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DIFFERING PERSPECTIVES ON RURAL DEVELOPMENT
STRATEGIES IN EGYPT: AN ANALYSIS OF FARMERS
AND OFFICIALS VIEWS

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EGYPT WATER USE AND MANAGEMENT PROJECT

22 El Galaa St., Bulak, Cairo, Egypt

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ABSTRACT

This paper analyzes the attitudes of both farmers and government officials involved in the process of rural development toward various approaches commonly utilized in development efforts. The data for the report was gathered in interviews with seventy-five Egyptian farmers and eighty-eight Egyptian government officials.

The authors questioned their subjects concerning various approaches to development: reliance on formal national programs and policies, encouraging local self-help initiative, provision of educational, technological or economic resources, promotion of limitations on population growth, and so forth.

A model of different development approaches is offered to orient analysis of data collected. The focus of analysis is on: (1) the extent to which respondents see differing approaches as competitive or complementary, and (2) the degree to which personal characteristics of farmers and officials are associated with their preferences for particular approaches.

The conclusions challenge some commonly held academic beliefs. In general, officials and farmers do not recognize differences and inconsistencies in approaches which have been identified by academics, and further, personal characteristics often are not associated with approach preferences in the expected patterns.

41 Pages 1 Figure 6 Tables

مستخلص

يتضمن هذا التقرير التحليل الخاص بكل من طوره التنميه الريفيه و اتجاهات وطوره تفكير كل من المزارعيه المصريه والمسؤوليه في الجراز الحكوم القائمه بالعمل على التنميه الريفيه . وقد تم اجميع البيانات المختلفه عن طوره اراستبياه ٧٥ مزارعا و ٨٨ مؤلده عن التنميه في الحكومه .

وقد ركز الاستبياه على الطوره والواضيع المتعلقه بالتنميه ونظر :
الاعتماد على الراج القوميه والياسيه الساب ، تشجيع بوادر التنميه الداخليه المحليه ، المناطه التعليميه ، الموارد الإقتصاديه والكوار الفنيه والتكنولوجيه ، تنميه المصادر البيئيه المتامه والتي تناسب الكثافه السكانيه ، وما إلى ذلك من الموضوعات .

ومن ثم يعتبر هذا النموذج مناسباً لتحليل الطوره المختلفه للتنميه الريفيه ، وقد ركز هذا التحليل على ما يلي :

(١) مدى اختلاف اتجاه التجوبيه لموضوع ما سواء كانت الاتجاهات متاف أو مقله .

(٢) درجه تأثير السلوك الشخص لكل من المزارعيه والقائمه على التنميه على الدولويات الخاصه باختيار وطوره التفكير لموضوع ما .

هذا وقد أظهرت نتائج هذا التقرير اختلاف الاعتقادات النظرية الساده عن في البحوث الميانيه التطبيقيه ، فلم يتعرف المزارعيه والمسؤوليه على الاختلاف وعدم التجانس في الاتجاهات التي تناولها مقام بتعريفها الجامعيه ، وعلاوة ذلك أظهر التقرير أنه السلوك الشخص لابد ان يتعلمه بالدولويات الخاصه بطوره الفهم لموضوع معيه في النتائج المقدمه .

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DIFFERING PERSPECTIVES ON RURAL DEVELOPMENT
STRATEGIES IN EGYPT: AN ANALYSIS OF FARMERS
AND OFFICIALS VIEWS

INTRODUCTION

Any large development project will at some time experience conflicts regarding the selection of the appropriate development approach to be utilized in the project. The various team members of the project and their supporters will propose and defend views which accord with their own particular aims, background and personal characteristics. This is particularly true for those projects which are interdisciplinary and international in scope. In addition, while recent years have witnessed a growing general interest in applied research,¹ there is at present only limited comparative research on the relative effectiveness of various processes for promoting developmental change. As a result, arguments in support of one or another approach frequently cannot be empirically supported. Finally, the situation becomes even more difficult when academics, tending to view the variety of strategies as competitive with one another, argue that one particular strategy or approach cannot operate in a complementary fashion with other approaches due to the differing assumptions, requirements and goals embodied in the different approaches.

There is, however, wide agreement on one issue -- that receptivity on the part of those who are to be most affected by a change approach is crucial. The effectiveness of a developmental approach is heavily reliant on this factor. Therefore, this paper is focused upon attitudes toward strategy options for two practical reasons: (1) to assure receptivity, and (2) to develop our understanding of the kinds of people and circumstances leading to preferences for particular approaches (i.e. the ability to anticipate and generalize preference formation tendencies) and to explain why this is the case.

I. Different Approaches to Extension Education and Rural Development

In order to gain some useful insights into the reasons for varying views on development, as well as some predictive ability in anticipating reactions to

proposed development and extension education methods, it is useful to define various approaches and the contexts within which they generally occur.² We begin here by drawing the most basic distinction between approach "types"; that of "bottom-up" vs. "top-down" initiative and direction.

"The Extension Education Approach" ("bottom-up")--developed by specialist working in the fields of adult education, communications, applied anthropology, social work and rural sociology--works primarily from the idea that rural constituents will seek and accept changes in their lives to the extent they have been given the opportunity to understand them, see personal and/or community benefits in them and feel comfortable with the requirements of the change effort. It is assumed that people prefer changes which they perceive will increase or maximize their control over their own circumstances, and avoid those which result in a loss of such control.

This approach emphasizes the process of learning, rather than the specific content of instruction or indoctrination. Developers begin by assessing existing conditions, such as constituent knowledge of, and beliefs about, the system which is to be the subject of development. They then rely on involvement by local people in new experiences which result in practical benefits for participants, new knowledge and greater self-confidence gained from participation in change processes. Group experiences of this type are particularly effective, as the entire community becomes actively involved in the process of development, rather than placing them in the position of the audience, or of people who are subjected to events beyond their control.

In line with this approach, professional development facilitators concentrate on areas of basic technology, social organization and the creation of techniques to encourage local innovativeness and initiative. They attempt to bolster the constituents' self-confidence in their ability to deal with local problems in order to make them the most effective agents for long-term development programs. A great deal of research has gone into the creation of the Extension Education Approach, and its advocates feel that it is the only way to insure successful basic, long-term local and national development.³

Not all development professionals agree with this approach however. Objections include claims that it is too slow, too idealistic, too broad and diffuse, too inefficient, not sufficiently focused on accomplishing material gains, and inconsistent with national political realities. These objections

often stem from a lack of confidence in the ability of the client population to initiate and direct local development programs. Such critics prefer the skills of technical experts and place their confidence in the national policies which those experts design.

The situation is further complicated by the variety of professional perspectives which reflect differing disciplinary training and specialized concerns.

Economists, for instance, are generally most interested in expanding productive resources, developing centralized marketing systems, increasing benefit-to-cost ratios of technology, etc. Agricultural engineers are typically more interested in modernizing farm practices through the transfer of technology. To increase production, an agronomist might recommend introducing improved seed and livestock, or providing farmers with proper fertilizers and insecticides.

Experts in the area of public administration and international relations have the slant of the political scientist. They often lay most emphasis on methods for increasing the operational efficiency of the administrative framework. This might include, for instance, the building up of institutions to supervise and mediate at the intermediate level, or streamlining bureaucratic processes involved in making decisions about national development.

For all of these groups, then, extension education is of secondary importance. From their point of view, its primary purpose is to teach the client population what they should know and believe, thereby making them "cooperative" in implementing the technicians' proposals. Compliance, therefore, is considered the major role for local people, a role which educators are expected to promote.

This point of view seems contradictory to that espoused in the Extension Education Approach. The one stresses education as a means of insuring the acceptance of national policies, the other stresses education as a means of increasing the rural population's own initiative and independence so that they can become more self-reliant and apply what they learn to a range of problems. This latter approach strives to build attitudes and abilities for dealing not only with problems occasioned by particular development programs, but with matter of importance to the individual, his family and community for years to come.

Clearly the methods espoused by adherents to the two points of view described above could be complementary, yet too often they come into conflict with each other when it comes down to designing and implementing rural development strategies. Such conflict can only be detrimental to the eventual outcome of development programs, and thus deserves systematic study.

II. Conceptual Model

The conceptual model guiding this analysis is based on the 1967 paradigm developed by Knop and Aparicio.⁴ For purposes of this paper, we have added some considerations of specific alternative approaches and put the previous model into simplified table form as summarized in Figure 1.

Here first attention should be given to the "who and how" column, which combines national interest and national initiative and contrasts this with local client interest and client initiative. Although these general categories are not mutually exclusive and contain components that are not always strictly associated within categories, they generally correspond with a distinction commonly assumed in the development literature.⁵ Next, two sets of variables (concerning origin of initiative and approach characteristics) taken from available data are listed for each general category. (More will be said in the Research Methodology section concerning their construction.) These provide us with a structure for examining respondent characteristics associated with preferences for one of these most general categories of strategy approaches as contrasted with the other.

The "what" heading of Figure 1 divides each of the general options:

- a) using/developing government policy and,
- b) using/developing formal, standardized general instruction programs, and the more focused approaches,
- c) using/developing technology,
- d) pursuing economic stimulation/growth, and
- e) improving the effectiveness of governmental agencies and operations.

Second, client interest/initiative approaches include, as general options:

- a) the broad grass-roots based self-help community development strategy, and

- b) informal, pragmatic educational processes emphasizing client-directed dialogue with expert personnel. Specific approaches of the client interest/initiative category on which at least partial data are available are:
- c) pursuing greater clarity in, and concern with, relevant human values, and
- d) encouraging voluntary population growth control.

III. Research Methodology

Data for this study were collected from a sample of Egyptian farmers and officials engaged in a program of rural development during 1978 and 1979. The farmers were polled in three rounds of interviews, with a sample of seventy-five farm owners and operators chosen to provide a representative range in terms of age, education, leadership status, and economic circumstances. The farmers came from three separate areas of Egypt, each typical of a different setting for irrigated agriculture in the Nile Valley. All of the farmers who were asked to provide data did so.

Data from rural development officials were collected by hand-delivered and retrieved questionnaires. Eighty-eight percent of the people polled responded. The officials of the sample were chosen from several government Ministries working in rural development. The officials chosen (except for those working at national Ministry or Institute levels) worked in the service of the same three areas from which farmers were chosen. They ranged in rank from village staff workers to national ministry and university research personnel.

Three areas chosen for study were:

- 1) Several villages in the Giza Governorate, adjacent to Cairo. Farmers here grow a broad variety of crops on small farms.
- 2) A village area in Kafr el-Sheikh Governorate in the north central Delta. Lands here have been settled in this century.
- 3) Several villages in El-Minya Governorate in Upper Egypt, where farmers have been working for millenia. Until recent land redistribution programs, farms here were primarily large tracts owned by absentee landlords and farmed by hired labor.

Data obtained from farmers included information on such areas as:

- 1) personal demographic and farm characteristics (age, education, size of farm, crops grown, etc.);
- 2) participation in local leadership, communication and organizational systems;
- 3) views on appropriate development strategies;
- 4) general attitudes about the community;
- 5) personal receptiveness to change.

The questionnaire submitted to officials contained items on:

- 1) demographic and professional service characteristics;
- 2) views on appropriate development strategies;
- 3) personal receptiveness to change.

Data from both farmers and officials on appropriate development strategies included questions on some forty specific strategy items. The present study gives its full attention to those items which have a bearing on the opinions of farmers and officials concerning different approaches to development and extension education work.

To extract this information from the data, it was necessary to:

- 1) define a range of commonly used approaches in rural development which might be relevant to EWUP's ⁶particular needs;
- 2) using data already gathered, take the responses showing the constituents' preferences, and subject them to factor analysis, to identify patterns in preferences for particular approaches;

- 3) identify sets of personal features which characterize "sets" of farmer and official respondents to be used as independent (or explanatory) variables;
- 4) correlate the personal characteristics defined in #3 (above) with the varying perceptions on development strategies defined in #2 using a series of simple, bi-variate Pearson Correlations, and then conduct a multiple correlation regression analysis. (The statistical significance level, chosen to minimize Beta or Type II errors, is 0.10 throughout this study.)

Steps 3 and 4 of the process described above deserve additional comment.

In step 3, forty separate items were reviewed to obtain a picture of the various social climates which are associated with different views on methods of development. These included such questions as:

- 1) How important do you consider each of the following categories of people for the development of life in your village: national level Ministry and political figures, Governorate officials, informal local leaders, village people trying to help themselves?
- 2) How important do you consider each of the following activities for improving life conditions in this village: more and better school instruction for children and adults, posters and slogans reminding people how to do things better, holding public meetings in which local people can get information and express their feelings to officials, having the government make new rules requiring people to change their behavior?

Those questions which were combined as indicators of a strategy approach for the analysis had a factor loading score of 0.35 or more on the same conceptual theme as summarized in Figure 1.

For step 4 it was necessary to carry out the operation in three stages.

Figure 1. Simplified Model of Alternative Approaches Consistent with Available Egypt Water Use and Management Project Survey Data

<u>Who and How:</u>	<u>What: Procedures Emphasize:</u>	
	<u>General:</u>	<u>Focused:</u>
<p>I. National Programs Pursuring Development Accomplishments of Societal (or rural-sector)</p> <p>Interest; the commitment is to:</p> <ul style="list-style-type: none"> - top-down initiative - a formal-national approach 	<p>I. A. Government Policy</p> <p>I. B. Formal Educational Instruction</p>	<p>I. C. Technical Development</p> <p>I. D. Economic Development</p> <p>I. E. Improved Governmental/Service Structure Effectiveness</p>
<p>II. Actions facilitating client-initiative pursuit of self-interest and self-directed development;</p> <p>The commitment is to:</p> <ul style="list-style-type: none"> - bottom-up (grass-roots) initiative - an informal-local approach 	<p>II. A. Community Development</p> <p>II. B. Informal, Pragmatic Educational Dialogue</p>	<p>II. C. Development/Clarification of Human Value Positions</p> <p>II. D. Population Growth Control</p>

- 1) All available personal characteristics which we thought might show an explainable relationship with development approaches were intercorrelated as a bivariate correlation.
- 2) Those variables showing at least several statistically significant relationships were then factor analyzed together for evidence of representing a personal characteristic theme.
- 3) Those loading together on a common factor (or dimension) at 0.35 or more were added together to create an index score consistent with intuitive feelings that had clear common meaning.

To give an example of the kind of items considered in this analysis, one element was a socio-economic index of the constituent population. Items included the amount of land owned, the amount of land operated, number of animals owned (broken down into horses, camels, donkeys, gamusas and other farm animals). Once established, the socio-economic index allowed researchers to use it as one general, independent variable representing related characteristics of respondents. This made multiple regression analysis feasible.

IV. Findings

"Who and How" Patterns.

Tables 1 and 2 present the evidence for the basis of support which exists in Egypt today for; a) development programs which emphasize national policy and supervision, and b) development programs which are based on action by the constituent population as self-help efforts. The degree of formality characteristic of different programs and the origin of program initiative (top-down vs. grass-roots), are treated as separate variables for each of the two general categories of development programs, forming four columns of correlation figures.

The following results are suggested by the data in Table 1 (farmers) and Table 2 (officials).

TABLE I Personal Characteristics and Most General Approaches Favored by Farmers (in r's; N=75)

Characteristic**	National Level, Societal Interest Emphasis		Client-centered, Local/Self Interest Emphasis	
	Top-down Initiative	Formal National Programs	Grass-roots Initiative	Local Informal Activities
Economic status	-.01	-.24*	.08	.01
Extended family residence pattern	-.24*	-.10	-.41*	-.50*
Satisfaction with village services	-.03	.20*	.06	.16
Interaction with non-related persons	.24*	.18*	.06	-.02
Total children	-.04	-.01	.06	-.13
Age	-.13	-.10	-.17*	-.26*
Receptiveness to modern farming methods	.21*	.03	.22*	.22*
Interaction with related person	.00	.09	.08	.10
Non-fatalistic life orientation	.11	-.01	-.15	-.15
Amount of information from mass media	.17*	.17*	.07	.04
Official of organization/council	.03	-.06	-.13	-.26
Values and desires more village cooperation	.23*	.23*	.15	.06
Satisfaction with community processes	-.13	.28*	-.18*	.06
Number of villagers often asked for advice	.07	.26*	-.07	-.08
Amount of social participation in village	-.17*	-.13	-.04	-.06
Integration into local information network	-.39*	-.13	-.42*	-.33*
Basic mechanization in home activities	.28*	.16	.32*	.25*
Views self as local leader	-.20*	.04	-.40*	-.30*
Visits to large cities	.13	.05	.14	.17*
Satisfaction with village social environment	.08	.31*	.14	.14
Wishes more personal leadership	-.29*	-.22*	-.34*	-.35*
Years of present village residence	.08	.01	.21*	.11
Mechanization of farm operations	-.27*	-.03	-.43*	-.51*
Number of officials often asked for advise	-.34*	-.01	-.60*	-.59*
Availability of and exposure to mass media	.02	.14	.06	.04
Pays relatives for farming assistance	.26*	.24*	.45*	.46*
Futuristic life-orientation	.27*	.06	.48*	.44*
Formal schooling completed	-.24*	-.20*	-.33*	-.38*
Satisfaction with government services	-.32*	-.12	-.74*	-.70
Economic self-sufficiency and frugality	.34*	.07	.68*	.70*
(Multiple correlation coefficient for all items)	.66 (R ² =.44)	.67 (R ² =.44)	.85 (R ² =.72)	.84 (R ² =.70)

*Significant at or beyond .10 by two-tailed t-test.

**Order of items is due to random-entry provisions of multiple regression computer program used.

TABLE 2 Professional Characteristics and Most General Approaches Favored by Officials (in r's; N=88)

Characteristic**	National Level, Societal Interest Emphasis		Client-centered, Local/Self Interest Emphasis	
	Top-down Initiative	Formal National Programs	Grass-roots Initiative	Local Informal Activities
Position level	.04	.25*	-.04	.23*
Operates farm as side-line	.03	-.06	-.02	.02
Residence close to development work location	.15	.09	.13	.05
Has extension job responsibilities	.07	.06	.22*	.21*
Originated in a village	.01	.09	-.04	.11
Years of development work experience	.12	.10	-.02	.00
Has academic teaching job responsibilities	.02	.15	.12	.28*
Has policy formulation job responsibilities	.11	-.03	.17*	.02
Has policy/program implementation responsibilities	.12	-.03	.11	-.21*
Has research job responsibilities	.07	.31*	.12	.21*
Geographic residence location	.01	-.07	-.02	-.17*
Amount of direct contact with farmers in work	.03	-.11	-.02	-.08
Has administrative job responsibilities	.22*	.03	.04	-.15
Formal education completed	.01	-.24*	-.02	-.25*
(Multiple correlation coefficient for all items)	.36(R ² =.12)	.46(R ² =.21)	.40(R ² =.14)	.43(R ² =.17)

*Significant at or beyond .10 by two-tailed t-test.

**Order of items is due to random-entry provisions of the multiple regression computer program used.

A. Development Strategies from the National Level.

Among the farmers, there was surprisingly little correlation of characteristics between the groups who favored one or the other of the two component parts of national development work as defined by the researchers, i.e., "Top-Down Initiative" and "Formal National Programs." Only five variables showed significant association with both dimensions. Sixteen variables were associated with one dimension or the other, but not with both.

Among the officials, none of the variables showed significant association with both aspects of national-directed development work, though four showed significant association with one or the other.

Such results suggest that both officials and farmers see governmental initiative as separate from formal national programs.

B. Client-Centered Development Strategies.

In contrast to the data concerning national-centered development strategies, the data concerning various aspects of client-centered strategies, i.e., "Grass Roots Initiative" and "Social Informal Activities," showed that farmers viewed these elements as intimately connected. The same personal characteristics show significant association with both dimensions of the development strategy most of the time.

Interestingly enough, however, officials do not seem to view the two aspects as related, for the data do not show a large number of significant associations between the two.

C. Data: Farmers.

1) Farmers who favored the first element of the formal/national approach to development, i.e., "top-down initiative", also appeared to favor both aspects of the client-centered approach. Of seventeen variables which showed significant association with "top-down initiative," only four do not occur as well with one or both aspects of the client-centered approach.

From this evidence it seems clear that the sort of farmers who favor a combination of "top-down initiative" with a client-centered development strategy can be distinguished from their neighbors who favor formal/national programs alone.

2) Personal characteristics of farmers which show significant correlations with the attitude of favoring a formal/national approach to development only, are as follows:

- a) modest economic means
- b) satisfied with the services presently provided to the community at the local level;
- c) have regular interaction with neighbors in the village who are not relatives;
- d) inclined to obtain information from mass media sources;
- e) inclined to consider cooperation among neighbors in the village as a definite "good" which is presently not sufficiently developed;
- f) inclined to turn to neighbors for advice and information;
- g) not inclined to take part in local social activities (weddings, etc.);
- h) satisfied with the general social and moral environment offered by the village.
- g) uses machines to perform activities on the farm;
- h) future-oriented;
- i) not satisfied with local services presently provided by the government;
- j) inclined to be self-sufficient economically and to be frugal.

3) Personal characteristics of farmers which show significant correlations with the attitude of favoring all four approaches are:

- a) does not desire to be a leader;
- b) likely to pay family relatives for their assistance with farming operations;
- c) little formal schooling.

4) Personal characteristics of farmers which show significant correlations with the attitude of favoring the combination of approaches "top-down initiatives," "grass-roots initiatives," and informal/local approaches are:

- a) married and living in an extended-family household;
- b) receptive to innovation and to progressive practices in occupational activities;
- c) satisfied with the present village activities; (this group favored formal/national and informal/grass-roots initiatives, but showed no particular preference for the type of implementation);
- d) does not have high degree of access to local channels of information;
- e) inclined to use mechanized appliances to perform household activities;
- f) does not consider himself/herself as locally influential or as a leader;

5) Personal characteristics of farmers which show significant correlations with the attitude of favoring informal/"grass-roots" approaches to development only are:

- a) younger;
- b) not likely to be an official of a local organization;
- c) likely to visit outside the village often;
- d) has lived longer in the village.

Note: Farmers had a number of personal characteristics which showed no significant correlation with their points of view regarding development techniques. These included: number of children, frequency of visits to family relations within the village, number of related families visited within the village, a fatalistic view of life, the amount and variety of exposure to mass media.

D. Data: Officials.

1) In contrast, officials showed little association of favor for either of the client-centered factors with their formal/national counterparts. Of eleven significant associations which occur in the

formal/national list, eight do not occur in association with either dimension of the client-oriented list. Evidently, agricultural officials in Egypt do not see a distinction between the two approaches. Rather, they appear to view them as complementary. To them, the purpose of standardized, national programs is to work in support of developing local initiative. Data presented elsewhere, in fact, suggests that officials have limited faith in the effectiveness of "top-down initiatives," given its cool reception by the farmers. "Grassroots initiatives," on the other hand, seem equally difficult to elicit from the present rural population.

These views leave Egyptian agricultural officials with a serious dilemma. What they favor is the use of intermediate institutions and organizations which would be capable of managing the national programs at local levels, where they would take on many informal characteristics.

2) The personal characteristic of officials which shows significant correlation with the attitude of favoring "grassroots initiatives" implemented locally and informally is; their official responsibilities including work in extension education.

3) Personal characteristics of officials which show significant correlations with the attitude of favoring the implementation of development informally at the local level are:

- a) official responsibilities that include university level teaching;
- b) official responsibilities that include the field implementation of government agricultural policies and programs.

4) The personal characteristic of officials which shows significant correlation with the attitude of favoring "grassroots initiatives," without relation to method of implementation is; official responsibilities that include the formulation of government agricultural policy.

5) The personal characteristic of officials which shows significant correlations with the attitude of favoring "topdown initiatives," without reference to the method of implementation is; they have administrative responsibilities.

6) Personal characteristics of officials which show significant correlations with the attitude of favoring both formal/national and informal/local implementation plans are:

- a) hold a high position professionally;
- b) official responsibilities include research for determining national agricultural policy;
- c) high level of education.

Note: most of the personal characteristics in the sample of officials did not show a significant correlation with any particular point of view. These include: whether they operate a farm themselves in addition to their duties as officials (a common practice in Egypt), whether they reside in a locale close to their work, whether they came originally from a rural area, the number of years they have been involved in rural development work, and the amount of contact they have with farmers during the course of their work. Researchers also prepared a separate tabular analysis of the officials' educational background and areas of specialization, but produced no significant correlations with any of the four viewpoints mentioned above.

The lack of correlation is noteworthy in this instance, for it belies the commonly held notion that officials with certain characteristics bring a specific orientation to their work.

"What" Patterns -- General: Attitudes Toward Plans for Implementing Rural Development. Researchers next turned their attention to the correlation of personal characteristics with preferences for various specific plans for rural development. Officials and farmers polled were given the following alternatives to consider:

- a) the development and application of new government policies as the major force in rural development;

- b) the use of formal educational methods (lectures, readings, study assignments) as a tool for development;
- c) the development of a comprehensive approach to community improvement, which would emphasize self-help, local initiative and learning-by-doing;
- d) the use of informal educational methods (demonstrations, instruction in the field) based on the individual's desire to obtain specific practical information from experts.

The results obtained, presented in Tables 3 and 4, show a pattern very like that which is observable in Tables 1 and 2. For instance, the government policy column of Table 3 shows a different pattern from the remaining three columns (formal instruction, community development and informal education) between which there is considerable correspondence. Further, the personal characteristics of farmers favoring these latter three approaches are highly consistent with farmers favoring the top-down, grass-roots and informal-local approaches shown in Table 1. Since there is such correspondence, in the farmer's responses, it should suffice to note general patterns and the few specific differences which occur.

A) Analysis of the Data Collected From Farmers

- 1) Farmers who show a preference for government policy as a development tool tend to have the following characteristics:
 - a) higher socio-economic status (Note that this is the opposite of observations in Table 1 concerning those who favor formal/national initiatives);
 - b) not satisfied with present state of community services (Again, this is the opposite of the response of those who favored formal/national initiatives in Table 1);

TABLE 3 Personal Characteristics and General Substantive Approaches Favored by Farmers (in r's; N=75)

Characteristic**	National Level, Societal Interest Emphasis		Client-centered, Local/Self Interest Emphasis	
	Govmt. Policy	Formal Educat. Instruction	Community Development	Informal Pragmatic Educat. Dialogue
Economic status	.28	-.05	.05	.09
Extended family residence pattern	-.08	-.16	-.10	-.19*
Satisfaction with village services	-.27*	.03	.03	-.02
Interaction with non-related persons	.12	.13	.02	.13
Total children	-.05	-.04	.20*	.11
Age	.04	-.11	-.13	.00
Receptiveness to modern farming methods	.15	.18*	.11	.13
Interaction with related person	-.06	-.07	.00	-.03
Non-fatalistic life orientation	.07	.17*	-.18*	-.03
Amount of information from mass media	.06	.10	-.06	.22*
Official of organization/council	.01	.03	.06	-.12
Values and desires more village cooperation	.21*	.07	-.04	.28*
Satisfaction with community processes	-.31*	-.08	-.03	-.36*
Number of villagers often asked for advice	-.02	-.03	-.04	.07
Amount of social participation in village	-.03	-.20*	-.04	-.14
Integration into local information network	-.05	-.39*	-.22*	-.27*
Basic mechanization in home activities	.07	.20*	.19*	.17*
Views self as local leader	-.09	.22*	-.23*	-.21*
Visits to large cities	.02	.16	.08	.13
Satisfaction with village social environment	-.25*	.04	.11	-.12
Wishes more personal leadership	-.06	-.28*	-.10	-.20*
Years of present village residence	.01	.17*	.04	.21*
Mechanization of farm operations	-.18*	-.18*	-.09	-.25*
Number of officials often asked for advise	-.15	-.33*	-.27*	-.35*
Availability of and exposure to mass media	.06	-.08	-.03	.09
Pays relatives for farming assistance	-.15	.21*	.23*	.26*
Futuristic life-orientation	.12	.30*	.20*	.23*
Formal schooling completed	-.07	-.15	-.16	-.322
Satisfaction with government services	-.02	-.28*	-.39*	-.34*
Economic self-sufficiency and frugality	.12	.33*	.25*	.38*

(Multiple correlation coefficient for all items)

.60(R²=.36) .70(R²=.49) .64(R²=.41) .71(R²=.50)

*Significant at or beyond .10 by two-tailed t-test.

**Order of items is due to random-entry provisions of multiple regression computer program used.

TABLE 4 Professional Characteristics and General Substantive Approaches Favored by Officials (in r's; N=88)

Characteristic**	National Level, Societal Interest Emphasis		Client-centered, Local/Self Interest Emphasis	
	Government Policy	Formal Educat. Instruction	Community Development	Informal Pragmatic Educat. Dialogue
Position level	-.05	.01	.10	-.11
Operates farm as side-line	-.01	.11	-.02	-.17*
Residence close to development work location	.12	.20*	.11	.20*
Has extension job responsibilities	.05	.00	.23*	.04
Originated in a village	.04	-.15*	.00	-.12
Years of development work experience	.04	.19*	.09	-.15*
Has academic teaching job responsibilities	-.12	.08	.11	.13
Has policy formulation job responsibilities	.20*	.15	.15	.13
Has policy/program implementation responsibilities	.17*	.12	.13	.14
Has research job responsibilities	.00	-.03	.19	.08
Geographic residence location	.10	-.13	-.01	-.04
Amount of direct contact with farmers in work	.	.02	-.09	-.08
Has administrative job responsibilities	.19*	.22*	.09	.08
Formal education completed	.00	.12	-.09	-.03
(Multiple correlation coefficient for all items)	.33(R ² =.10)	.46(R ² =.22)	.43(R ² =.147)	.76(R ² =.17)

*Significant at or beyond .10 by two-tailed t-test.

**Order of items is due to random-entry provisions of the multiple regression computer program used.

- c) say they value an increase in cooperation among neighbors;
- d) not satisfied with the present processes for conducting local activities in the community;
- e) not satisfied with the social environment of the community;
- f) less apt to use machines to perform agricultural tasks.

From these responses it becomes clear that these farmers differ from their neighbors who favored formal/national initiatives as the force behind development, as well as from those who favored a combination of "top-down" and "grass-roots" initiatives with informal/local implementation. It appears from this that those who favor the use of government policy do not view this as either "top-down" initiative nor as part of the formal/national development program. It is possible, rather, that they view "policy" as government directives carrying the force of the law, given other of their personal characteristics notes. They are more apt to be wealthier but somewhat more traditional farm operators who are rather disillusioned with various characteristics of their local communities which contribute to local-based rural development processes. By implication, consistent with findings noted in the discussion of Table 1, most of these farmers judge top-down initiative as well as formal-national programs as a governmental service activity, intended to either encourage or manage local developmental processes. Farmers favoring the use of policy presumably view such service activities as a waste of time and favor development by mandate. Data from another paper show this to be a minority perspective in this sample, with only 25% of these farmers thinking it might be very helpful to have new government rules requiring people to change their behaviors (the lowest percentage supporting any of 36 separate development strategies and tactics).⁸

- 2) As notes above, the farmers who preferred a combination approach of "top-down" initiative, "grass-roots" initiative and informal/local implementation procedures share many

characteristics with those who favor a combination of formal education, community development processes and informal education techniques. The most notable exceptions to this are:

- a) those with more children favor a community development approach;
- b) those most lacking in a fatalistic approach to life, and change in their lives, favor the use of formal education and community development;
- c) those with a greater exposure to the mass media favor the use of informal educational approaches for learning specific information as it is needed.

3) Only minor differences separate those who favor formal education as opposed to informal instruction based on specific needs. Farmers who had a distinctly non-fatalistic approach to life favored formal instruction. Those, on the other hand, who are likely to favor informal instruction tailored to specific needs are also those most likely to obtain information from mass media sources, be dissatisfied with the present state of community action, and to give more emphasis to the value of and need for local cooperation.

The pattern of those favoring the community development emphasis holds no surprises; it is simply an emphasis which fits the general pattern being discussed, (see #2 immediately above), but is supported by a broader range of personal types yielding fewer differentiating significant correlations.

B) Analysis of the Data Collected From Officials

1. Officials who particularly favor the use of formal education for development tend to be those with rural origins
2. Those officials who especially favor the use of informal education based on specific needs have the following characteristics:
 - a) operate farms themselves, in addition to their official duties;
 - b) are new to the rural development profession.

3. Officials who emphasize a combination of educational approaches tend to be those who live close to the area where they have fieldwork responsibilities.

4. Officials who particularly favor the introduction of new government policies to promote change show the following characteristics:

- a) hold responsibility for the formulation of policy, (These officials also show a broad line of correlation with all three of the above categories);
- b) hold responsibility for implementing government policies and programs, (These, too, show near-significant correlation coefficients in the other three categories).

5. Officials who favor the use of government policy along with a program of formal education tend to be those having administrative responsibilities.

None of the following characteristics were observed to have significant correlations with any of the above points of emphasis among approaches:

- a) level of professional position;
- b) responsibility for teaching and/or research;
- c) area of the country in which the official resides;
- d) degree of contact with the farmer in the course of their work;
- e) level of education.

"What" Patterns -- Specific: Attitudes Toward Goals. After surveying farmers and officials on their views toward "how" rural development should be approached, and concerning preferred general modes of implementation, the next question took a new direction. "What" would the people who are most directly involved in this process like to see as the specific focus of these efforts? The choices offered to those sampled were:

- a) technological development;
- b) economic development;

- c) improving effectiveness of governmental efforts through reform, and/or reorganization;
- d) promotion of moral values;
- e) population growth limitation.

Correlations between the emphasis farmers put on each of these "what" approaches and other of their personal characteristics are presented in Table 5.

A) In comparing the general patterns of significant associations observed here with those already reviewed, some general observations are worth noting:

1. Technology, economic development and development of humanistic (moral) values show relatively few significant associations, with the exception of a light correspondence with the "dominant set" of approaches reviewed above, (the "top-down" and "grass-root" initiatives, informal-local action, formal and informal education, and community development "group"). The general suggestion is that the sample population, with a few exceptions, is not greatly differentiated in favoring technological, economic, or values development.

2. The approach of improving governmental effectiveness corresponds closely with the same "dominant set" of approaches (described immediately above). The current Egyptian national decentralization and reform program is of note here, in reference to this finding.

3. The population control item shows a significant negative correlation with the same "dominant set", indicating a distinctly opposite group of characteristics for proponents of this approach. (A separate paper explores the population matter in depth.⁹)

B) With regard to specific farmer characteristics associated with this final set of the more focused approaches:

1. Farmers favoring governmental operations development tend to be:

TABLE 5 Personal Characteristics and Focused Substantive Approaches Favored by Farmers (in r's; N=75)

Characteristic**	National Level, Societal Interest Emphasis			Client-centered, Local/Self Interest Emphasis	
	Technical Infrastruct. Development	Economic Development	Improved Govmt. Effect.	Social Value Develmt.	Population Growth Control
Economic status	-.11	-.03	.00	.09	.09
Extended family residence pattern	-.09	-.15	-.44*	.04	.28*
Satisfaction with village services	.16	-.17*	-.02	.06	-.12
Interaction with non-related persons	.16	.15	.14	.07	-.09
Total children	.23*	-.14	.05	.07	-.02
Age	.08	.01	-.12	-.08	.28*
Receptiveness to modern farming methods	-.09	.00	.15	.09	-.12
Interaction with related person	.16	.04	.06	-.02	.07
Non-fatalistic life orientation	.08	-.03	-.02	-.05	.04
Amount of information from mass media	-.06	.01	.06	.11	-.03
Official of organization/council	-.14	.15	-.12	.08	.16
Values and desires more village cooperation	-.20*	.12	.15	.19	-.03
Satisfaction with community processes	.02	-.26*	-.23*	.01	-.19*
Number of villagers often asked for advice	.27*	.00	-.11	.05	.00
Amount of social participation in village	.09	-.02	.07	-.06	.09
Integration into local information network	.10	-.29*	-.35*	-.21*	.15
Basic mechanization in home activities	-.15	.19*	.22*	.31*	-.19*
Views self as local leader	.21*	-.11	-.28*	-.23*	.08
Visits to large cities	.13	.02	.11	.12	-.25*
Satisfaction with village social environment	.04	-.05	-.02	.23*	.09
Wishes more personal leadership	-.06	.06	-.38*	.03	.19*
Years of present village residence	-.06	.10	.23*	.14	-.04
Mechanization of farm operations	.08	-.10	-.44*	-.11	.36*
Number of officials often asked for advise	.07	-.14	0.57*	-.10	.36*
Availability of and exposure to mass media	-.16	-.07	-.01	.13	.06
Pays relatives for farming assistance	.16	.15	.39*	.16	-.35*
Futuristic life-orientation	-.22*	.07	.42*	.17*	-.21*
Formal schooling completed	-.14	-.12	-.29*	.03	.25*
Satisfaction with government services	-.02	-.21*	-.63*	-.20*	.31*
Economic self-sufficiency and frugality	-.05	.13	.67*	.12	-.41*
(Multiple correlation coefficient for all items)	.71(R ² =.50)	.66(R ² =.44)	.83(R ² =.69)	.58(R ² =.33)	.76(R ² =.57)

*Significant at or beyond .10 by two-tailed t-test.

**Order of items is due to random-entry provisions of multiple regression computer program used.

- a) married and living in extended family households;
- b) less satisfied with community activities and efforts;
- c) less in touch with local information networks;
- d) more mechanized in household and farm implements;
- e) less likely to consider themselves local leaders nor to desire more local leadership than they currently have;
- f) long-term village residents;
- g) less likely to turn to officials for advice and assistance;
- h) less likely to pay relatives for farming assistance;
- i) more futuristic (future-oriented);
- j) those with fewer years of schooling;
- k) less satisfied with current government services;
- l) more economically self-sufficient.

2. Farmers who favor technological infrastructure development tend to be:

- a) those with more children
- b) less inclined to value cooperation among villagers;
- c) more likely to turn to neighbors for information and advice;
- d) those who see themselves as local leaders;
- e) less futuristically oriented (more present-oriented);

3. Farmers who favor economic development tend to be:

- a) less satisfied with present community services;
- b) less satisfied with present community processes (activities and efforts);
- c) less in touch with local information networks;
- d) more mechanized in household implements;
- e) less satisfied with local provision of government services.

4. Farmers who favor voluntary population control tend to be:

- a) living in nuclear family households;
- b) older;
- c) less satisfied with community activities and efforts;
- d) less mechanized in both household and farm implements;
- e) less likely to visit urban areas often;
- f) more likely to pay relatives for farming assistance;
- g) less futuristically oriented (more present-oriented);
- h) more satisfied with local provision of government services.

5. Farmers who favor promotion of, and emphasis on, humanistic values tend to be:

- a) in favor of cooperation among community members and aware of the need for it;
- b) less in touch with local information networks;
- c) more mechanized in household implements;
- d) less likely to see themselves as local leaders;
- e) more satisfied with the community social environment;
- f) more futuristically oriented;
- g) less satisfied with local provision of government services.

C) With regard to patterns observed in the officials sample (Table 6), note:

1) Officials who favor improving government effectiveness tend to be:

- a) those occupying lower-level positions;
- b) those having Extension responsibilities;
- c) responsible for implementing policies and programs;
- d) higher in educational levels.

2) Officials who favor technological infrastructure development tend to be:

- a) responsible for implementing policies and programs;
- b) in administrative positions;
- c) those with higher educational levels.

3) Officials who favor economic development tend to be:

- a) those holding research positions;
- b) in more direct contact with farmers.

4) Officials who favor promotion of humanistic values tend to be:

- a) in lower-level positions;
- b) living closer to their place of field responsibilities;
- c) those without academic teaching responsibilities;
- d) responsible for policy formulation and implementation;
- e) in more direct contact with farmers;
- f) in administrative positions;
- g) those with higher educational levels.

No specific characteristics of officials were associated with favoring population control as a development approach. Characteristics which showed no significant correlations with any of these five focused approaches include: whether they were also a farm operator, had village origins, or had worked in rural development for a long or short time.

V. Summary, Interpretations and Conclusions

As suggested in the introductory section, several general research questions have oriented this exploratory analysis. These include:

- 1) What is the empirical basis for delineating alternative development/extension approaches?
- 2) What can be learned from this evidence concerning the complementarity and competitiveness of alternative approaches?

TABLE 6 Professional Characteristics and Focused Substantive Approaches Favored by Officials (in r's; N=88)

Characteristic**	National Level, Societal Interest Emphasis			Client-centered, Local/Self Interest Emphasis	
	Technical Infrastruct. Development	Economic Development	Improved Govmt. Effect.	Social Value Develmt.	Population Growth Control
Position level	-.14	-.06	-.22*	-.23*	-.15
Operates farm as side-line	.08	-.01	.01	.07	.14
Residence close to development work location	-.07	.03	-.09	.21*	.10
Has extension job responsibilities	.06	.08	.18*	.05	.06
Originated in a village	.09	.06	-.02	-.13	-.09
Years of development work experience	-.02	-.01	-.05	.08	.03
Has academic teaching job responsibilities	-.11	-.05	-.07	-.22*	.07
Has policy formulation job responsibilities	.03	.02	.12	.17*	.13
Has policy/program implementation responsibilities	.25*	.04	.25*	.21*	.02
Has research job responsibilities	-.01	0.17*	.04	-.12	-.02
Geographic residence location	.16*	.10	.14	.10	-.03
Amount of direct contact with farmers in work	.06	.16*	.04	.25*	-.01
Has administrative job responsibilities	.24*	.13	.05	.24*	-.07
Formal education completed	.17*	.07	.25*	.20*	.01
(Multiple correlation coefficient for all items)	.41 (R ² =.17)	.29 (R ² =.08)	.45 (R ² =.20)	.40 (R ² =.16)	.37 (R ² =.14)

*Significant at or beyond .10 by two-tailed t-test.

**Order of items is due to random-entry provisions of multiple regression computer program used.

- 3) What personal characteristics are associated with favoring particular extension and rural development approaches?
- 4) What underlying general factors can be identified or inferred which help to account for preferences in approaches, (e.g. familiarity, vested interest, bases of ideological commitment, indoctrination, etc.)?
- 5) What does all this mean for the field practitioner, policy maker and researcher?

Each of these questions shall be briefly discussed here to conclude this analysis.

Early in the paper a summary conceptual model of alternative development and extension approaches (Figure 1) was introduced to guide the analysis of Egyptian farmer's and official's data. This conceptualization was presented as preliminary, subject to revision consistent with subsequent analysis, and it was thought incomplete, addressing only matters covered in available data. Accordingly, basic perspectives such as radical societal transformation were not included, while a number of focused approaches such as organizational development, transactional/encounter approaches, institution building, etc., were either implicitly subsumed under more general categories for economy or were ignored due to lack of data for their assessment.

More importantly, the model was largely a conceptual creation incorporating distinctions and assumptions common among academic development observers and practitioners, not often understood or appreciated by lay constituents and government development professionals. Based on analysis of the research data, it appears that many basic distinctions drawn between development approaches by academic researchers and program planners are not recognized as meaningful and useful by constituents and program implementers. Presumably, the latter group is more pragmatic, concerned with the result of an action rather than the philosophy behind it.

It should come as no surprise therefore, that those who do not understand these differences are inclined to pragmatically argue: "let's take advantage of everything we've seen working well somewhere already and not waste our time

with a lot of nonsense about problems of counter-productive mixing of approaches; let's try it and see." In fact, that logic is hard to contradict, even from the development process ("Extension") perspective, for we know from much experience that determination and an incrementalist approach (i.e. use of small "building" stages) usually produces results. Probably, in the final analysis it is others' perspectives on the nature of development and the complementarity of approach that is most important, regardless of whether it conforms with the scholar's perspective.

With specific concern for the findings in this analysis which deal directly with research questions #1 and #2 above, several observations sum up our assessment here.

- 1) The top-down/bottom-up initiative distinction and the societal/individual benefit distinction are not very useful when constituents and development officials assume all are desirable, complementary components of the ideal development approach. These together produce a dominant set of strategies, apparently assessed as promising so long as each component works in support of its counterpart.

- 2) Approaches seem to become differentiated in the thinking of the respondents analyzed here when a given general approach (e.g. the "formal-national" one, above) is defined as including particular strategies or tactics which intuitively are perceived as inconsistent with the dominant approach set and/or other personal/cultural values. This judgement does not necessarily mean the approach is rejected completely, however. An approach suitable for one special case of circumstances or goals of the action. Options are exercised accordingly.

- 3) Consistent with the foregoing, the more generally applicable an approach or set of approaches to specific routine development problems or goals, the more patterned and predictable will be the support for them from people with a broad range of known (and to a large extent mutually reinforcing) personal characteristics. As approaches we consider get more specific, as with technological or economic development, the number of significant identifying characteristics falls off, reflecting a narrower or specialized base of support, and reducing predictability of

support based on known personal characteristics. These more focused approaches may either be considered as special purpose "tools" in the general approach arsenal, or, if their patterning of characteristics diverges significantly from those of the dominant set, we should consider them as special-case approaches, as discussed under point two.

4) Most generally, we find the following patterning of approaches in the thinking of these Egyptian farmer and official samples:

a) The dominant set: top-down initiative, bottom-up initiative, an informal-local approach, formal educational instruction, the community development approach, informal pragmatic educational dialogue, improving governmental service effectiveness, and, marginally, social value development and economic development. These, in combination, constitute the general-purpose development/extension set of approaches in the sample's thinking.

b) The formal, standardized national program approach is apparently viewed as a special-case approach, which may be inferred to involve essential services (such as in the health area), to be provided to those who would otherwise not be adequately cared for, and for which only the government holds the necessary resources.

c) The use of government policy is apparently considered by farmers to be the application of coercion, and is another special case. We infer it is viewed by them as properly reserved for instances when the general welfare required compliance that is not voluntarily forthcoming, and this is thought more an essential social option than a developmental one.

d) Surprisingly, building technological infrastructure is apparently considered another special case of development approach. It may have attained this status because it is viewed as an effort which is undertaken for the national society but is not

believed to involve much active participation by rural people in the development processes (as in apparently presumed for the dominant set of approaches).

e) Not surprisingly, promoting population growth control is considered a special case of approach also. While other approaches aim for increasing the supply of national resources, this one seeks to limit the demand for them, (which may be contradictory to the majority concept of development).

Turning attention to personal characteristics associated with these approaches, (research questions #3 and #4) we note these general patterns among farmers:

1) Those advocating the dominant approach set are generally the most average of villagers, somewhat traditional with a good feeling about their social community, but not entirely satisfied with present services. They may be reasonably independent, self-reliant and future-oriented with some taste of the tangible advantages of development in their home and occupational life. Such persons might reasonably be thought of as the middle-class majority of the Egyptian village, with all the implied connotations.

2) Those expressing a preference for the formal-national program approach tend to be: poorer, more dependent on others and desiring stronger cooperative relationships, content with village social patterns and services, rather moralistic, and attentive to the mass media. In short, they are the serious aspirants for village middle-class status and acceptability.

3) Those favoring the government policy approach tend to be: wealthier but more traditional in their farm operation, relatively dissatisfied with community processes, services and social environment, and included to wish for more cooperation among village neighbors. Most generally, such farmers seem to fit a "nouveau rich" pattern applied to the Egyptian village.

4) Those favoring technological infrastructure development present a confusing profile. They simultaneously appear more socially assertive and self-confident, more indifferent to community conditions and local cooperation, more present-oriented than future-oriented, and have larger families. Such persons, one can speculate, are the socially marginal group (non-integrated) from all levels of the community who are more predisposed to minimum-effort solutions to life's challenges.

5) Those favoring the population growth limitation approach also present a complicated profile. They seem a mix of non-traditional patterns (they maintain a nuclear family residence and pay relatives for help) and traditional patterns, (they are older, use fewer mechanical implements in home and farm operations), are less satisfied with village social processes, less future-oriented and less self-sufficient than the average villager. One suspects, given those characteristics, that they are reasonably disillusioned people who have made an independent effort (by choice or by circumstance) to improve their personal conditions, without succeeding as they had hoped.

With regard to patterning of perspectives among officials favoring one or another development approach, the results differ from those observed among farmers. Most notably:

1) There does not appear to be a broad dominant set of favored approaches among Egyptian rural development officials, although there is slight evidence many see the formal, standardized national program approach as complementary to the more particularistic, flexible informal-local one (unlike the farmer's perceptions). More importantly, however, data suggest most of them do not really have a preference for or against one or another approach and/or they do not sense a difference between them. There is one major exception to this observation, to which we will turn attention momentarily. Generally, however, officials' professional characteristics do not seem to make a great deal of difference in how they view development approaches.

2) The exception is this: there seems to be a reasonably large category of officials who are distinguishable in that they put more emphasis on client-centered/interest approaches than do other officials, particularly to the extent these involve promoting local-informal development processes, development of humanistic values and improved governmental effectiveness. In general, the professional characteristics of these officials include: the more highly educated, holding responsibilities for field implementation of programs, academic responsibilities, and/or more direct personal contact with field conditions.

3) Other professional characteristics associated with favoring specific approaches include:

a) Top-down initiative in general: favored by those with administrative responsibilities;

b) Formal, standardized national approach in general: more educated professionals in higher-level positions who hold policy formulation responsibilities;

c) Grass-roots initiative in general: those with responsibilities for extension and/or policy development;

d) Informal-local approach in general: the more educated, those in higher-level positions and/or those with academic, extension or implementation responsibilities;

e) The government policy approach, specifically: those involved in policy formulation, implementation and/or administrative responsibilities;

f) Formal programs of educational instruction: those with village origins who now live close to their area of development work and hold administrative responsibilities;

g) The community development approach: those having extension responsibilities;

- h) Informal, pragmatic educational dialogue: those officials who farm as a side-line, live closer to their location or development work and/or are newer to the development profession;
 - i) Technology infrastructure development: the more educated, having responsibilities for administration and/or program implementation;
 - j) Economic development emphasis: those who are researchers and/or have more direct job contact with rural constituents;
 - k) Improving governmental effectiveness: those with lower level positions, higher educational levels, and/or responsibilities for extension or policy implementation;
- 4) The social value development approach: a broad range of official characteristics including more direct contact with farmers. The full spectrum of professional types see the need for assisting villagers to develop and adhere to social value positions supportive of rural development processes.

In reflecting on the patterns evident in these officials' data, two general conclusions seem justified. First, as we would expect, they tend to reflect the professional vantage-point of the position, particularly regarding frustrations occupants feel in their effort to be effective. Second, the preferences for alternative approaches correspond closer to the relationships conceptualized in the model presented in Figure 1 among officials than among farmers. Yet there are many points of divergence from what was expected, basically involving a tendency to favor composite approaches which appeal on pragmatic grounds. For some this involves putting more emphasis on client-involvement procedures.

Now, there is the question of what all this means to the field practitioner, policy maker, researcher, (research questions #5).

The conclusion to be drawn from this analysis is that the question of preferred rural development or extension approach should not be made a matter of purist doctrine, as is too often the case. We have available to us a

range of alternative approaches which can serve us and our rural constituents best if they are considered as complementary approaches rather than inherently competitive. We must be prepared to select among them, or use them in combination, in terms of appropriate and relevant aspirations and circumstances.

It is a basic truism for successful development that whatever the effort to be undertaken, the people involved must believe in it. Implicitly, they must either understand it and accept it, or have blind faith that it will work, based on respect for those who advocate it. They must anticipate that it will produce benefits which they themselves value without imposing unacceptable costs. For these reasons it is critical for the success of the development effort that approaches be selected to match the experiences and interests of both the rural target population and the professionals who serve them, and that these people be adequately prepared for the application of innovative approaches.

In these regards, research on client and practitioner perspectives about problems, aspirations and suitable approaches, combined with the requisite rapport-building in preliminary and subsequent activities, is both necessary and useful. From this base, an incremental strategy (10) of gradually implementing a development effort should enable the use of trail experiences (with alternative, sequenced or combined approaches) blossoming into an effective, integrated program supported by the personal commitments of all involved.

ENDNOTES

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1. Typical of the several hundred sources available in English are the following, chosen as representative of the range of emphasis covered: Conrad Arensberg and Arthur Noehoff, Introducing Social Change, Chicago: Aldine, 1964; W. G. Bennis, K. D. Benne and R. Chin, eds., The Planning Of Change, N.Y.: Holt Rinehard and Winston, 1969; Harvey A. Hornstein, et.al., Social Intervention, N.Y.: Free Press, 1971; D. Woods Thomas, et.al., eds., Institution Building, Cambridge, Mass.: Schenkman, 1972.
2. For instance, knowledge of characteristics and perspectives of clients and responsible officials should be significant in realistically setting program goals and strategies; selection of appropriately oriented staff would be facilitated by such knowledge, as would developing programs of staff training, etc.
3. For insight into the last point see Denis Goulet, The Cruel Choice, N. Y.: Atheneum, 1973.
4. Edward Knop and Kathryn Aparicio, Current Sociocultural Change Literature, Grand Forks, N.D.: Center for the Study of Cultural and Social Change, University of North Dakota, 1967, pt. 4.
5. Note, for instance, Szyman Chodak, Societal Development, N. Y.: Oxford University Press, 1973 and Harvey A. Hornstein, op.cit.
6. The Egypt Water Use and Management Project is a cooperative Arab Republic of Egypt and US/Aid sponsored irrigation and agriculture development project operating in various Nile Valley rural areas since 1977.
7. Sallam, Knop and Knop, Ibid.
8. Sallam, Knop and Knop, Ibid.
9. E. C. Knop and M. S. Sallam, "Population Growth and Development in Egypt," Population Studies Quarterly Review, No. 54, July/Sept. 1980, pp. 239-61.
10. David M. Freeman, Technology and Society, Chicago: Markham, 1974, p. 118ff.

AMERICAN EQUIVALENTS OF EGYPTIAN ARABIC
TERMS AND MEASURES COMMONLY USED
IN IRRIGATION WORK

<u>LAND AREA</u>	<u>IN SQ METERS</u>	<u>IN ACRES</u>	<u>IN FEDDANS</u>	<u>IN HECTARES</u>
1 acre	4,046.856	1.000	0.963	0.405
1 <u>feddan</u>	4,200.833	1.038	1.000	0.420
1 hectare (ha)	10,000.000	2.471	2.380	1.000
1 sq. kilometer	100 x 10 ⁴	247.105	238.048	100.000
1 sq. mile	259 x 10 ⁶	640.000	616.400	259.000

<u>WATER MEASUREMENTS</u>	<u>FEDDAN-CM</u>	<u>ACRE-FEET</u>	<u>ACRE-INCHES</u>
1 billion m ³	23,809,000.000	810,710.000	
1,000 m ³	23.809	0.811	9.728
1,000 m ³ / <u>Feddan</u> (= 238 mm rainfall)	23.809	0.781	9.372
420 m ³ / <u>Feddan</u> (= 100 mm rainfall)	10.00	0.328	3.936

<u>OTHER CONVERSION</u>	<u>METRIC</u>	<u>U.S.</u>
1 <u>ardab</u>	= 198 liters	5.62 bushels
1 <u>ardab/feddan</u>	=	5.41 bushels/acre
1 <u>kg/feddan</u>	=	2.12 lb/acre
1 donkey load	= 100 kg	
1 camel load	= 250 kg	
1 donkey load of manure	= 0.1 m ³	
1 camel load of manure	= 0.25 m ³	

EGYPTIAN UNITS OF FIELD CROPS

<u>CROP</u>	<u>EG. UNIT</u>	<u>IN KG</u>	<u>IN LBS</u>	<u>IN BUSHFLS</u>
Lentils	<u>ardeb</u>	160.0	352.42	5.87
Clover	<u>ardeb</u>	157.0	345.81	5.76
Broadbeans	<u>ardeb</u>	155.0	341.41	6.10
Wheat	<u>ardeb</u>	150.0	330.40	5.51
Maize, Sorghum	<u>ardeb</u>	140.0	308.37	5.51
Barley	<u>ardeb</u>	120.0	264.32	5.51
Cottonseed	<u>ardeb</u>	120.0	264.32	8.26
Sesame	<u>ardeb</u>	120.0	264.32	
Groundnut	<u>ardeb</u>	75.0	165.20	7.51
Rice	<u>dariba</u>	945.0	2081.50	46.26
Chick-peas	<u>ardeb</u>	150.0	330.40	
Lupine	<u>ardeb</u>	150.0	330.40	
Linseed	<u>ardeb</u>	122.0	268.72	
Fenugreek	<u>ardeb</u>	155.0	341.41	
Cotton (unginned)	<u>metric qintar</u>	157.5	346.92	
Cotton (lint or ginned)	<u>metric qintar</u>	50.0	110.13	

EGYPTIAN FARMING AND IRRIGATION TERMS

<u>fara</u>	= branch
<u>marja</u>	= small distributor, irrigation ditch
<u>masraf</u>	= field drain
<u>mesqa</u>	= small canal feeding from 10 to 40 farms
<u>qirat</u>	= cf. English "karat", A land measure of 1/24 <u>feddan</u> , 175.03 m ²
<u>qaria</u>	= village
<u>sahm</u>	= 1/24th of a qirat, 7.29 m ²
<u>sagia</u>	= animal powered water wheel
<u>sarf</u>	= drain (vb.), or drainage. See also <u>masraf</u> , (n.)

EGYPT WATER USE AND MANAGEMENT PROJECTPROJECT TECHNICAL REPORTS

<u>NO.</u>	<u>TITLE</u>	<u>AUTHOR</u>
PTR#1	Problem Identification Report for Mansuriya Study Area, 10/77 to 10/78.	By: Egyptian and American Field Teams.
PTR#2	Preliminary Soil Survey Report for the Beni Magdul and El-Hammami Areas.	By: A. D. Dotzenko, M. Zanati, A. A. Abdel Wahed, & A. M. Keleg.
PTR#3	Preliminary Evaluation of Mansuriya Canal System, Giza Governorate, Egypt.	By: American and Egyptian Field Teams.
PTR#5	Economic Costs of Water Shortage Along Branch Canals.	By: A. El Shinnawi M. Skold & M. Nasr
PTR#6	Problem Identification Report For Kafr El-Sheikh Study Area.	Egyptian and American Field Teams.
PTR#7	A Procedure for Evaluating the Cost of Lifting Water for Irrigation in Egypt.	By: H. Wahby, M. Quenemoen, and M. Helal.
PTR#9	Irrigation & Production of Rice in Abu Raya, Kafr El-Sheikh Governorate.	Compiled By: R. Tinsley.
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PTR#24	Agricultural Pests and Their Control.	By: E. Attalla.
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