE	TYPE OF DECISION (Z-SCORE)*				
	Problem Solving	Con-strained Decision	Ignorant Habit	Routine Habit	Fatalism
Apathetic Campesinos	-1.23	0.12	0.68	3.32	0.94
Subsistence-Level Campesinos . . .	-1.89	1.94	1.20	1.21	1.77
Noninnovative Coffee Growers . . .	-0.92	-0.26	2.07	-0.50	0.40
Frustrated Entrepreneurs	0.00	1.41	-0.23	-1.14	-0.47
Frontier Settlers	0.62	0.55	-0.57	-0.87	-0.61
Entrepreneurs	1.75	-1.80	-1.90	-1.24	-0.99

* In a standard normal distribution, about 68 percent of the Z-scores fall between -1 and +1, 95 percent between -2 and +2, and 99 percent between -3 and +3. The mean is zero, standard deviation 1.

The ordering of variables for the first two typologies—the Apathetic Campesinos and the Subsistence-Level Campesinos—bears out this prediction. Both types have few opportunities available and as a result also have low perceived usefulness of information and low information seeking.

The first type, the Apathetic Campesinos, consists of those minifundistas who, after facing prolonged hardships, have lost all aspirations to succeed. They are low on level of aspiration, achievement motivation, problem-solving decisions, and adoption of new practices. They are high on both routine habit and fatalism. Because routine habit shuts off consideration of problems, they perceive no need for better markets, transportation, or credit. Total income is low but no lower than for similar types who try to modernize.

The Apathetic Campesinos thus provide an empirical picture of the concept of routine habit and also display many characteristics of fatalism. As predicted, information seeking and exposure to all information sources are generally below average in determining the type. They are not extremely low, however, because an individual engaging in routine habit neither avoids information (even though he does not perceive it to be relevant) nor does he seek it.

The most important communication variable for the Apathetic Campesino is radio ownership, a score which can also be explained by apathy and routine habit. Because a large majority of programming time on Colombian radio is devoted to music,²⁰ radio use is generally for entertainment. For the Apathetic Campesino, radio could be interpreted as an escape mechanism. Accordingly, exposure to agricultural radio programs is low but still of average importance in distinguishing the type, because

²⁰ For a content analysis of agricultural radio programs in the Department of Antioquia, see José Edgar Garcés A., "La radio como medio de información agropecuaria en el Departamento de Antioquia" (tesis de grado, Facultad de ciencias agrícolas, Universidad nacional de Colombia, Medellín, 1969).

TABLE 2
RELATIVE IMPORTANCE OF TWELVE COMMUNICATION VARIABLES IN DETERMINING THE SIX Q-TYPOLOGIES OF MINIFUNDISTAS

COMMUNICATION VARIABLE	Q-TYPELOGY (Z-SCORE)					
	Apathetic Campesinos	Subsistence Level Campesinos	Noninnovative Coffee Growers	Frustrated Entrepreneurs	Frontier Settlers	Entrepreneurs
Information seeking	-0.57	-1.03	-1.04	-0.26	0.90	1.25
Perceived usefulness of information	-1.78	-0.58	-0.62	0.96	0.80	0.21
Newspaper exposure	-0.21	-0.36	-0.80	0.60	0.10	0.88
<i>El Campesino</i> exposure	-0.16	0.04	-0.35	1.55	0.50	-0.61
Radio ownership	0.62	-0.25	0.92	-1.61	-0.09	0.08
Exposure to agricultural radio programs	0.01	-0.36	-0.29	-1.12	0.83	0.20
Authoritative sources	-0.89	-1.40	-0.50	-1.41	0.16	1.93
Commercial sources	-0.89	-0.19	-1.05	1.14	-0.36	-0.02
Peer sources	-0.37	-1.09	0.14	0.65	0.65	0.28
Situational relevance of content	0.09	-2.24	-0.60	-0.53	1.05	1.35
Market information	-1.13	-1.48	0.52	0.54	1.34	0.33
Technical assistance with credit	-1.10	-0.94	-0.80	-0.96	1.56	1.45

these programs also have a high music content and are not avoided when overall exposure is high.

The Subsistence-Level Campesinos have the lowest income of all groups, live at the margin of subsistence, and have little stake in the society in which they live. They are generally of Indian or Negro extraction. They have little land; they receive little technical information; transportation is antiquated; markets are unstable; and institutional credit is unavailable. Because opportunities are cut off, constrained decision is the most important type of decision behavior, and fatalism is also important.

As a result, overall communication exposure and information seeking are still lower for the Subsistence-Level Campesino than for the Apathetic Campesino. This type, in contrast to the Apathetic Campesino, still desires an improved situation and thus perceives information to be more useful. But his situation is just as limited as that of the first type, and his capacity to make use of alternatives is even lower; thus, information seeking is very low. In short, restricted communication results because this individual is generally uneducated and illiterate, constrained decision predominates, and a highly risky situation generally prevents innovation.

At the same time, the Subsistence-Level Campesino has by far the lowest score on "situational relevance of content"—indicating the double-edged sword of his restrictive situation. First, innovation is risky if not foolhardy, and thus any information is of doubtful utility. Second, situationally relevant information which might reduce this risk is not available to him; authoritative sources of information are potentially most useful, but he has a very low score on this variable. He is excluded by most extension-type agencies in Colombia because they regard him as too traditional and ignorant to change. Most of the information they provide is also irrelevant to his situation, so any attempt to help him is usually predisposed to failure—setting in motion a cycle of failure and avoidance.

Peer sources of information are very low here, primarily because the Subsistence-Level Campesino has an overwhelming suspicion of his neighbors. This situation would seem to eliminate the possibility that extension agents could communicate with this type through other "opinion leader" campesinos.

The variable "commercial sources of information" does indicate, however, one way of reaching this type, as well as the Apathetic Campesino. For both of these types, one of the few relatively important information sources is the stores where insecticides and other inputs are purchased. Store clerks could overcome literacy and similar barriers to communication if they were trained more adequately and were capable of providing situationally relevant information.²¹

²¹ A personal attempt by the author to buy insecticide for a campesino in Sogamoso, Boyacá, revealed that the store clerk had no idea of the type of insect problem for which a given insecticide was designed. A barn-fly spray was being sold to kill a worm residing in the soil. Under these conditions, innovation is clearly difficult.

Economic Development and Cultural Change

Turning to the Noninnovative Coffee Growers, we find a situation that is distinctly more favorable than those of the first two types; yet communication behavior has changed little. The Noninnovative Coffee Growers are also old, illiterate, and low on aspirations, but they have two important differences from the first two groups. They have more land—land which is suitable for coffee production—and their primary crop, coffee, is intensive, has a stable market, and brings good returns. Thus, this group has the highest total income of all groups—higher even than the three more modern types which follow. However, they are not innovative and are generally traditional in outlook. Ignorant habit is the most important decisional motivation.

Accordingly, this type's restricted communication behavior can again be seen as situationally derived. With his high income level, the Noninnovative Coffee Grower does not perceive his situation to be problematic. With no problems to solve, information is not perceived as relevant and information seeking is the lowest of all groups. At the same time, the type is low on literacy and high on ignorant habit; thus, his capacity to perceive and solve problems and hence his need to seek information are also low.

This type is the highest on radio exposure, seemingly for three reasons: (1) he is traditional in outlook and like the Apathetic Campesino uses it for entertainment and possibly for escape (agricultural program exposure is low); (2) he has enough income to afford the radio; and (3) the Coffee Federation has provided electricity in most rural areas it serves, making it more likely that radios have been in use for a long time. Similarly, exposure to market price information is about average because such information is available from the Coffee Federation. This score is not particularly high, however, because most of the market information received by this type was not published but sought out personally, which yielded a lower score on the scale used for this variable.

The Frustrated Entrepreneurs are found in structural conditions similar to the Apathetic and Subsistence-Level Campesinos—land, credit, and technical assistance are scarce, and markets are poor. Constrained decision is therefore the most frequent decision type. However, the Frustrated Entrepreneurs are generally young, educated, literate, and highly motivated. Their aspirations have not yet been molded by the structure; level of aspiration is high, but because of low income, anomie is also high.

The communication behavior of the Frustrated Entrepreneurs illustrates the behavior of individuals who have the capacity to make use of alternatives but who have few alternatives available. Perceived importance of information is high as well as exposure to those sources available within this limited situation. Informational sources include *El campesino* (an agricultural weekly published for campesinos by a Catholic organization); commercial sources; peer sources; newspapers; and market

information. But these are also sources which generally provide little situationally relevant information. For this reason, "situational relevance of content" is well below average in importance for the type.

Authoritative sources and technical assistance with credit, the two most important sources for the more successful Entrepreneurs (see below), are both very low in importance for the Frustrated Entrepreneur. Overall information seeking is below average because this type has learned that the information he really needs is not available.

The Frontier Settlers are relatively successful, with a level of income well above the average of the total sample. They are all found in the frontier settlement area included in the study. They have the most land, but it is relatively poor in quality and much of it lies idle. Frontier Settlers are achievement motivated and high in aspirations. All modes of decision are common, although problem solving and constrained decision are above average in importance, and ignorant habit, routine habit, and fatalism are below average. Credit and technical assistance are generally available from INCORA, the agrarian reform agency, which has a major project in the region. Markets, transportation, input supplies, schools, and medical facilities, however, are generally inadequate.

Thus, with the Frontier Settlers, the order of the two requirements for effective communication is reversed. The situation presents some alternatives, but these individuals have limited capacity to solve the problems encountered—problems which are especially acute in this frontier region. The communication variables reflect this combination of a need for information but limited capacity to make use of it; both perceived usefulness and seeking of information are above average but not strongly so.

In spite of limited problem-solving capacity, the existing capacity could be used more fruitfully if information were more relevant. Situational relevance of content is high in relation to other types, but again not especially high, because few of the available sources provide information relevant to the vastly different conditions of the plains—conditions which include poor soils, limited infrastructure, and scarce supplies of modern inputs. INCORA loan supervision is the primary information source although it is not particularly relevant—as the differing scores on technical assistance and situational relevance demonstrate. This type of peasant is highest on exposure to market information, probably because he travels more than the others (see his score on cosmopolitanism in table 4) and in doing so learns prices. Often his trips are to visit a former home community, which requires that he pass through the state capital of Villavicencio and through the national capital of Bogotá.

Relevant information would be an important stimulus to this type and would help build his problem-solving capacity. Much of the land now held by settlers is unused because of problems they cannot solve. These include not only a lack of farm machinery adapted to these medium-size farms (a structural problem), but also ignorance of which crops bring

Economic Development and Cultural Change

highest returns, adequate levels of fertilization in these low-quality soils, use of improved seeds, proper use of insecticides, etc. (all information problems).

The final type, the Entrepreneurs, represents an ideal type of modern farm operator, although it is questionable whether many of this group can be called peasants. Problem solving, economic rationality as a decision criterion, adoption, and achievement motivation are high. The structural factors of land quality, markets, credit, transportation, and technical assistance are favorable. This group is well educated and literate. Their income is high, but not as high as the income of the Noninnovative Coffee Growers, who have more land but are less innovative.

With the Entrepreneurs, then, we find both a generally favorable situation and individuals capable of making use of alternatives. As predicted, when both of these conditions are satisfied, information seeking is high, as well as exposure to authoritative sources, credit supervision, and newspapers. Although situational relevance scores higher than for any other type, information is not perceived as being particularly useful—illustrating again the low level of relevance of content available to all types. Especially irrelevant are *El campesino*, radio, commercial sources, peer sources, market information, and to some extent newspapers—all variables on which even this type is only average.

These interpretations of the *Q*-factors thus provide strong support for the hypothesis that communication behavior is determined by the situation and that the communication derivations for the five decision modes are correct. Standard correlations of the decision modes with the communication variables provide further empirical support (table 3).

TABLE 3
CORRELATIONS OF FIVE TYPES OF DECISION BEHAVIOR WITH TWELVE COMMUNICATION VARIABLES*

COMMUNICATION VARIABLE	TYPE OF DECISION				
	Problem Solving	Constrained Decision	Ignorant Habit	Routine Habit	Fatalism
Information seeking . . . . .	.374	-.060	-.139	-.341	-.225
Perceived usefulness of information . . . . .	.250	.045	-.039	-.264	-.405
Newspaper exposure . . . . .	.238	-.139	-.081	-.117	-.157
<i>El campesino</i> exposure . . . . .	.058	.080	-.075	-.099	-.105
Radio ownership . . . . .	.095	-.110	-.029	.010	-.018
Exposure to agricultural radio programs . . . . .	.137	-.081	-.045	-.190	.092
Authoritative sources . . . . .	.464	-.233	-.284	-.234	-.186
Commercial sources . . . . .	.149	-.006	-.104	-.115	-.123
Peer sources . . . . .	.218	-.019	.088	-.323	-.221
Situational relevance of content . . . . .	.453	-.251	-.311	-.191	-.140
Market information . . . . .	.436	-.245	-.174	-.255	-.220
Technical assistance with credit . . . . .	.450	-.321	-.316	-.191	-.143

* Significance ($<.05$, $t = 103$ df) = .199.

For problem solving, correlations with information seeking and perceived usefulness of information are high, as predicted. But perceived usefulness of information is lower than information seeking, again probably because of irrelevant and poor-quality content. The more relevant and/or potentially useful sources also correlate highly—authoritative sources, supervised credit, market information—as does situational relevance. Other sources are positively but not significantly related. Newspaper exposure is barely significant, probably because of its limited functional utility.

Correlations of the communications variables with constricted decision, ignorant habit, routine habit, and fatalism are all negative or insignificant. The correlations become more strongly negative as the decision modes become less change oriented (left to right in table 3).

Social-Psychological Characteristics

Table 4 shows the relative importance of thirteen social-psychological variables in determining the six peasant *Q*-typologies. As predicted, when the situation becomes relatively less restrictive and opportunities greater (left to right in table 4), the modern characteristics increase in value and the traditional characteristics decrease. With the exception of age and possibly education, these are derived from the situation. More modern types with more opportunities generally are better educated, younger, more cosmopolitan, belong to more voluntary organizations, are more motivated to achieve, have higher aspirations, are more often literate, are less anomic, and adopt more modern practices (are more innovative). But there are some exceptions to this general rule.

The Frustrated Entrepreneurs are the most literate of all groups and perhaps for this reason are achievement motivated and have high aspirations. These high aspirations within a generally limiting situation reflect incongruous elements of the situation. The Frustrated Entrepreneurs have managed to obtain some education and to become literate, and so are capable of problem-solving behavior. Yet at the same time, they have been thrust into a situation of limited opportunities and low social status. It is difficult to predict whether this younger group will adapt to the situation like the older Apathetic Campesinos and Subsistence-Level Campesinos or whether they will eventually attempt to break the restrictions which they realize now constrain them.

Some specific variables which provide exceptions to the above general rule include political efficacy, social values, and empathy. Political efficacy showed little difference among types, although the Noninnovative Coffee Growers scored somewhat higher—probably because of receiving coffee-related services. Subsistence-Level Campesinos are relatively high, in this case undoubtedly because they tended to agree with the interviewers, whom they perceived to be part of the government. Social values also failed to distinguish substantially between types. Subsistence-Level Cam-

TABLE 4
RELATIVE IMPORTANCE OF THIRTEEN SOCIAL-PSYCHOLOGICAL VARIABLES IN DETERMINING THE
SIX Q-TYPOLOGIES OF MINIFUNDISTAS

VARIABLE	Q-TYPOLOGY (Z-SCORE)					
	Apathetic Campesinos	Subsistence Level Campesinos	Noninnovative Coffee Growers	Frustrated Entrepreneurs	Frontier Settlers	Entrepreneurs
Education level.....	0.21	-1.39	0.41	0.46	-1.31	1.17
Age.....	-0.05	2.12	1.24	-0.85	-0.55	-1.21
Cosmopolitanism.....	-0.77	-0.63	-1.25	0.56	1.24	0.10
Political efficacy.....	-0.86	0.28	0.79	-1.31	-0.15	0.46
Social values.....	-0.16	0.52	-0.64	-0.06	-1.04	0.41
Empathy.....	-0.55	0.27	0.80	-0.74	0.18	-0.28
Membership in voluntary organizations.....	-0.62	0.00	1.09	-0.71	0.42	0.37
Achievement motivation.....	-0.77	-0.41	-1.11	0.91	0.96	0.73
Level of aspiration.....	-0.79	-0.22	-1.15	1.52	1.38	-0.07
Relative deprivation.....	-0.29	1.20	0.30	0.57	0.19	-1.42
Literacy.....	-0.36	-1.76	-0.59	1.25	0.80	0.61
Anomie.....	1.61	0.91	1.40	0.01	-1.07	-0.99
Adoption.....	-0.78	-0.97	-0.88	0.71	-0.53	1.38

James E. Grunig

pesinos were highest, theoretically meaning that their values were most modern. This result probably occurred because the importance of friends in getting ahead was one of the traditional values included in the value scale and these peasants had a strong suspicion of any "friend." In the forced-choice measure utilized, a modern value was usually chosen over friends. Education, another modern value, also rated high with this group and was nearly always chosen over the traditional values. As the situation would predict, however, the Entrepreneurs have the next most modern values. Empathy also showed no consistent pattern and differed little between types.

Finally, it is interesting to note that aspirations reach a peak with the Frustrated Entrepreneurs and decline to a negative score for the Entrepreneurs. This circumstance contrasts with theories which state that aspirations increase with success. The theory, however, does not necessarily hold in Colombia. The culture dictates that the most favorable life is a quiet and easy one. Success leads not to aspirations for more success but to a life of *tranquilidad*.

Conclusions

The data presented support the general hypothesis proposed earlier. For the typologies with available opportunities, communication behavior was an important determinant of the typology; for those without opportunities it was nonexistent. Communication behavior and its concomitant social-psychological variables are a function of the situation in which an individual performs. Communication can have little effect in modernizing peasants unless situational changes first make modernization possible. Effective communication must then be related to the problematic aspects of the situation if its content is to be situationally relevant. Situationally relevant content is a necessary condition if communication is to play a complementary role in the development process.

As stated earlier, structural rigidities exist in Colombia and similar underdeveloped countries because of elite control of political processes, the mass media, and other communication channels—a control accompanied by elite desire to preserve the status quo. In a country like Colombia, real peasant progress will never occur given the present social and political structure of society. Under the present structure, the potential role of communication in development seems extremely limited.

Peasant modernization will probably never begin until the peasantry is organized into an effective political force which can apply pressure to eliminate the structural blocks which an individual peasant can do nothing about. When such an organization exists, then it must obtain control of communication channels in order to further mobilize the peasantry, to help the peasant understand what problems he faces and what he can do about them, and to provide the purely technical information needed to cope with new opportunities.