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POPULATION GROWTH AND DEVELOPMENT IN EGYPT:
FARMERS' AND RURAL DEVELOPMENT OFFICIALS' PERSPECTIVES

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Abstract

As a part of the sociological support work of the Egyptian Water Use and Management Project, a survey was conducted of sample farmers' and rural development officials' concern about various development issues and their receptiveness to alternative development strategies. Among the issues included was one concerning how important population growth limitation was thought to be for improved local living conditions (originally included for comparison with other issues and strategies assumed to be more important in the thinking of respondents). The data showed: (A) Sixty-three percent of the farmer sample considered population growth limitation a most important issue and strategy dimension for achieving rural development in Egypt; (B) Seventy-six percent of the rural development official sample considered it a most important and essential strategy dimension. The population concern ranked considerably higher than various other issues like having more money or credit or new employment opportunities available in support of local development, for instance.

The present paper examines characteristics of farmers and officials who give higher and lower priority to population growth limitation, and what strategy options are favored by those with greater and lesser concern about the issue. The patterns in the findings are complex, but involve the following:

A. Farmers who are most concerned about population growth are in many regards not ones that would be expected to take this position and are person less likely to directly affect birth rates themselves (they are older, live in separate nuclear family households, etc.) Indirectly, they may serve as influentials for others (for instance, they are slightly better educated and are from all economic levels of their villages). The data suggest, however, that they have only a preliminary intuitive understanding of population growth consequences, and do not have a good sense of how to control growth except by expecting ameliorative actions by the national society.

B. While most rural development officials, regardless of personal or professional characteristics, favor population growth limitations of some sort, there is a tendency for those who feel strongly about the issue

to prefer grass-roots level self-help approaches complemented by government support. In fact, present government action is aimed at sensitizing the public to growth consequences while providing technical support through its medical and population clinic service system.

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Population Growth and Development in Egypt:
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Introduction

One gets the impression from casual conversations with various Egyptian officials and representatives of the rural and urban lay populations that most Egyptians do not believe the nation faces a "population problem" or, more correctly, that it does not suffer from over-population presently, and will not in the near future. Beyond that, no one hazards a guess.

Frequent comments on the topic indicate a common realization that high rural-to-urban internal migration flows are problematic, but most people seem not to sense the connection between this and the rate of national population growth. Similarly, one is often told that no one in the country is starving (doubtless a correct assertion), and that in many occupational sectors, like the skilled trades and seasonal agricultural labor, there are actually deficits of people. What is needed, one is told, is education and manpower redistribution of occasional pockets of superfluous people, bringing the national population back into good balance. Occasionally, one even hears the stronger Soviet version of this some basic argument: that what appears to be a problem of over-population is really a problem of economic inequality which can be solved by restructuring the national socio-economic system (a doctrine no longer accepted by the Chinese communists or several Eastern European Socialist States).²

Whatever else they say, most Egyptians give the impression that they simply do not think much about the consequences of national population growth. And when prompted to reflect on the matter, they seem to typically take a rather private and fatalistic position: what I do in my family is my business; what others do in their family is their business; and what happens in our nation of families is God's business.

Given these impressions, one would expect that popular understanding of and concern about one of the very important but most subtle dimensions of population growth - its erosive effects on national development gains and potentials - would be negligible. Upon reviewing data collected in 1978 and 1979 as a part of a major rural development project in Egypt, we were surprised to discover that impressions can be misleading, and that the matter

of Egyptian's perspectives on population growth deserves more careful scrutiny. Survey data we collected from a representative sample of farmers in three regions of Egypt (ranging from Upper Egypt to the north-central Delta), and from officials serving the rural development interests of these three areas from the local to national levels shows:

- (A) Sixty-three percent of the farmer sample considered controlling population growth a most important and essential strategy dimension for achieving development of villages like theirs (rated a substantially higher-priority concern than having more money or credit available in the villages, for instance);
- (B) Seventy-six percent of the official sample agreed that controlling population growth was a most important and essential dimension of rural development (rated substantially higher-priority than having more money or new local industry available for the villages, for instance).

It is outside the scope of this paper to answer the question of whether Egypt suffers from too high a birth rate, or to even fully explore the complex relationship between population growth and development progress. Attention here will focus on personal characteristics of those farmers and officials who are most and least convinced that population growth control should be a major feature of Egypt's national development process, so that program insights and implications can be drawn.

The National Situation

Egypt's birth rate is high by world standards (38 per 1000 population per year as compared with 35 for India, 27 for the People's Republic of China, 15 for the US and 10 for the Federal Republic of Germany).³ Also high is Egypt's determination to develop in an expedient, orderly and balanced fashion. In many regards, good progress is being made in these development efforts, due to years of systematic technical achievements. Commensurate achievements in some other aspects of Egyptian life have lagged behind, however. Rational population planning achievements is one such case. Upon reviewing the nation's balanced development progress since the 1952 national revolution, many experts and laymen are left wondering why a substantially-improved life for the average Egyptian seems so evasive. Many seem to be concluding that national population growth is part of the reason which deserves additional attention.

Some data help to clarify the picture. Egypt's industrial production has increased 635% from 1951 to 1977; 244% of this increase has occurred since 1965.⁴ Processed food staples, on the other hand, have shown less spectacular increases. Sugar production, for instance, increased 60% between 1951 and 1977, and native white cheese production rose 26% during the period, to cite but two specific examples of staples on which official figures are published.⁵ All agricultural production rose 457% during the 1951-1977 period, according to official figures, but agricultural exports have also increased substantially (compared with a 145% total agricultural production increase between 1972 and 1976, there has been a 275% increase in animal products exports, a 127% increase in vegetable products exports, and a 128% increase in exports of prepared foodstuffs during the last five years on which official published data is available; information is not available for the entire 27-year period).⁶ During the 1952-1977 period, Egypt's population grew from approximately 21 million people to about 39 million.⁷ Clearly, progress is being made, but equally clearly, the country's developmental gains must be spread among many more people, substantially reducing percapita benefits.

Recent international data show Egypt's percapita Gross National Product at \$280 (1974) with the 1965-1974 percapita GNP growth rate at 1%. During this same period, according to official Egyptian data, the average annual population growth was about 2.3%.⁷ Although birth rates fell slightly between 1951 and 1965 (45.2 to 41.7), so did death rates during the period (17.8 to 14.1). During the last 10 years for which data are available, there has been very little change in the Egyptian birth rate (38.2 to 37.7) while the death rate has dropped to 11.8 (1977). Accordingly, natural increase rates⁸ are now at about the same level as they were in 1960 (25.9/26.0), they are not much lower than they were in 1952 (27.4), and they are considerable higher than they were in 1970 (20.0).⁹

Since 1966, Egypt has had at least a nominal national family planning program. It has been approached largely as a medical service for the population. Occasional information campaigns have also been conducted in rather low-key fashion. In the past several years, however, prominent Egyptians promote family planning concepts. A current increase in official attention to the matter (encouraged by industrial "donor nations" to Egypt's development) is characterized by caution, perhaps because of uneasiness with

with the possible political consequences of too fast and forceful a campaign. Probably caution is justified in a nation where children and family life are strongly valued, and where a religious revival is in process, with both the majority Islamic and minority Coptic Christian faiths traditionally having evidenced pronatalist tendencies.¹⁰

In recent years, Egyptian newspaper headlines announcing new aspects of government population plans and programs appear several-times weekly, discrete family planning posters and billboards are being produced and disseminated about the country, and two new high-level population commissions (one family planning research and one program implementation planning) have been created to parallel an internal migration commission established earlier.

It is important to note that the policy shift toward trying to influence public awareness is an important advent for a nation that has heretofore concentrated on building its family planning health service infrastructure. The data to be reported below suggest that the nation is ready for a more vigorous and complete national approach, and that they are already basically aware of and sympathetic with its implications for national development.

Farmer/Official Survey Rationale and Methods

When planning to conduct surveys of Egyptian farmers and officials in several areas of Egypt where an irrigated agriculture development project would work, the sociology group of the Egypt Water Use and Management Project (EWUP)¹¹ elected to add a few items to interview/questionnaire schedules intended to give information on how important respondents considered various rural development strategies relative to one another. These alternative/ supplemental strategies included such as: increased youth and adult education offerings, government rules requiring changed personal behaviors, increasing local leadership effectiveness, improving the morality of community life, and so forth at great length. One such development strategy item included was: controlling population growth. The response to this item has already been introduced above; it is compared fully with other strategy items in another report.¹² For present purposes, it should suffice to indicate that data from this item and from many other attitudinal and demographic items which were collected provided the opportunity to study various characteristics of farmers and officials who expressed greater-or-

lesser concern about population growth on rural development processes.

Two sets of analyses are reported here. First personal background, status and general attitude characteristics are compared with respondents' answer to the population growth question. This provides a preliminary profile of those who show greatest understanding and concern about the issue. Second, we consider relationships between the expressed concern about population growth and evaluations of the appropriateness of various change strategies. This analysis provides some insights into what respondents with greater and lesser sensitivity to the population issue think effective and prudent as a basis for ameliorative action.

All variables which could be justifiably analyzed using bivariate Pearson product-moment correlations were treated in that way (eg., all that represented ordered-metric or interval level measurement). The few nominal-level variables which were included were analyzed by cross-tabulation procedures. All variables for which data were collected and which held any potential for being conceptually related to respondent's perspectives on population growth or its management strategies were entered into the analysis. Several matters need emphasis in this regard. First, a much broader set of data on personal background, status and attitudes characteristics were collected from farmers than from officials, enabling a more complete profile of farmers who are concerned about population growth. Accordingly, the farmer and official profiles are not intended as strictly comparable; we consider the officials profile to be complementary to that of the farmers, and of secondary importance.

Second, emphasis is given here to relationships showing a statistically significant difference within farmer and official categories. Some non-significant relationships of greater interest will be noted in the narrative discussion, but most non-significant relationships will not be noted. The reason for this is that we seek to identify differentiating characteristics found in the farmer and official samples that are associated with greater or lesser concern about population growth. It is important to understand that many conceptually-important relationships examined showed no empirical relationship only because some explanatory "variables" which were examined showed enough consistency in response patterns that they actually functioned more as constants than variables. For instance, if 95% of respondents considered education to be important as a development

strategy, we could expect no significant difference to be apparent when relating views on education with those on population growth. While the data would demonstrate perceptions on education to be an important development concern, it would not be a "differentiating characteristic" helping to explain why some people are more concerned about population growth and other less so, or how those who are concerned about growth differ from those who do not on the use of education as a development strategy. (Relevant data and interpretations of the non-differentiating sort are presented in another report).¹³

Concerning methods of data collection, the farmer sample was interviewed in three successive rounds of questions, beginning in the Spring of 1978 and concluding in the Fall of 1979. Interviews were conducted in colloquial Arabic by Egypt Water Use & Management Project field team sociologists trained and supervised by the project's senior sociologists (the first two authors here). The first interview largely concerned personal identification information as well as agronomic and irrigation practices followed by case study farmers. It used primarily open-ended questions. The second round represented more conventional measurement of social participation, leadership, communication, organizational matters, and some follow-up focused attitude questions on agricultural and irrigation practices and policies. This interview schedule contained mostly structured items with relatively few open-ended questions. The third round of interviews focused on perceptions of appropriate development strategies and tactics, and other general attitude matters like community satisfaction, general receptiveness to innovation and change processes, self-confidence in decision-making, perceived community factionalism, collective-self-orientation, etc. The third round consisted entirely of forced-choice items, frequently using Likert-type agree-disagree response categories.

Study sites focused on the Giza Governorate villages of Beni Magdoul and Kafr Hakim (N-23) near Cairo; the Kafr el-Sheikh Governorate village of Abu Raya (N-20) in the north-central Delta region; and the Minya Governorate village of Abyuha (N-33), near Abu Qirgas in northern upper Egypt. These sites were selected to represent varying conditions in the more-populated rural areas of the nation.

The questionnaire used for collecting data from officials consisted of some personal background and occupational service data and the majority of items contained on the third round farmer schedule noted above. Officials' instruments were hand-delivered, explained, and later retrieved by senior or field team project sociologists. The official sampling frame was structured to provide balanced representation of the following types of persons: (A) those serving the rural development interests of each field site noted from positions in the Ministry of Irrigation, the Ministry of Local Affairs, and various branches of the Ministry of Agriculture, including the cooperative societies and extension service, and the Village Bank system; (B) those representing the most-local through Governorate levels of service for those areas; (C) those representing national-level service to rural development, including national-level ministry officials, national research institute personnel, and university professor who teach, conduct research and advise on policy in areas related to rural development.

During the Fall of 1979, approximately 100 officials were invited to participate in this phase of the study (to keep the number of cases as comparable as possible with the farmer sample), and virtually none declined. Eighty-eight completed forms were returned by the time data had to be coded for analysis in late December. We are most grateful for the excellent cooperation these officials, and the case study farmers, gave us in this research.

Findings

Table 1 summarizes responses of farmers and officials to the population growth item by separate subpopulation. Most apparent here are the following patterns:

- (1) Farmers in the Giza and Kafr el-Sheikh Governorates are very evenly divided between thinking population growth control is a very important matter and thinking it is not at all important; rather few of them think it a matter of only some importance for rural development advances.
- (2) The vast majority of Minya farmers consider growth limitation very important; none consider it of no importance.
- (3) Three of four officials consider growth control very important as a part of rural development strategies; very few think it unimportant. There is no significant subsample differences among officials.

Table 1. Farmers' and Officials' Judgement of the Importance of
Population Growth Limitation as a Rural Development Strategy
By Geographical Area in Percents.

Subsample	Most Important/ Essential	Somewhat Important	Of No Importance	Total (N)
Farmers:				
Giza Gov.	43	13	43	100 (23)
Kafr el-Sheikh Gov.	50	5	45	100 (20)
Minya Gov.	84	16	0	100 (32)
Total (N)	63 (47)	12 (9)	25 (19)	100 (75)
Officials:				
Giza Gov.	87	13	0	100 (23)
Karf el-Sheikh Gov.	76	19	5	100 (21)
Minya Gov.	70	20	10	100 (20)
National-level	70	22	9	100 (23)
Total (N)	76 (66)	18 (16)	6 (5)	100 (87)

A noteworthy implication of this set of data is that farmers in Lower Egypt appear to feel more strongly about the growth control issue in a pro or con fashion (eg., relatively few feel it moderately important), whereas this does not seem to hold in Upper Egypt, or among officials. More insight into this is provided by data to be examined. The present point is that in Lower Egypt, a family planning public awareness campaign may expect to meet with both solid support and considerable indifference-to-opposition from farmers. (Unfortunately, the wording of the "no importance" response category does not permit us to know whether those responding in this way are indifferent or opposed, although probably both positions are represented). In Upper Egypt, and among officials, on the other hand, most can be expected to support a family planning public awareness effort. In light of the Lower Egypt responses, caution and prudence in launching a nation-wide campaign seems justified, whereas all data, taken together, indicates a desire of the majority that population growth control be a matter of high priority.

Concerning farmer characteristics differentiating those who consider population control important from those who do not, we begin with several personal "demographic" variables like age, education and socio-economic status.

Age is significantly related to concern about growth (Pearson $r = .28$; probability of chance occurrence = .007 by Z test), wherein the older farmers are more inclined to consider it important strategy matter, and younger farmers more inclined to think it unimportant. Perhaps having already completed one's family or having younger children to attend to at an older age, changes one's perspective. Or, perhaps the greater historic perspective of watching changes and national growth over the years conditions one's views. Whatever the case, those with less personal reason to be concerned about growth are the most concerned, while those who have more of their lives remaining, and who are more likely to father children, appear less convinced growth limitation is important. As long as older villagers continue to have some influence over their less-concerned juniors, they have an important role to play in a public awareness effort. If their social influence decreases, however, their own views become rather irrelevant to actual growth patterns.

No empirical relationship was observed in these data when total number of children in the household, total male children, total female children or total residents in the household were used as independent variables. The farmer's general family residence pattern was significantly related, however ($r=.28$; $p=.007$), wherein those living with other extended family members in a common household were least concerned with population growth, and those living separately as a nuclear family were more inclined to think it important.

Years of formal schooling completed yielded the expected relationship ($r=.25$; $p=.017$), wherein those with more education were more likely to be concerned with consequences of population growth. Although there is an inverse relationship between age and education in rural Egypt, relatively few farmers have much formal education (in this sample, 63% no schooling; 75% none beyond primary school; 91% less than secondary school completion). Therefore it is not surprising that more-educated farmers, who tend to be younger, share the population concerns of older persons, whose education has more likely been an informal one. No significant relationship was observed between basic literacy and concern about population growth (71% of this sample were illiterate).

No significant relationships were observed when amount of land operated or owned were compared with concern about growth, nor was whether the farmer held another job in addition to farming. In fact, the only socio-economic variable used that showed a significant relationship - number of cattle owned, as one surrogate variable for wealth ($r=.26$; $p=.012$) - leaves it unclear whether having more wealth in cattle is a cause or consequence of concern about growth, if causally related at all. Most probably, socio-economic status is causally irrelevant to the population matter in rural Egypt.

Several variables examining one's present or past status as a local elected official or as an informal leader in the village showed no significant relationship with concern for population growth. One's desire for more leadership than presently held, however, was inversely related ($r=-.19$; $p=.050$), with those wishing more influence being less likely to think growth control important. Presumably present informal leadership/influence patterns in Egyptian villages is independent of concern about population growth. Implicitly, leaders are no more or less likely to see growth

control as important-or unimportant- than other community members on average.

A series of 25 items dealing with personal and family patterns in use of the mass media (radio, TV, newspapers and magazines) yielded only two significant correlations. One of these showed that those who were more avid fans of radio serials and plays were less inclined to think population control strategies were important ($r=.25$; $p=.015$). The other showed those who got more information from newspapers (by themselves or through other family members) had greater concern about population growth ($r=.23$; $p=.026$). By implication, subtle growth limitation messages conveyed in media dramatic programs, and more direct newspaper coverage geared to encouraging family discussion, seem the most effective way to initially use the media for increasing public awareness of family planning goals. Since the Egyptian mass media has not been used much in this way to date, it is not surprising that significant correlations are largely absent; they could not be expected to have had an effect.

Several community participation items were likewise considered with no significant correlations occurring. There appears no relationship between concern about population growth and attendance at village wedding celebrations of non-relatives, attendance at funerals of non-relatives, or the frequency of participation in village religious observances and celebrations. This is consistent with the findings on the relationship between community leadership and growth sensitivity (above), and suggests civic-mindedness is presently unrelated, pro or con, with a desire for population control strategies. Similarly, no significant association occurred between a desire to out-migrate from one's present village and concern about population growth. Such findings are typical of settings in which awareness about the consequences of growth on development progress are at a rudimentary, or "first stage" level. At this pre-action level, awareness is largely undefined and intuitive. Accordingly, efforts to develop awareness in the population by means of providing acceptable rationales justifying personal concerns will contribute to individual's clarifying and concretizing their thinking on the subject. This is usually a precondition for feeling prepared to discuss the topic with other people, and for taking personal family planning action.

Several items on family patterns were considered in the analysis. No significant relationships were noted between a growth concern and number of local families related to self or wife, number of related families with which regular visits were exchanged, or number of related families with whom animals, machines or labor were exchanged. The basis on which such exchanges were conducted showed significance in all contexts, however. Those who usually received or gave rent or pay for animal and implement exchanges among relatives were less inclined to think growth control important ($r=.35$; $p=.001$), and those putting labor exchange on a monetary basis were less concerned about growth ($r=.20$; $p=.044$). This interesting finding is easiest to explain in terms of same attitudinal data analyzed.

Some sociocultural value items used as indicators of receptiveness to innovation and change showed the following significant relationships with concern about population growth. Those taking the fatalistic position that "life's events are controlled by people with more power than one's self so why try changing them" are more concerned about growth ($r=.30$; $p=.004$). However, those who agreed that life around them was changing too fast thought population control was not important ($r=.21$; $p=.035$), and those who believe the "old ways" are generally the best ways thought growth limitation was unimportant ($r=.24$; $p=.018$). It appears, therefore, that those favoring population growth control are in some ways more desirous of change in general, but that they feel their effort in promoting or supporting it is futile. In short, they are fatalistic but not traditionalistic. Perhaps they favor change but are disinclined to do anything about it (as in the case of adopting the newer pattern of paying for animals or labor provided by relatives) because they are not sure enough of the consequences, or of their own reasoning, and so opt for passive inaction.

Several "self versus collective-orientation" items are consistent with this reasoning. Those thinking growth limitation is important also believe people get more by looking out for themselves rather than trying to cooperate for gains ($r=.20$; $p=.041$) and that more can be accomplished by people working alone rather than together with others ($r=.32$; $p=.003$). Since national growth limitation can be achieved only by many people taking appropriate personal action in concert, it is probable those who are more concerned about growth are prepared to do their part, but are not optimistic

about a shift in national growth trends. In response to an item asking whether the respondents thought theirs and similar villages could take care of their own problems, those concerned with growth limitation said no ($r=-.33$; $p=.002$).

Before turning attention to what respondents who favor population growth limitation consider the most appropriate development change strategies, some comment on the differentiating characteristics of officials concerned about growth is needed so their strategy preferences can be meaningfully noted together with those of the farmers. Most simply: there were no differentiating characteristics noted among officials on the population issue for any of 22 variables considered. Given that the vast majority of them thought growth limitation was very important for development progress, minor differences among them were not patterned enough to yield statistical significance, thus do not justify comment.

Some of the variables analyzed included: ministry and agency of present employment; level of position; highest educational level attained; subject area of educational concentration; major present professional duties; whether regular contact with farmers was involved in carrying out these duties; total years of professional services to rural development efforts; whether they operated a farm; whether their place of origin was a village, town or urban place; and what category of place they lived in now. None of these factors appear related to how important they think population limitation strategies are to rural development progress.

Change Strategies

A series of 36 separate items summarizing frequent alternative/supplemental approaches to pursuing developmental changes were presented to respondents. They were asked to evaluate each in terms of how helpful or important they considered it to be as part of an effort to improve life conditions for people in a village like their (for officials, in Egyptian villages in general). Population growth control strategy was one of these items. Generally, this series of questions fall under three headings:

- (1) What categories of people make the greatest contributions to grass-roots development (ranging from National-level officials and scientific experts to informal local leaders and village citizens coming together to plan self-help activities);

- (2) What general strategies are most important (including improved public education programs, more money or credit for the village, more government-initiated public works and facilities, more local caring about one another's needs, government rules requiring behavioral change, etc.);
- (3) What specific development change tactics (or operational strategies) are thought most important (including demonstration farms and shops, posters, slogans and pamphlets, having expert consultants recommend changes, etc.).¹⁴

In the farmer sample, significant relationships between a concern for growth control and the categories of persons who were important showed the following:

- (1) Those rating the contributions of government officials operating at the village level to be lower than that of other officials did tend to think growth limitation more important ($r=-.27$; $p=.010$). Conversely, those less concerned with the consequences of growth place higher value on the work of local government officials.
- (2) Those evaluating the importance of local village councils lower considered growth limitation more important ($r=-.40$; $p=.001$). In contrast, those less concerned about population growth were more impressed with the effectiveness of their village council.
- (3) Those who thought informal village leaders to be less important judged growth control more important ($r=-.37$; $p=.001$). Conversely, those who valued them more thought growth a less important issue.
- (4) Those who rated the value of local citizens organizations lower considered growth control more important ($r=-.30$; $p=.005$), while less growth-conscious citizens gave greater importance to local organized efforts.
- (5) Those who are least convinced it is useful for village people to try solving their own problems in their own way thought growth limitation more important ($r=-.39$; $p=.001$). Those with greater appreciation for this approach were less concerned with population growth.

The perceived importance of no other categories of people, including government officials at the national ministry, parliament or research institute levels, or at the governorate or district level, was significantly

associated with a growth control concern. These patterns, again, reflect the fatalism issue introduced above: those who think growth control is important are unimpressed with the developmental contributions of local efforts, and are no more impressed with the effectiveness of higher governmental levels than anyone else is. On the other hand, those with the least social awareness of population growth's consequences are more responsive to the grass-roots forces which can be effectively used in increasing awareness. It seems fairly obvious, however, that those local citizens who have greater concern about growth cannot be counted on to provide leadership in this regard. Such impetus must come from outside the village, at least initially.

Turning attention to the matter of general strategies, only one is significantly related to the growth concern. The main reason for this is that most strategies were thought very important by most farmers, transforming these "variables" into near-constraints, making significant differences unlikely. The one which does show a significant difference is getting better information in the village on occurrences which will have local consequences. Here, again, those who think this important are less concerned about growth control ($r = -.33$; $p = .002$). On the other hand, those who most desire such information are least concerned about growth.

Finally, we turn to specific tactics for rural development. Those showing a significant relationship with the growth question include:

- (1) More concerned farmers see less value in the use of films and rural theater to convey development messages, whereas those who value this media more are now less likely to think growth control important ($r = -.21$; $p = .037$).
- (2) Those more concerned about growth consider public meetings in which citizens can speak their minds to influence official decision-makers to be less important, whereas those who value such meetings more highly are less concerned about the consequences of population growth ($r = -.42$; $p = .001$).
- (3) Those who consider growth limitation more important believe it is also more important to have applied researchers collect local opinions and data to be used in informing and influencing official decision-makers in the development process ($r = .24$; $p = .016$). Conversely, those not concerned about growth see less value in this.

(4) Those most concerned about growth are least concerned about development tactics intended to improve the effectiveness of local village councils, whereas less population-conscious citizens want these councils strengthened ($r=-.45$; $p=.001$).

Data from the official sample contrasts interestingly with the farmer's differentiating patterns. The only significant differences observed among officials was in the category of general strategies (recall that variation in the response patterns of officials was quite limited on the population limitation issue). Most generally, the patterns observed here run counter to the fatalistic tendencies of farmers who are concerned about growth.

Specifically, officials who are concerned about the developmental consequences of population increases tend to put higher emphasis on: (1) improved adult and youth general education programs in the villages ($r=.35$; $p=.001$); (2) building stronger informal leadership in villages ($r=.18$; $p=.045$); (3) getting more local industry in rural areas ($r=.21$; $p=.027$); (4) increasing the moral conscientiousness of the villages ($r=.23$; $p=.013$); (5) creating more respect and privileges for those local citizens who work hard for their village's benefit ($r=.32$; $p=.001$); and (6) getting better information to villagers about occurrences that affect their lives ($r=.18$; $p=.045$).

Summary Comments

There is good reason to believe that Egypt's development progress is not realizing its fullest potential because rapid population growth in the nation is diminishing the percapita benefits and contributing to other problems to which national attention and resources must be diverted.

Survey data suggests that somewhat over half of Egyptian farmers are conscious of this, as are the great majority of officials working in service of Egyptian rural development. More thorough analysis of these survey data, however, suggest that farmers who are concerned about population growth have only a preliminary understanding of it, and do not have a good sense of what can be done to combat it. In consequence, they seem to be passively relying upon ameliorative action from outside of their villages, while being skeptical that much can be accomplished by familiar rural development approaches they otherwise favor.¹⁵

Rural development officials, on the other hand, hold a highly similar perspective on national growth regardless of their backgrounds or present positions. The only difference between them seems to be that those who are more concerned about growth put more faith in basic grass-roots development approaches than do the concerned farmers and the less concerned officials. In this sense, the population-conscious officials and farmers seem to be taking a healthy complementary stance on the matter. Initiative and direction must come from officials committed to: (1) increasing understanding among those villagers who are now somewhat concerned, and (2) increasing the awareness of the personal and social consequences of growth among those who remain unconcerned. Such efforts should be met with skeptical sympathy by many in the villages who can lend important informal support to the public awareness process in time.

This appears to be precisely the approach the government of Egypt is cautiously undertaking presently.

END NOTES

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2. While there can be an element of truth to this position concerning reallocation of existing material means of sustenance, it avoids the basic issue of total potential per capita national resource wealth relative to consumptive needs. This balance, of course, is highly favorable in the resource-wealth, under-populated USSR, but is already close to the limits in many other resource-poorer, highly populated settings.
3. John W. Sewell, et al. The United States and World Development: Agenda 1977. N.Y.: Praeger, 1977, pp. 160-171.
4. Central Agency for Public Mobilization and Statistics. Statistical Year book, Arab Republic of Egypt. Cairo. A.R. Egypt, 1978, p. 64.
5. Central Agency ... (Ibid.), p. 68, 70.
6. Central Agency ... (Ibid.), p. 224.
7. Sewell, Op cit, p. 160 and Central Agency (Op cit.), p. 4.
8. Births minus deaths, controlling for international migration.
9. Central Agency ... (Op cit.), p. 14.
10. Both stop short of formally prohibiting contraceptive birth control, but local religious leaders often advise against it, and generally the faith discourage voluntary childlessness while assuring that God will provide for the needs of all people born. The strong familistic emphasis of both faiths also functions indirectly but strongly as a pro-natalist force.
11. EWUP is an irrigated agricultural development project jointly funded by the ARE and USAID.
12. M. S. Sallam, E.C. Knop and S.A. Knop. Effective Extension for Egyptian Rural Development. Cairo, ARE and Ft. Collins, Colorado, USA: Egypt Water Use Project, 1980.
13. Sallam ... (Ibid).
14. All items are listed in Sallam ... (Ibid).
15. This matter is discussed more fully in Sallam ... (Ibid) and in E. C. Knop, M. Naguib and M.S. Sallam. Voluntary Farmer Organization, Cairo, ARE and Ft. Collins, Colorado, USA: Egypt Water Use Project, 1980.