COMMUNICATION NETWORK
IN
RURAL DEVELOPMENT APPROACHES:
EXPERIENCES OF COMILLA AND SAVAR

BY

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CERTIFICATE

This is to certify that this thesis titled "Communication Network in Rural Development Approaches : Experiences of Comilla and Savar" is the result of an independent research work carried out by Mr. Md. Tawhidul Anowar under my guidance and supervision, and that, I deem it worthy of submission for consideration for the award of the Doctor of Philosophy in the Science of Communication from the University of Dhaka.

Talukder Maniruzzaman
16.4.89

ABSTRACT

The present study tried to understand the role of interpersonal communication of rural development messages in the formation of behaviour change of development participants without ignoring the role of the mass media. Two important elements of development efforts - cooperative and family planning - in each study area from Comilla and Savar were subjected to a sociometric survey. In this survey both the individuals and their relationships were the units of analysis which provided the demographic and the communication variables to explain the behaviour change of development participants.

First, the study saw the pattern and intensity of the interpersonal communication of normative (cooperative) and disruptive (family planning) messages. Then, it observed the role of both personal and mediated communication in the change of behaviour regarding cooperative and family planning.

The existence and absence of formal local structure to support development activities in the study areas of Comilla and Savar respectively yielded two divergent scenarios. In Comilla, the existence of such a structure helped increase the flow of development messages among the participants. A pattern of leader-

ship emerged where one set of communication leaders looked after the normative message flows while a different set took on the task of disseminating disruptive messages. In Savar, the absence of any formal structure at the local level hindered the process of the creation of increased communication flows. But whatever might be the amount of the flow, both the normative and disruptive messages flowed under the same set of communication leaders.

It was observed from the findings of the two areas that the communication flows must increase to a certain measure so as to weave sufficient interpersonal communication connectedness to predict the change of behaviour of development participants in a definite cause and effect relationship.

In Comilla, the mediated communication raised the level of awareness of normative and disruptive innovations, the awareness helped the formation of a favourable opinion, the interpersonal communication induced advocacy and finally advocacy led one to adoption. In Savar, this sequacity of causality was not present. In respect of normative behaviour change only, the interpersonal communication (network) had a role in organising awareness, advocacy and adoption, but these measures of behaviour change could not be linked to any logical cause and effect sequence.

In both the study areas the persons having a favourable opinion about family planning were not those who advocated the same to others.

Taking into consideration the positive aspects of the two rural development approaches, an attempt was made to simulate an ideal model which hoped to ensure an increasing flow of development messages as well as to integrate the divergent communication flows to bring about the expected sequacity of causality between communication and behaviour change.

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TERMINOLOGIES

For a ready reference and comprehension of the key terms used in the chapters of this study, this section collated all such terms for appropriate definitions authoritatively collected from relevant sources. The terms were arranged in an alphabetical order.

Amount of communication refers to the frequency of the flow of communication in a system.

Coefficient of determination (R^2) is the ratio of explained variance to total variance.

Convergence model of communication refers to a joint occurrence and a mutual process of information sharing between two or more persons. The model emphasises on the study of relationships, differences, similarities, and changes in these relationships over time. The minimal unit of analysis is dyad. From dyads, analysis can be extended to personal networks, and to cliques and to large intact network.

Clique is a subsystem whose elements interact with each other relatively more frequently than with other members

of the communication system.

Communication is a process in which participants create and share information with one another in order to reach a mutual understanding.

Communication network consists of inter-connected individuals who are linked by patterned flows of information.

Communication network analysis is a method of research for identifying the communication structure in a system in which relational data about communication flows are analysed by using some type of interpersonal relationship as the unit of analysis.

Communication structure is the arrangement of the differentiated elements that can be recognised in the patterned communication flows in a system.

Communication system is a set of interrelated parts coordinated to accomplish a set of goals.

Communication connectedness is the degree to which a focal unit is linked to other units.

Convergence is the tendency for two or more individuals to move toward one point or for one individual to move toward another, or for two individuals to come together and unite in a common interest or focus.

Consistency here refers to high intra-network, inter-network and inter-variable correlations in a communication structure.

Diffusion model of communication assumes one-way causality of the components with a source bias toward a persuasive act to bring about a psychological effect.

Dyad is composed of two individuals connected by a communication link.

Empathy refers to the communication skill of an individual to step into other person's shoes and act accordingly.

Heterophily is the degree to which pairs of individuals who interact are different in certain attributes.

Homophily is the degree to which pairs of individuals who interact are similar in certain attributes, such a beliefs, values, education, social status and the like.

Indigenous facilitators are those persons who are opinion leaders from among the development participants who volunteer the spread of innovation to others.

Individual connectedness is the degree to which a focal individual is linked to other individuals in a system.

Innovativeness is the degree to which an individual is relatively earlier in adopting new ideas than other members of a system.

Integration is the degree to which the units linked to a focal point are linked to each other.

Isolate is an individual who neither refers to any individual as his/her link nor is referred to by any other as a link back in a communication situation in a system.

Link is a communication relationship between two units (usually individuals) in a system.

Multiple correlation is a single value that describes the overall strength of the correlation between two or more independent variables and the dependent variables.

Mobility multiplier refers to the mass media which with certain levels of urbanisation and literacy insystem can multiply mobility of an individual toward accepting an innovation.

Openness is the degree to which a unit exchanges information with its environment.

Opinion leaders are those individuals who are exposed to mass media in someway or other and thus are placed between mass media and the inactive section of population.

Paraprofessionals are those persons who help the work of an extension agent and are paid for that.

Pattern of communication refers to the social choice of individuals to maintain communication flows in some sort of homophilous or heterophilous communication dyads.

Pearson r correlation coefficient is a number that summarises the degree of relationship between two variables; the squire root of the coefficient of determination.

People-grinder refers to the sample survey which using random sampling of individuals tears the individual from his

social context and guaranteeing that nobody in the study interacts with anyone else in it.

Personal communication network is made up of those interconnected individuals who are linked by patterned communication flows to a focal individual.

Relational analysis is a research approach in which the unit of analysis is a relationship between two or more individuals.

Sociogramme is a graphic means for displaying the patterns of communication or a social choice in a system.

Sociometry is a means of obtaining quantitative data about communication patterns among the individuals in a system by asking each respondent to whom he/she is linked.

Starters are the first few respondents purposively selected for use in a snowball sampling method of sociometric

data collection. The starters sociometrically decide the respondents in the subsequent stage of data collection.

Systems approach considers communication as a total process wherein lies the interrelationship among the components as well as the environment in which the communication system is embedded. Systems approach to communication research is away from the component approach which isolates the components from the social matrix.

Snowball sampling is a research approach in which an original sample of respondents are asked to name their sociometric peers, who then become respondents in the second phase of data-gathering, their sociometric contacts thus nominated become respondents in third phase and so on. Snowball sampling utilises the sociometric data about network relationships to determine who in a system should be the respondents in a research study, rather than gathering data from all of the respondents in an intact system, or from a randomly selected sample (as in most sample surveys).

Snowballs are the respondents in a sociometric study who are selected first by the random starters and by the snowballs themselves.

Two-step flow hypothesis suggests that ideas often flow from radio and print to the opinion leaders and from them to the less active section of the population.

Two-tailed probability value is associated with nondirectional hypotheses. The proportion of area in both tails of the distribution is taken into account.

Unobtrusive method is a measure that directly removes the observer from the events being studied.

Variable is a characteristic of an individual or object that is measurable and takes on different values.

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PREFACE

The study was originally conceived of years back at the East-West Centre, Hawaii where as a professional associate from the University of Dhaka I had the opportunity to discuss the problems of communication in the development process in Bangladesh with late Dr. Wilbur Schramm, a past Director of the Communication Institute of the Centre and with Dr. Godwin C.Chu, Dr. Syed A. Rahim, Dr. Wimal Dissanayaka and Dr. Lawrence D. Kincaid, research associates of the Institute. Dr. Rahim helped me in identifying communication problems for development needing immediate research attention. Further conceptualisation of the problems and the required methodological tools came in the wake of a series of discussions with communication resource persons in Dhaka.

I am deeply indebted to Professor Talukder Maniruzzaman of the Department of Political Science, University of Dhaka, who kindly consented to be my guide for my Ph.D. programme on this topic. His constant attention and suggestions to bring the topic down to specifics and the area down to what can be manageable proved to be timely. With his personal care, a systematic handling of all the stages of this study could be attainable.

I owe a tremendous debt to Dr. Y.V.L. Rao, a pioneer of communication research in the subcontinent, who, while in Dhaka on an international assignment, gave me valuable comments and advice in perfecting the methodology for a scientific handling of the variables.

Dr. Maksudur Rahman and Mr. Abbasuddin Bhuiyan, demographers of the International Centre for Diarrhoeal Disease Research , Bangladesh, helped me in the operationalisation and statistical manipulation of the core data. Mr. M. Ghulam Sattar, Communication Chief, Bangladesh Academy for Rural Development, Comilla helped me in organising the collection of data. My colleague Dr. A.A.M.S. Arefin Siddique took away much of the concern that fighting with time generated in me by sharing the work of rearranging the flow of facts and figures. Mr. Saleem Ahmed, another colleague, helped me with his valuable comments. My friend Mr. Idris Ali stood by me in the codification of data from a vast array of items.

Meelee, who died last year and to whom this work is here proposed to be dedicated, could not see this work in print. She led the group of the female interviewers. With her keen sense of observation and intimate handling of interviews, an

additional section on the simulation of a model for communication could be attempted.

Other best scorers of my department, Alam, Rahman, Mini, Geetee, Meeta, Riaz, Habib, Borhan and Nayeem, volunteered their interest to have the first field feel of sociometric survey in this study. All good words at my command are for them.

I am also grateful to the Bangladesh University Grants Commission for its partial sponsorship of this study.

Finally my deep appreciation is for Mrs. Syeda Farida Parveen whose daily sacrifices and helping hand sustained me through the rigours of this and such work.

When everything is said and done, I am alone responsible for any failings and the findings.

CHAPTER I
INTRODUCTION

Communication, both media and personal[1], has been found to go with the development process at community levels in developing countries. The studies done in this area came out with a proposition that mass media and personal influence[2] in a social setting had some role to play in the dissemination of development messages to the end users. But the regional diversity of social settings for these studies proved to be deterrent for the researchers to comprehend the scope of the distinctive role of mass media and personal influence per se in development efforts.

Authors in communication studies had either emphasised the role of mass media over other channels of communication, or compromised mass media with interpersonal communication in a two-step[3] or n-step flow[4]. Even some stressed on interpersonal channels over mediated communication in the context of the development of rural areas. In this researching, the macro studies including some case studies at national levels in different continents[5] landed up with observations in favour of mass media to play a multiplier's role in the flow of information yet others[6] presented the interplay of the mediated and interperso-

nal communication in the spread of relevant messages in a community. Recent studies in developing nations concentrated in 'learning a lot about a little rather than the usual social science approach of learning a little about a lot' (and where the lot may still not be very socially significant)[7] evidently to emphasise the crucial role of personal influence in any communication situation with development goals. Lerner (1958)[8] in his study of the middle eastern nations subsumed a bigger role of mass media in the passing of traditional societies. He found a role of mass media in multiplying the mobility of a society through stages of modernisation. Lazarsfeld (1953)[9] introduced the significance of the influence of opinion leaders in the ultimate shaping of the opinion of the receivers of messages. Such leaders in Lerner's parlance were, in fact, mobile personalities who not only would accept change but also advocate the same. Klapper's five generalisations[10] prescribed only a supporting role of the mass media instead of a bigger role. To him a reinforcement of the existing predisposition was the function of mass media. Schramm (1964)[11] reviewing the scenario gave out a list of functions of communication in the process of development. He mostly dwelt at length upon the flow of communication, might it be mediated or interpersonal. He said that in a changing society it was not the function of

communication that changed, but it was the amount of communication. Rao (1966) had sharpened our conception of communication and development by showing how 'communication creates the stress by creating an awareness of the possibility of change and some of the possible rewards and it is communication again which will provide the necessary information to release tension'[12] He considered both the mediated and interpersonal communication in comparing a traditional community with a transitional one and saw that the difference in the amount of interpersonal communication in two areas was 'not too great, what is striking is the pattern'[13]. Rogers (1962)[14] abandoned his diffusion studies of mediated communication and of late (1977)[15] advocated the significant role of interpersonal communication in development efforts.

This study therefore presupposed a crucial role of personal influence without ignoring altogether the role of mediated communication in any development setting. It took into account both the amount and the pattern of communication at the interpersonal level of two comparable communities in Bangladesh where institutional interventions were made for integrated development objectives.

An Economic Profile for Development in Bangladesh :

Bangladesh continues to be beset with two fundamental problems of poverty and population. With an area of 55,598 square miles she has todate accommodated a population of more than 100 million[16] allowing them 'a subsistence living and accompanying subsistence knowledge'[17]. The annual per capita income is low at US $ 130[18] and more than 80 percent of the population do not have access to a minimum daily diet of 2460 calories[19]. Almost all cultivable land has been brought under cultivation and 50 percent of the land is double-cropped. The country still runs a deficit of about 13 percent of its food requirement[20].

A projection for the past fiscal year (1987-88) had set the requirement of food at 197 million tons calculated on the basis of the annual rate of population growth (2.62 percent) and the food need per head per day (18.50 ounces). The annual production of food had been at 177 million tons[21].

The increase in agricultural productivity is marginal and whatever increase in food production could be discernible over past years came through the introduction of new technology

as against little scope left for further extensive cultivation. A combination of structural problems in the economy has however stagnated the growth in agricultural productivity.

The problems are : 1) The inequitable distribution of land in the economy is to the extent of gini coefficient of .553 with 50 percent of the rural households functionally(owning no land or less than half an acre) landless[22]. A survey on the feasibility of land reform in Bangladesh shows that the top 10 percent of the rural people owns 53.9 percent of the total land and the bottom 50 percent owns about 5 percent of the arable land[23]. The practice of tenancy and share-cropping that ensued has eroded the productivity of agriculture further.

2) The primitive method of cultivation in most arable areas results in a very low yield per hectare,the yield of rice is 1.8 tons in Bangladesh as against 4.9 tons in South Korea, 3.1 tons in China and 2.6 tons in Sri Lanka .[24]

3) The higher share of rural population (91 percent) somehow employs 80 percent of the labour force in agriculture which contributes 53 percent to the gross domestic product of the country. In reality, about 35 percent (in mandays) of agricultural labour force is unemployed. This rate is on the

increase as the absorption rate of rural labour force in agriculture is lower than the supply rate.[25]

4) The rate of literacy is low at 23.8 percent[26] with no development oriented education system still in vogue.

The development of agriculture sector is also constrained by weak participatory institutions, the risk of floods and drought and the lack of adequate infrastructure and transportation facilities.

The stagnation in the industrial sector of the economy has been due mainly to the subsistence peasant economy, the absence of necessary factors of production and above all the low elasticity of substitution between factors of production.

Taking all these factors into consideration, Chenery and others [27] have found that with the present rate of population growth the threshold level of per capita income of $ 700 can be attained by 2000 A.D. if GDP grows at the annual rate of 11.5 percent. This is not possible without a very big industrial thrust as was given in South Korea. If the present rate of growth of GDP by 4.3 percent is maintained, the threshold effect will start sometime after the next 100 years, a time

span the nation can ill afford to wait.

Evidently fallen in a trap between low productivity and high population, 'achievements have not been worthy of the promises of the successive plans. The problems are so compelling and the goals are so desirable that (the planners) tried to achieve too many things at a time with too little resources. ..... Much more could be achieved even within the limitations of resources if priorities were correctly set and appropriate strategies adopted to initiate an organic growth of the economy'[28].

A number of ways have been suggested to tide over the stagnant populous economy. They are a combination of capital accumulation through generation of savings, trade expansion for a favourable balance, more equitable distribution of income through land reform and progressive taxation, development of public sector conducive to the creation of investment base for the growth of industry, increasing use of labour force in the development activity to make up the dearth of capital and above all an integrated rural development programme with basic needs approach.

All of them together may not be readily attainable. The

architects of the third plan have thus emphasised on the 'development of local planning capability and expansion of national planning into regional planning ..... to integrate the two levels of planning into a single whole. As our needs are unlimited and our resources are too scanty, there is no alternative but to develop a multi-sectoral multi-regional macro-framework for a balanced development of the country'[29].

In this broad framework the planners have therefore identified a number of constraints to development, set the priorities and adopted the needed strategies for development.

The constraints are :

1) the inability to save enough to invest,
2) the inability to produce enough to export,
3) the inability to produce such essentials as food to feed people, and
4) the inability to generate opportunity for local participation in the development process.

The priorities set are :

1) the attainment of food self-sufficiency,

2) the initiation of income generation activities, and

3) the lowering of the population growth rate.

The major strategies adopted for the third five year plan therefore have been 1) the maximum utilisation of scarce land and surplus manpower, 2) the expansion of agricultural technology, the opening up of opportunities for productive employment in non-farm sectors and organising poor families into production groups or cooperatives, 3) the control of population through incentive, motivation and mother and child health care, 4) the development of rural industries through technology upgradation and credit operation, and 5) the rendering of basic education and development of skill at the lower level and the improvement of quality at the higher level.[30]

In sum, in the absence of any organised capital, judicious use of land and manpower through local participation has been stressed for the initiation of an organic growth of the economy. The strategy of population control has become an integral part of the plans primarily to ensure that the rate of the growth of population does not exceed the rate of increment in food production. Thus a set of factors subsumed under the rubric of 'development and modernisation' and 'demographic transition' went

together contributing toward an overall growth of the economy.[31]

In recent years, 'the hypothesis that joint efforts in rural development and population planning programme - rather than population programme alone - are likely to reduce fertility significantly has been widely accepted in Bangladesh and elsewhere. Several studies were taken up during the 1970s to empirically test the hypothesis. Various studies showed that 'development programmes and family planning programmes have an almost equal contribution to village-level contraception. The combined effect of development and family planning are greater than the sum of effects of either separately'. A high correlation was also observed between contraception and increasing income through income-employment-generation schemes : '40 to 46 percent of the eligible couples of the income generating families are currently using family planning methods'[32].

With this positive correlation between poverty and population, especially between productivity in primary sectors and small family norm, the planners have constantly been pursuing a policy of combining the efforts in these sectors in an integrated packet largely through participatory forums. Such forums came into being either formally by institutional programme support or informally by a local convergence of relevant ideas

and information regarding core development issues like the increase of the production of food, the organisation of income generating activities and the control of the high rate of population growth through the introduction of family planning programme.

In most of the rural development approaches in Bangladesh the participatory forum is manifest through interpersonal relational structures formed with the social, economic and institutional leaders as the influentials and change agents. The leaders are expected to initiate, disseminate and help practice development innovations in respect of agriculture and other income generating activities as well as of family planning. As agriculture and income generating activities in the rural development approaches are mostly looked after by cooperators and the work of family planning is done through field level workers, this study presupposes a leading role of these institutional leaders in the process of development of rural areas without ignoring the role of the social and economic leaders.

In other words, in assessing the contribution of the institutional leaders toward any integrated rural development efforts, the flow of cooperative ideas and information relevant to an

increase in productivity and income and the flow of ideas and information relevant to a decrease in the rate of population growth are considered to be two important variables needing immediate research attention.

Communication Profile for Development :

The development system of the country which is to achieve plan priorities which include the increase of food and income as well as the control of population is yet to have a clear-cut communication policy for development. The absence of such a policy has 'inhibited efforts to communicate the plan to the people as an instrument of development policy'[33]. As the agency for formulating a communication policy, the Ministry of Information, 'failed even to conceptualise the idea of such a policy or to evaluate its significance for development efforts'[34]. This has resulted in a very poor interaction among policy makers, planners, functionaries, plan executors and the people as to the materialisation of plan priorities.

The policy makers/political leadership are engaged in sifting political contradictions with little emphasis given to relate them to development problems. They failed to identify

the needs and aspirations of the people awaiting to be collated, aggregated, and conceptualised in the policy-making process, neither did they keep the channels of communication 'open to secure feedback from the people on impact, so that policies can be reexamined, modified, or even withdrawn if popular reaction are unfavourable'[35].

The planners are called upon by the policy makers to set development plans without clear national goals. The plans therefore tend to be an excercise of the planners' ingenuity. 'Since the formulation of the plan had been done largely by government agencies, it could hardly invoke, in its own right, any popular support'[36]. The people thus see the plan 'as only remotely related to their immediate concerns'[37].

The plan executors and functionaries have individual sources of feedback which could otherwise be gainfully utilised. But their role position only allows them to make communication a top-down affair rather than an effective two-way traffic.[38]

These inconsistencies in the process of development at the levels of policy makers, planners, functionaries and plan executors as well as the consequent absence of interactive communication among them have resulted in a failure to mobilise

people behind the plan or to assess feedback toward rectification of plan programmes.

With such a state of affair at the macro-level development planning and execution, the people at the grass-root level are only left with 'some piece-meal approaches to rural development taken up as isolated endeavours by sections of innovative people in different areas of Bangladesh'[39]. These approaches have the promise to offer something tangible to the wellbeing of the rural people. Some benefits have already reached through such programmes. This has been confirmed by Haque, Mehta, Wignaraja and Rahman through their study on rural development in some Asian countries, including Bangladesh. They said : 'The quantitative significance of all such efforts taken together in the total national landscape may not be great, but in qualitative terms, these efforts represent initiatives in a new direction by sections of the society that need to be reckoned as a factor in the rural development process in Bangladesh which is certain to interact dialectically with the more traditional approaches in this area'[40].

Some of these programmes have emphasised for interactive communication to be the prime mover in bringing about adequate

awareness and favourable opinion about development activities among the people in rural areas. It is believed that if a scientific communication system could be built into these programmes, they could have led to more tangible results. And hence is the need for studying the state and role of communication structure operative in some of these approaches in the effective implementation of the innovative programmes.

The Setting of the Study

Isolated efforts in rural development in Bangladesh manifested broadly through four programmes : (i) The cooperative approach to rural development of Comilla, (ii) Health and family planning services for rural upliftment at Savar, (iii) Mass literacy programme for rural advancement of Raumari, Rangpur, (iv) Self reliant movement of Kanjipukur, Rangpur. Of late,more rural development approaches were being tried with innovative institutional support.

The broad objectives of all these programmes were development of rural areas through an integrated approach but they had their distinctive emphases. The Comilla approach centred round cooperative method of farming and other income generating activities for the land holders and the landless with simultaneous

emphasis on family planning. The Savar approach basically offered health care and family planning services, but it incorporated programmes on farming and on subsistence income for women. The Raumari experiment laid emphasis on mass literacy drive to help create a base for rural development activities. The Kanjipukur movement aimed at organising the peasants for all round development emphasising self-reliance.

Of these programmes, the Comilla experiment made significant inroads to rural development efforts at national level through the Integrated Rural Development Programmes (IRDP).The Savar approach was gradually making a headway into national programmes on health and family planning. The other approaches however could not come up to national limelight the way the Comilla and Savar approaches could. As the Comilla experiment was being duplicated in varying degrees in other areas through state intervention and as the Savar programme already started receiving attention at the national level, the present study would be limited to these two programmes only.

The Comilla Approach

The innovative approach to rural development at Comilla, an eastern district of the country, was a two-tier cooperative

system evolved by the Bangladesh Academy for Rural Development (BARD). At the village level there were small voluntary farmers' cooperative societies. The cooperatives were federated into a central organisation at the thana level for training, banking and servicing. Thus the establishment of a Thana Training and Development Centre (TTDC) and a Thana Central Cooperative Association (TCCA) became two core elements of the Comilla experiment. Put together with the rural works programme and the thana irrigation project to constitute the Integrated Rural Development Programme (IRDP), the Comilla approach was institutionalised for replication throughout the country by government intervention. The approach sought to use the farmers themselves as their own extention agents through the training of model farmers at the TTDC. These farmers became the technical persons to demonstrate and reach the agricultural innovations they learnt at the centre to the farmers of the cooperatives. Besides, there were two other important office-bearers of the cooperatives. The chairman conducted the weekly meetings of the cooperatives and legitimised group discussions into decisions while the manager maintained the administrative link between the cooperative society and the central cooperative association.

Thus formalised procedures of communication, compulsory weekly meetings at the village level for all cooperative members

and regular visits of the model farmers and managers and occasional visits by the chairman to the TTDC and the TCCA helped hold the groups together to keep them functioning until they became self-sustaining.

Like the farmers of the cooperatives, the women also organised themselves into groups taking up specialised roles to receive training from the TTDC on subjects which inter alia included child care, maternity and family planning so as to relate their training experiences to the members of the women organisations.

The Savar Approach

Gana Shasthya Kendra (People's Health Centre) was established in 1971 during the war of liberation and later found its site at Savar, 10 miles north of the capital city of Dhaka. Basically it was an innovative programme organised privately by a group of dedicated doctors to train the village youth and women to provide medical services of a preventive and curative nature for the people. The programme sought to enroll the people for a very modest payment within their limited means as a part of a village health service. This provided them with household visits by paramedics who had been locally recruited and trained

as barefoot doctors to render rudimentary curative services including minor surgical intervention of tubal ligation and menstrual regulation. On the preventive side they educated the villagers on matters of personal hygiene, family planning, nutrition and even cropping practices. Thus from the health and family planning services for the village women in the main, the activities of the paramedics gradually bordered on an initiation of cooperative ventures for marginal farmers, sharecroppers, fishermen and women groups.

Both the programme centre at Savar and a number of sub-centres at the adjoining places served the clientele. The village based health workers worked in cooperation with the paramedics from the centre and the sub-centres. The paramedics working for more than a year gradually involved in agricultural and educational work. The programme was financed by the Kendra, donations and a health insurance scheme.

With some success at Savar, a same type of programme was duplicated at Bhatsala of Jamalpur district. The philosophy was that the ordinary people, given responsibility and some training, could effectively meet their challenging needs.

Of the institutional development activities at the study

areas of Comilla and Savar, agricultural and non-agricultural cooperative ventures and family planning efforts had been purposively selected as the two major components of the integrated rural development programmes - the former contributing to the reduction of poverty through an increase of yield and income and the lattercontributing to the institutionalisation of the concept of planning a family through a processual path which promised to bring the increasing level of awareness of family planning to a situation favourable for adoption. The key communication elements in effecting successes in cooperative and family planning efforts thus remained to be the flow of relevant information and ideas either by various formal media or by words of mouth at the localities. Thus in the programme intervention areas an individual received information and ideas on cooperative and family planning from the newspaper, radio and television, to name the three important formal media, as well as from paraprofessionals and indigenous facilitators, friends and relatives as well as social and economic leaders and the knowledgeables. This study took into consideration both the media exposure and the interpersonal communication connectedness of an individual as the two important communication structural variables intervening between an individuals' socio-economic status and his change of behaviour in respect of cooperative pursuit and small family norm.

Objectives

This study hoped to search for a communication model for rural development efforts simulated from the experiences of Comilla and Savar. However, the specific objectives of the study were :

1. To study the state of communication structures in the Comilla and Savar approaches to rural development, especially to see the formation of interpersonal communication networks in the development process of the two study areas.

2. To study the role of the communication structural variables in the change of behaviour of the development participants in respect of cooperative pursuits and family planning efforts in the two study areas.

Hypotheses

1. Both the Comilla and Savar approaches to rural development functioned basically in a top-down communication diffusion process and hence local convergence of development information and ideas were either dormant or incoherent.

2. The contribution of the communication structural variables in the change of behaviour of development participants in an information saturated area varied greatly from that in a facility saturated area.

3. The influence of the communication structural variables in the change of normative non-taboo behaviour of development participants varied greatly from the influence that the same variables would have in the change of taboo behaviour disruptive of norms.

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CHAPTER II

CONCEPTUAL FRAMEWORK

Communication as a concept and as a process has undergone a significant change in its meaning and context over the decades. Communico (sharing)[1] in place of communis (commonness)[2] has provided the meaning of the concept while convergence[3] (Kincaid, 1981) in place of only diffusion[4] (Rogers, 1971) has redefined the process in a changing context. This change in communication conceptualisation has been the result of a change in development conceptualisation in the developing countries.

Rostow described modernisation as a movement from a traditional society through a point of "take off" into a situation of self-sustaining growth.[5] A basic index was Gross National Product. Basic social indices were urbanisation, development of communication system, and an amount of political participation. Lerner suggested a sequence of institutional development leading to take-off— urbanisation, literacy, extension of mass media, higher per capita income, ...and political participation (voting).[6] The essential point was that growth in one of these spheres stimulated growth in others and all spheres of society moved forward together toward modernisation. Lerner also suggested development of empathy as a prerequisite for modernisation.

Ever since the publication of The Passing of Traditional Society by Deniel Lerner (1958) and Mass Media and National Development by Wilbur Schramm (1964), western communication researchers 'have exaggerated the power of the mass media in fostering rapid development in the Third World countries'.[7] In truth, Schramm took up the role of a facilitator of the proposition by communication authorities, Lerner included, that mass media acted as "magic multiplier" ..... for development in the emerging nations.

Pye (1963) attributed the downfall of traditional societies to the pressure of communication. A number of communication studies in the Third World countries were conducted to find the contribution of mass media toward development efforts. Mostly correlational and field experimental studies were undertaken by communication researchers (Fry, 1964; Rogers, 1962; Gruning, 1971; Kincaid, 1973; McNelly and Molina, 1972).

Correlational studies on mass media and modernisation demonstrated a certain degree of covariance between the two sets of variables but did not prove any causal relationship. Some field experimental studies demonstrated a positive contribution of mass media to the modernisation process (Neurath, 1962; Brown, 1970).

Despite the fact that some studies confirmed that mass media exposure was highly correlated with individual modernisation variables ..... 'the powerful role of the mass media was more often assumed than empirically established.This trend ..... unfortunately continues'[8].

The early seventies saw the publication of The Limits to Growth by P. Meadows et. al. (1972) and Small is Beautiful by E.F. Schumacker (1973) which challenged the concept of infinite growth and the relevance of capital-intensive industrialisation route to development in developing countries. This shift in emphasis in regard to components of development process gave way to a new paradigm of development. The proposed paradigm was based on two major concepts: quality of life and integrated rural development. 'The concept of integrated rural development is emerging as the main element of new paradigm of development. This concept means appropriate technology, labour-intensive planning, small industries, agricultural development, health development, income distribution and so forth. This is considered as a comprehensive approach to enhancing the quality of life of the rural population'[9].

Meanwhile in a thorough review of the past communication research efforts in Latin America, kindred communication research

thinkers spearheaded by Luis Ramiro Beltran concluded that the research methodology in the field of communication in the past had been of a pro status quo bias 'in that it never considered the alternative of the creation of new system but rather presented "functional" adjustment to the old. ..... the methodology itself limits a critical comprehension of the social system in which communication operates'[10].

Thus a search for newer paradigms for communication research relevant for developing nations started.

The "effects" and "functions" models which emphasised on receiver motivation to find out how commercial and political persuasion could be effectively exerted on him made widespread use and overuse of empiric research methods like the sample survey. Beltran called it 'the meat-grinder/the people-grinder'[11]. To Alfonso and Dissanayaka,it portrayed 'the dehumanizing implication of this research tool whose sole interest is the statistic, not the person'[12].

As Rogers (1976) pointed out, the emphasis on individual variables tended to define social problems studied in terms of 'person-blame rather than system blame'[13].

Nordenstreng observed that this research method grew up in an atmosphere of behaviourism and operationalism, which made it correct in technical methodology, but poor in conceptual productivity.[14]

Everett M. Rogers who conducted numerous studies in Asia and Latin America had been much critical of his own diffusion studies and said : The innovation is usually a technological idea, and thus one can see that past diffusion research fits well with the dominant paradigm's focus on technology and its top-down communication to the public.[15]

Beltran called for a shift in the method and focus of communication research from surveys of audience effects to studies of the control of functioning of media institutions.Rogers elaborated that 'this shift involves going into critical research or a "systems approach" wherein the interrelationships among the elements of communications are studied in the context of the environment in which the communication system is embedded and away from the purely empirical or components approach' to communication research ..... in which a source variable, a message variable or a channel variable is investigated to determine how it is related to communication effect'[16].

Everett Rogers tried to make a distinction of the empirical and critical schools of communication, 'while not everyone agrees on exactly what is meant by these terms, nor on who belongs to which school. I believe they may be useful distinctions. ..... The empirical school of communication research is commonly characterised by quantitative empiricism, functionalism, and positivism. In the past it has generally emphasised the study of the direct effects of communication, while paying less attention to the broader context in which such communication is embedded. In contrast the essence of critical school is more philosophical emphasis,its focus on the broader social structural context of communication ..... and a central concern with the issue of who controls mass communication systems'[17]

Alfonso and Dissanayaka made efforts toward further conceptualisation of the two research categories.[18]

A. Category Scheme :

1. Empirical research

1.1 Characteristics of communication
1.2 Effects and functions of media of communication
1.3 Content of the mass media
1.4 Communication of innovations and modernisation

2. Critical research

2.1 Historical aspect of communication
2.2 Structural/systems communication
2.3 Transactive communication
2.4 Mass media institutions and other communication institutions
2.5 Communication in policy and planning

B. Definition of Categories:

Empirical Research	It is characterised by quantification, functionalism, positivism and empirical explanation; it uses the "components approach" wherein the elements in a communication event(SMCR i.e. Source, Message, Channel and Receiver) are studied individually to gain understanding of how they operate, usually in order to determine how each is related to communication effects; here less attention is given to the broader context of communication.
-Characteristics of communication.	It takes a descriptive look into the nature of any of the communication elements; other aspects of communication (i.e. status, problems, the use of technology per se); or patterns of communication.
-Effects and functions of the media of communication.	It delineates uses of the media in the context of influences on the receiver as perceived by the communicator.

-Content of the media of communication.	It focuses on the manifest message as a means for persuasion.
-Communication and modernisation.	It examines use of the media in disseminating new information as judged important/relevant by the communicator; it includes such concepts as "development," "social change," "diffusion of innovations," "two-step flow," and "leadership".
Critical research	It is a problem-posing, consciousness raising activity focused on the broader social structural context of communication; it uses the "systems approach" which regards communication as a total process, investigating both the interrelations among the components and the relevant environment of which the communication system is a part.
-Historical aspect of communication.	It reviews the origins and trends of communication and the different media.
-Structural/systems communication.	It takes a holistic view of communication and culture including socio-economic aspects.
-Transactive communication.	It emphasizes the interactive nature of communication.

-Mass media institutions and other communication institutions.	It looks into the structure, ownership and operation of the mass media and other communication institutions such as advertising agencies, communication schools; it includes also documentation of "the social and attitudinal backgrounds of (the professional) communicator in (those) organisations.
-Communication in policy and planning.	It introduces communication as one basis for policymaking and as a component in programme planning.

James Halloran (1981) underlined the need to conceptualise afresh the objectives and functions of communication research in the developing countries. He stressed the need for more critical or policy research as opposed to empirical or administrative research.

To Alfonso and Dissanayaka 'this is a distinction that was enforced by Lazarsfeld in the forties; but Halloran has thoughtfully related it to the concerns of the developing countries! They thought 'the simplistic communication-based and manipulator-oriented model of communication should be replaced by one that facilitates structural change in Asian societies. This is where a critical research philosophy can prove to be useful'[19].

Schramm (1979) 'rereading' his book Mass Media and National Development 17 years after its publication found the model of change based on the concept of modernisation to be 'inadequate to the task of many of the developing countries, and new models rather than one new model are now evolving'.[20] He also discarded the diffusion model with all its variations and suggested for the big media 'a supporting rather than a leading role in development communication'[21]. He considered "local strategy" for development communication to be of utmost importance.

The local strategy 'is not basically an exercise in diffusion. It does not begin with the experts ..... Rather, it begins with local planning, local decision, local organisation, and it counts on local leadership'[22]. Schramm thus recognised the dominant role of "little media" in development process and suggested that future research in the developing countries should be conducted keeping in view the following needs:[23]

(i) The first need ..... is for a great deal of simple research which can be focused on local problems, conducted quickly and used at once to improve local activity.

(ii) A second type of priority research in developing countries is studies that follow the process of local development. This type of study should show the following characteristics:

(a) they should try for specificity rather than generality,

(b) they should wherever possible use the social group as a unit of analysis; and

(c) they should deal with change over time.

Therefore, a new approach to human communication process was proposed - a convergence approach which was based on a circular rather than a linear model - and which argued that the effectiveness of communication process depends upon the degree of participatory relationships among participants in order to achieve a common focus, mutual understanding.[24] Here convergence meant moving towards a mutual understanding of the communication participants' meaning, interests, needs or point of view.

In the framework of the convergence approach to communication, Rogers and Kincaid in their latest book Communication Network: Toward a New Paradigm for Research presented network analysis as an approach to research on human communication and behaviour change. They suggested for the inclusion of three main types of data named as "data-cube":[25]

(i) The unit of analysis (individuals and their relationships),

(ii) Variables; and

(iii) Time.

A synthesis of Schramm's proposition for a "quick" picture of communication problems at local level with Rogers and Kincaid's proposition for a "relational" picture of communication system through "network analysis" might be attainable in any rural development communication studies.[26]

Both the propositions suggested a baseline study followed by study over time. The problem would be how to study the state of communication problems in a network quickly to improve upon communication strategy without waiting for a longitudinal study.

This problem might be resolved through a cross-sectional study in the framework of network analysis. It implied that both "quick" and "relational" study may be undertaken in an integrated way. Such studies were important for a comparative analysis of communication network in popular rural development approaches. 'Comparative studies of different communication approaches may provide useful guides for transfering rural development ideas and practices from' one area to another.[27]

This study, in essence, tried to follow Rogers' proposition that 'a hybrid of the empirical and the critical schools (can be) developed by applying them in a way that may be distinctive'[28]. This study therefore made a fusion of both the research approaches by borrowing methods of data collection from critical school while analytical tools came mostly from the empirical school. In other words sociometric data were analysed with the help of heuristic statistical models.

NOTES TO CHAPTER II

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16. E.M.Rogers, President's Column, International Communication Association Bulletin, Fall 1980, quoted in Alfonso and Dissanayaka, op.cit., p.7.

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24. E.M.Rogers and R.Adhikarya, 'Communication and Inequitable Development : Narrowing the Socio-Economic Gap', Prisma, Djakarta, 1981, pp.64-75.

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27. S.A.Rahim, 'Communication Approaches in Rural Development', W.Schramm and D.Lerner (eds.) Communication and Change - The Last Ten Years and the Next (Honolulu, The University Press of Hawaii, 1975), p.161.

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CHAPTER III
ANALYTICAL FRAMEWORK

This study owes its conceptual framework to a mix of linear and convergence models of communication and its analytical framework to communication network analysis of Rogers and Kincaid (1981).[1] Of the data cube (time, units of analysis and variables in the analysis), the time dimension of the processual nature of communication was not covered as the time frame for a doctoral dissertation stipulated in the University Ordinance does not accommodate a longer time for a longitudinal study. The study therefore concentrated on the rest two dimensions of the cube. However adequate adjustment had to be made in respect of the units of analysis and the variables commensurate with the objectives of the study.

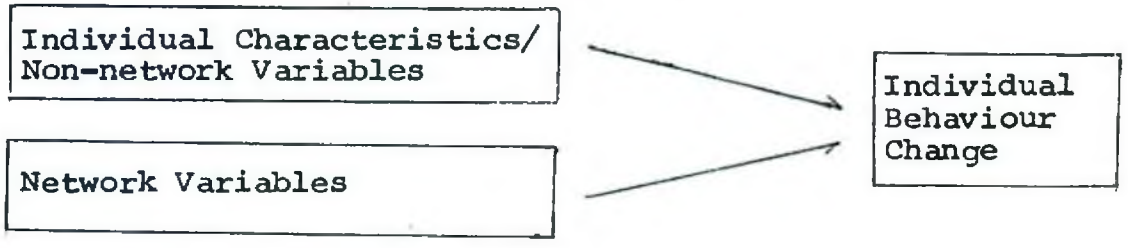
As for the units of analysis, both 'individuals' and 'their relationship'[2] within the communication system were studied. In other words monadic and dyadic data [3] were analysed.

In regard to variables of this study four distinct categories were identified. They were : (a) Background variables, (b) Non-network variables, (c) Network variables and (d) Behaviour change variables. These four categories were further

collapsed into three broad heads for easy cognition of the variables. The background and the non-network variables were considered to be independent, the network variables intervening and the behaviour change variables to be dependent. In other words network variables, the basic communication variables in this study, were studied to see the operation of the behaviour change variables in the broad context of background and non-network variables.

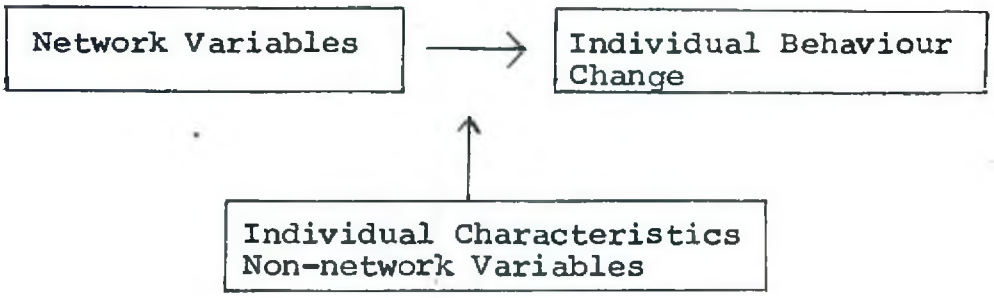
A scrutiny of past research on the effect of communication network on behaviour by Rogers and Kincaid identified, three analytical models for communication studies. They were[4] :

1. Network variables as important as background variables in explaining behaviour change :



2. Network variables having important intervening effects in explaining behaviour change :

3. Network variables having unique contribution in explaining behaviour change while controlling on the contribution of individual characteristics and non-network variables :



The present study took into consideration the rationales of all these models and attempted to derive an analytical model which allowed all possible relationships among the three broad heads of variables and showed their positional arrangement in an interactive setting. The analytical model ran as under :

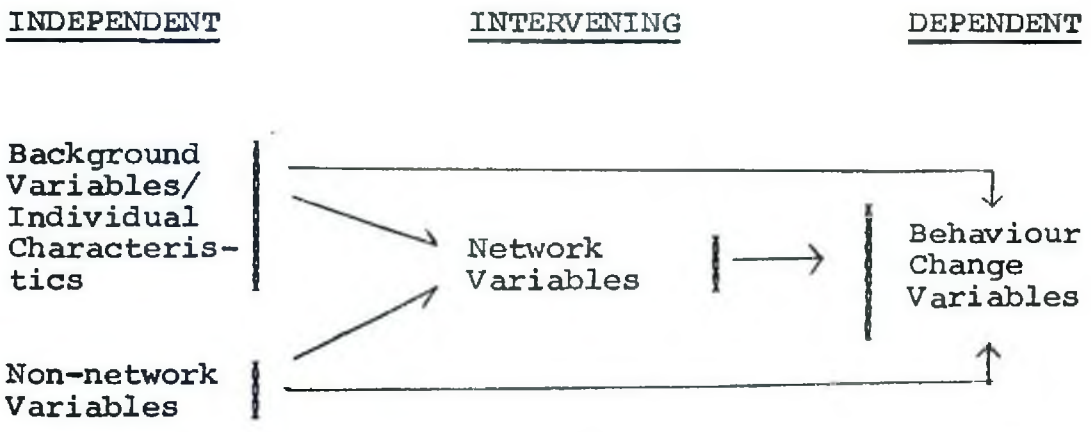


Figure 1 : Analytical model showing relationship between variables.

Thus the independent variables would explain the intervening and dependent variables while the intervening variables would explain the dependent variables simultaneously. However this study, in the main, saw the influence of the intervening variables on the dependent variables.

NOTES TO CHAPTER III

1. E.M.Rogers and D.L.Kincaid, Communication Networks : Toward a New Paradigm for Research (New York ; The Free Press, 1981), pp.82-83.

2. Ibid, pp.79-82.

3. Ibid, pp.102 and 142.

4. Ibid, pp.226-227.

CHAPTER IV

METHODOLOGY

The objectives of this study were to reach to a macro-view of communication system through a micro-view of communication structure in certain development programme intervention areas of rural Bangladesh.* In the intervention areas, the communication structures, especially the interpersonal communication networks contributing to behaviour change with respect to development information and ideas, were the focus of research attention. In this very area of communication study the initial problems that were encountered were to find two comparable representative areas — one from Comilla and the other from Savar. In finding them two questions were posed :

1. Which programmes in the integrated development package in the two rural development approaches did have resemblance in their agenda of activities ?

2. Which areas of the two rural development approaches did have similar socio-economic phenomena ?

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* The areas of programme intervention by the Thana Training and Development Centre (TTDC) at Comilla and the People's Health Centre (Gana Shasthya Kendra, GK) at Savar respectively were referred to here and hereafter as 'Comilla' and 'Savar'.

Programme Selection

The Comilla approach had the following list of programmes:

(a) Agricultural cooperative;

(b) Non-agricultural cooperative;

(c) Rural works programme;

(d) Adult education;

(e) Women's programme;

(f) Family planning programme;

(g) Youth programme.

The Savar approach had the following list of programmes:

(a) Health and family planning programme;

(b) Training programme for health workers;

(c) Narikendra - Centre for women's vocational training;

(d) Gana Paduka - Shoe making small industry;

(e) Gana Pathshala - People's school;

(f) Gana Krishi Khamar - People's cooperative farming.

As the two approaches offered cooperative pursuits as well as family planning programmes in their integrated packages,

the area selection was limited to those places where the two programmes were present. In other words agricultural cooperatives, non-agricultural cooperatives and family planning programme in respect of Comilla and the family planning component of the Health and Family Planning programme and the Gana Krishi Khamar (People's Cooperative Farming) in respect of Savar were the programmes selected for the purpose.

Area Selection:

After the first question about common emphases in the two programmes was answered, attention was given to selecting the comparable representative areas having similar socio-economic phenomena.

Innovators at Comilla and Savar were approached to identify 10 village areas each where the programmes proved to be successful over past years. Of them only two village areas - one each from Comilla and Savar - could be selected on the basis of the following six criteria :

(i) Location of the area - neither too near nor too far from the programme centres i.e. the Thana Training and Development Centre (TTDC) at Comilla and People's Health Centre (Gana Shasthya Kendra, GK) at Savar.

(ii) Population - fairly composed of Hindus and Muslims, and existence of landless and land owning groups.

(iii) Occupation - mostly farming.

(iv) Existence of institutions - schools, clubs, mosques, temples and other informal associations.

(v) Support from the programme centres - fairly reaching the areas.

(vi) Programme length - emerging village(s) with a continuous programme support.

The Bangladesh Academy for Rural Development (BARD) resource personnel who were engaged in research on programme activities under the TTDC were first approached to name the programme areas where the innovators had earned confidence of the localities for successful endeavours. The three-monthly reports of the BARD were also studied to identify the successful co-operatives. Accordingly 10 cooperatives covering 10 programme intervention areas could be selected primarily. They were : Deddar, Joypur, Takdir, Pachkitta, Sree-Nibash, Disha Band, South Gopal Nagar, Joshpur, Dharmapur and Monogram.

Similarly, the resource personnel of the Gana Shasthya

Kendra (GK) were interviewed and the records scrutinised to identify 10 village areas where their programmes could make a successful headway. The areas so identified were : Enayetpur Nalam, Shubandi, Shimulia, Chakalgram, Ghughudia, Gopinathpur, Kaicha Bari, Konda and Charigram.

In Comilla, Takdir was found to satisfy all the six criteria and therefore Takdir covering the village of Dhanpur and some adjoining areas was selected for this study.

Of the village areas in Savar, Ghughudia and the adjoining village of Panchghughudia were selected for this study applying the same criteria.

The Study Area of Dhanpur, Comilla :

The village of Dhanpur is on the east of Jorekaram Union. The office of the Takdir Shamity, the cooperative society of the area, stands at the border of Dhanpur and Bhatpara villages. These two villages in particular are like a cluster around the cooperative office. The Dhanpur had a total of 1500 inhabitants. Occupationally 70% family heads were day labourers mostly in farming and 15% were land owning agriculturists. Activities of the cooperative included fish culture in a big tank(2.60 acre),

rickshaw projects, cattle fattening project, fruit gardening, education programme, and health and family planning education through weekly meetings. Takdir cooperative society started functioning on September 24, 1978 with an initial capital of Tk.42/- from its 42 founder members. Todate the membership strength rose to 397 with savings at around Tk.1,50,000/-.

The cooperative was responsible in setting up a primary school and a girls' high school. Beside the Takdir Shamity, there was a farmers' cooperative which started functioning in as far back as 1962. This cooperative was active only during the dry season when water distribution to agricultural land holdings of the farmers became imperative.

In the adjoining area of Bishnapur there was yet another farmers' cooperative with limited activities during the dry season.

Notwithstanding the existence of farmers' cooperatives in the areas, the focus of attention of the people in general had been toward the Takdir cooperative society even for insecticides and fertilizer which the farmers' cooperatives could have arranged for the farmers.

As the area of the Takdir Shamity and others agricultural cooperatives centred round the village of Dhanpur, the entire area was referred to in this study as Dhanpur (the literal meaning of this being 'the estate of wealth'). The name incidentally justified the efforts of the cooperatives which emphasised on the creation of wealth through diffusion of facilities in an integrated approach combining therewith a programme of family planning ostensively for reduction of pressure on wealth.

The Takdir Cooperative Society evolved a mechanism which ensured a regular earning for the society and some mediated entertainment for the people. A Dighi earned and a TV set attracted. In fact, a quick glance of the programme activities in this area readily offered a scenario like this.

A close observation of these activities however unveiled some additional socio-economic realities that helped interpret the nature of interactions among the people in an institutional embrace.

The formal interaction among the people about cooperative farming, family planning and the like was taking place due mainly to the existence of institutional structure. Certain amount of seriousness could also be discernible among the people about

institutional programmes in general.

The institutional structure had also been successful to dilute in most cases the influence of government agencies in the area. For example no litigation at a civil court was allowed to be instituted without seeking a prior adjudication at a local shalishi board arranged by the local leadership. This shalishi board also acted as a law enforcing agency for the area. Mostly pecuniary punitive measures were taken against the person proved to have encroached on the right of others. The Takdir cooperative society took a number of development projects with alternating successes and failures. Doses of failures were due to some ambitious projects.

Some distinct communication cliques could be identified in the area. Two dominant cliques were found to oppose each other. The leadership pattern of the two cliques was taken into consideration, one could be said to be tradition-bound and the other could be termed as transitional/modernity-bound. The former laid too much emphasis on religion and hence considered some programmes of performing arts on TV to be either anti-Islamic or youth-corrupting. It also considered the earnings from a Dhighi whose proprietorship had not yet been settled to

be illegal and 'haram'.The clique was of the opinion that the transitional clique currently running the Shamity misappropriated its funds and in certain cases due to lack of proper planning in undertaking development projects it incurred substantial loss to the Shamity. In a word the transitional clique was opposed on certain grounds by the traditional clique. In most cases the opposition was how better to perfect the integrated rural development programmes taken up by the Shamity.In the face of opposition from the traditional clique, the ruling clique maintained a cautious stance in order to avoid unnecessary criticism from religious point of view. They allowed a TV set at the Society's office, but dared not own one for the family, as that would erode their popularity among the religious electorate. These two dominant cliques were within the Muslim populace. Other discernible cliques were in the Hindu families. The dominant Hindu clique maintained congenial relations with the ruling Muslim clique through a number of liaisons and bridges. The interaction between the two dominant cliques was either to confirm or to perfect the institutional programmes and never to undo cooperative activities of the Shamity. As a result notional protests against each other were ventilated through 'gainst-speaking with people below poverty line and occasional noninvolvement in cooperative affairs.

This inter-clique interaction of non-involvement and 'gainst-speaking could be due mainly to top-down diffusion of facilities reaching the traditional beneficiaries and creating economic cliques wherein certain heterophilous communication structures developed. As most cliques were sold to the concept of integrated rural development through cooperative activities these cliques together shared power or prestige in the area. The leadership of the ruling Muslim and Hindu cliques wielded power in the institutional structure, the leadership of traditional Muslim clique commanded respect of all the other cliques.

The Study Area of Ghughudia, Savar:

Ghughudia lies to the South of Nayarhat, 4 miles from the township of Nabinagar and two miles and a half from the Gana Shysthya Kendra (People's Health Centre) at Savar.Though Ghughudia was originally chosen to be the area for study as it fulfilled all the criteria set for area selection, the hub of development activities for both the aged and the youth centred round the local school premises and a youth club that fell at the border of Ghughudia and Panch Ghughudia. This necessitated the inclusion of Panch Ghughudia into the study area. Ghughudia and Panch Ghughudia were referred to in this study as Ghughudia.

Ghughudia was making efforts toward rural upliftment and the people's Health Centre at Savar provided necessary logistics in the diffusion of information and services regarding health care and family planning. The cooperative efforts for farming and fishing also received adequate attention of the Centre at Savar.

The study area had a population of 1500. Occupationally farming and fishing were the two dominant economic pursuits in the locality involving 80% of the populace. The farmers had their cooperative headed by a school teacher. The fishermen had their own. The youth also came up to form a cooperative which limited its scope of activities to the generation of voluntary savings. Of all, the most successful was the farmers' cooperative which took up seasonal programmes for irrigation during dry season and procurement of seeds, fertilizer, pesticides as and when required. The youth club, Nabarun Sangha, encouraged by the middle-aged influentials of the locality and run by the youth members arranged both entertaining and education programmes, for example, Zari gaan and Kabi gaan that, inter alia, explained the significance of good health and small family. The Gana Shasthya Kendra at Savar also sent their centre-based field workers on every working day to their clientele in the village. In addition there were

village-based workers visiting the clientele for simple health and family planning service.

The cluster of the villages of Ghughudia at Savar had no institutional structure as was found at Comilla and hence it offered no organised interaction. In the field of health care and family planning, there was institutional support through daily visits of health workers at the villages and occasional receiving of health and family planning facilities by the villagers at the Gana Shasthya Kendra (GK) of Savar. This was a sort of direct link established between health workers as well as the GK and the villagers. Evidently this was a diffusion process which did not provide for regular formal interaction at the local level among the beneficiaries, as a result the practice either in terms of health care or adoption of family planning devices remained mostly a sort of an isolated endeavour.

Female adopters of health care and family planning had some degree of seriousness but the manifest attitude of the malefolk was that health care was a day-to-day need for all but family planning should be exclusively a women's affair meaning that if it was a question of permanent sterilization, only the womenfolk should go for necessary operation. It was interesting

to note that general awareness about family planning among the villagers at Savar was quite high, higher still among the old who had gained bitter experience meeting dowry and other expenses of marriage of their sons and daughters. Some of them did not even hesitate to counsel their grandchildren and even to indicate to their children the very essence of family planning.

In the absence of institutional structure within and existence of institutional support from without, the aspiration of the villagers seemed to be for a formalised local structure that would help redress pressing problems of the area. A road by the side of the village and procurement of irrigation facilities were the two problems needing immediate attention.Local convergence of ideas about problems and possible solutions took place only to confirm their felt need for any structural arrangement that would bring down some facilities in this respect. The existing bodies of local government were not paying adequate attention to these problems. Some philanthropic organisations from the capital city offered some assistance to meet irrigation problems of the area, but they were far from being adequate.

The area did not suffer from religious dogmatism or conservatism. Social reasons apart, this phenomenon was due mainly

to the absence of a road to link the interior of the village. The paras could not be kept in tight isolated compounds as that would have virtually stopped the movement of the villagers altogether. A para offering the foreground, another allowing the backyard and still another making rooms between two houses were how the villagers' road was formed. The strangers to the village also used this road.

Traditional leaders' clique could not be discernible.In the leadership pattern of the society, people with money had an easy access. Aristrocracy was no indicator of leadership. The labour force was divided to agriculture, fishing and work at mills and factories. Activities of agricultural upliftment did not receive due attention. Some 40 farmers had formed a cooperative and had been successful in mobilising a common fund for timely procurement of irrigation facilities for the last few years. Their immediate need was for a local structure to look after these problems in real terms.

One interesting thing was that no strong leadership pattern could be found in the area. There were a number of well-to-do families with the possession of status symbol like a TV set, but the youth seemed to be stronger enough at least

to dilute the influence of these opinion leaders, if not to take over the reign of leadership.

On the need for a road linking the interior, there was dissatisfaction among the people about the elected leadership of the locality but clear communication cliques around such discontent were not evident enough. Most of the youth however had their friendship network, the farmers had their Shamity and the fishermen had theirs. The inter-group interactions were limited to a very benign challenge offered by the left-leaning youth to the traditional leadership. Inter-religious amity existed.

Identification of Variables:

As stated in the analytical framework background variables and non-network variables were grouped to constitute the independent variables for this study. Individual characteristics, herein referred to as background variables, included religion, education, occupation, land, family size and age. The non-network variables in the study were : (1) media exposure of the respondents, (2) physical mobility of the respondents between the locality and the programme centre, (3) family planning workers' visit to the respondents and (4) husband-wife commu-

nication on family planning. The reasons for not considering the aforesaid four variables as network variables lay in the fact that :

(a) media exposure of the respondents were basically cybernetic in nature involving a man-machine interaction,

(b) physical mobility of the respondents here meant a physical movement of a person of the locality to the programme centre which was located outside the study area,

(c) family planning workers came from or were employed by the programme centres which were located outside the study area, and

(d) husband-wife communication which was essentially an elemental dyad within the family was taken to be a non-network variable as the interspouse relationship was highly intimate and within the very limited bounds of the family.

Thus the non-network variables referred to the communi-

cation link of an individual which was either exclusively intimate in nature as in the case of husband-and-wife communication or of extraterritorial nature as in the case of the physical exposure to the city or an exposure to the city-centred media.

The network variables, the intervening variables in this study, referred to the communication connectedness of an individual within the development setting under study. The network variables were grouped into general and institutional network. Rogers and Kincaid defined them as under[1]:

'The communication networks ..... were operationalised by means of two different sociometric types of questions.

1. Family Planning : Of the women living in this village, who do you talk most about family planning ? Please list the names of the five people you talk to most about these subjects.

2. General : Who are the people that you meet and talk with most in this village outside of your family ? These responses were also limited to the five most frequent links'.

In line with this broad premise this study thus divided the networks into general and institutional.

The general network variables included social and economic networks. They were communication connectedness of individuals pertaining to discussions on social and economic problems.

The institutional networks came out from communication connectedness of individuals in matters of the exchange of information and ideas on programme-specific subjects in the development setting under study. In this case two institutional networks could be put into sociogrammes; they were communication network in respect of the exchange of cooperative information and ideas and networks regarding the exchange of family planning information and ideas.

All the general and institutional networks were considered to be intervening between the independent and the dependent variables.

The dependent variables in this study were the change of behaviour of development participants in respect of cooperative and family planning. In the analytical framework of the study the dependent variables were classified as awareness, opinion, advocacy and adoption of innovations.

For a quick comprehension, the variables in their positional arrangements were presented in a flow chart.

Analytical Framework

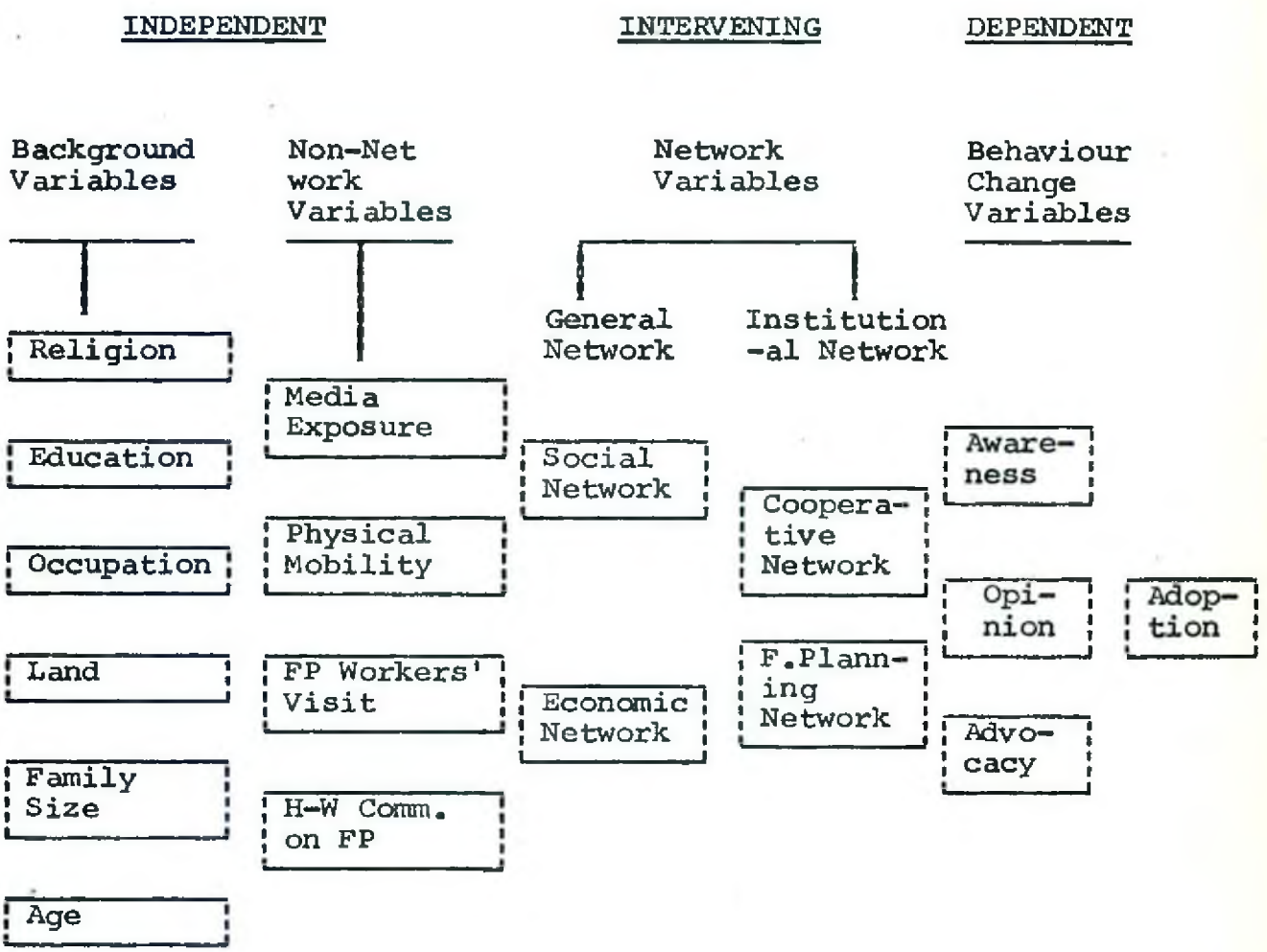


Figure 2 : Flow chart of the analytical framework.

It could be said that the institutional programme intervention in the two study areas made the institutional network variables more meaningful in explaining the change of behaviour than any other variables could do. Thus the simplified arrangement of the flow of variables should run as follows :

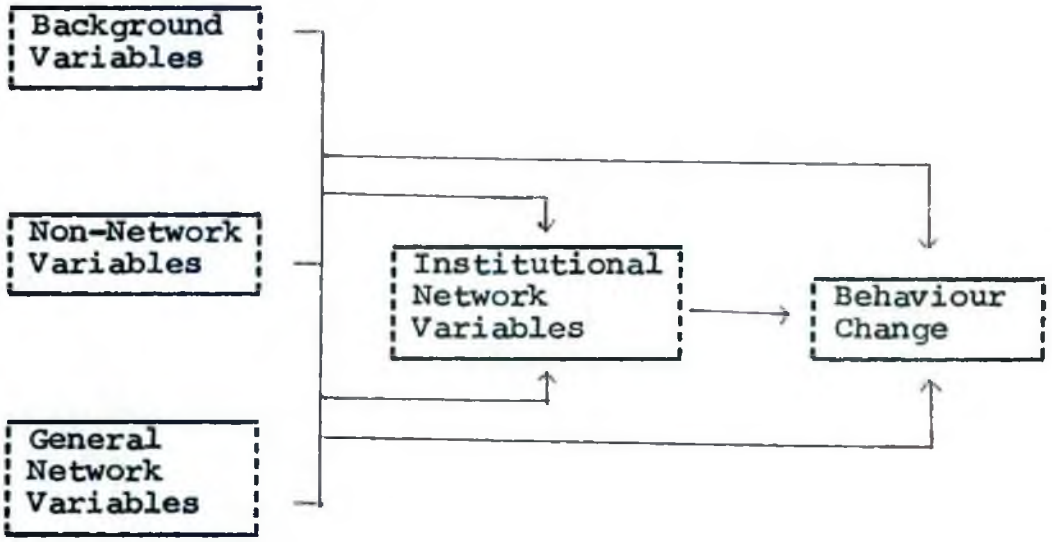


Figure 3 : Simplified flow chart of the analytical framework.

Care was thus taken to see that the change of behaviour of the respondents was explained in terms of the institutional variables and in the light of the remaining variables.

Sample Selection

Since the nature of the present study must capture both the formal and informal flow of communication through the collection of dyadic or relational data in place of only monadic ones, sociometric survey was found to be an appropriate method of data gathering. In other words, as the units of analysis for this study should be the individuals and their relationship, a sample survey method of data collection was avoided and the snowball sampling method was adopted. This was due to the proven efficacy of the snowball sampling method of data collection in a sociometric research like this.

> "Snowball sampling method utilizes the sociometric data about network relationships to determine who in a system should be the respondents in a research study". (Rogers and Kincaid, 1981)[2].

In this method an original sample of respondents called starters were asked to name their sociometric referrals who then became respondents in a second phase of data gathering. At this second stage the referrals as respondents named further sociometric referrals to constitute the respondents at the third stage and so on. After the purposively selected

original starter sample, further sets of referrals as respondents were determined mostly by following only the interpersonal chains. 'Thus, the sample grows like a snowball rolling downhill' (Rogers and Kincaid, 1981)[3].

Care was taken to ensure that in the snowball sampling method of data gathering the isolates in the system who preferred not to be visible enough for easy identification as links but were considered as knowledgeables in the locality were included into the sample. This was done by posing the respondents at different stages with questions like 'Who do you think are poor but knowledgeable in matters of family planning or cooperative ? Name them even if you do not maintain any personal communication link'.

The original sample of respondents were selected purposively from an elaborate list of knowledgeable and key persons of the selected villages representing all the available occupations, sex as well as religion.

The size of these persons was 10 in each study area, but in the identification process information about these persons was gathered from the people of the adjoining villages to

avoid any bias from within. These starters were checked back by observation and unobtrusive data collected from the villages under study.

In all, from the starter sample to the last stage sample, there were four stages of identification of respondents. Thus, upto the fourth and final stage, a total of 71 and 67 respondents were identified in Comilla and Savar respectively as shown in the following Tables :

Table 4.1 : Identification of respondents in Comilla.

Stages of Sample Identification	Method of Sampling	No. of Starters/ Referrals	No. of Overlaps	No. of Starters/ Actual Referrals	No. of Starters/ Available Referrals who were interviewed
First (Starter)	Purposive	10	-	10	10
Second	Snowball	50	20	30	30
Third	Snowball	90	65	25	25
Fourth	Snowball	70	62	8	6
		220 (10+210)	147	73 (10+63)	71 (10+61)

The Table 4.1 showed that in the study area of Comilla 210 names were referred to out of which 147 were overlaps and 63 were actual referrals of which 61 could ultimately be reached for interview in addition to 10 starter respondents making the total to 71.

Table 4.2 : Identification of respondents in Savar.

Stages of Sample Identi-fication	Method of Sampling	No. of Starters/ Referrals	No. of Overlaps	No. of Starter/ Actual Referrals	No. of Starters/ Available Referrals who were interviewed
First (Starter)	Purposive	10	-	10	10
Second	Snowball	40	14	26	25
Third	Snowball	73	47	26	25
Fourth	Snowball	60	53	7	7
		183 (10+173)	114	69 (10+59)	67 (10+57)

The Table 4.2 showed that in the study area of Savar 173 names were referred to out of which 114 were overlaps and 59 were actual referrals of which 57 could ultimately be reached for interview in addition to 10 starter respondents making the sample size to 67.

Parameters of Comparison :

A question might be posed as to how the study proposed to strike a comparison between the two approaches of rural development which differed from each other significantly. One was more engaged in rural development through cooperative pursuit while the other was laying primary emphasis on health and family planning. Both the approaches however functioned in some form of an integrated package. In other words, activities under Comilla approach started with a cooperative venture which gradually transcended the areas of health, family planning, women's welfare and the like. Activities under the Savar approach started with health care and family planning, which gradually reached to areas of cooperative economic pursuits. Thus, even if cooperative and family planning remained the two dominant components of integrated approach in both the areas, the importance given to the components differed. This divergent nature of primary and secondary importance of components in the two areas might stand a comparison.

The next parameter of comparison between the two approaches would be in the nature of communication structure manifest through the opinion leaders' personal network and the effective-

ness of the two approaches in weaving an institutional communication network in matters of cooperative and family planning.

The third possible comparable area would be in seeing the type of communication model within which the institutional activities really functioned. It would be the endeavour to see how the diffusion model of communication worked in the vertical/top-down communication flows while horizontal convergence of relevant information and ideas at the grass root level produced feedback material for vertical/bottom-up communication flows in both the approaches of development activities.

Development of Questionnaire :

After series of discussions and meetings with programme innovators at Comilla and Savar and with resource personnel at various institutes, a draft questionnaire was developed for pre-testing. The pretest was conducted in two programme areas, located far away from the study areas. The areas of pretest were Joypur of Comilla and Chakalgram of Savar.

Most of the problems in the perfection of the questionnaire pretested arose in (a) seeing whether the questions asked

could eke out the required communication network from such environments and (b) standardising the questions in such a way that it could be administered in both the approaches where a divergent nature of programme components existed.

The pretested questionnaires were given to experts for comments regarding its operationalisation and statistical manipulation. Their comments were incorporated in the form of necessary additions and alterations of questions and a rearrangement of the questionnaire.

Recruitment and Training of Survey Personnel:

The type of survey under this study warranted recruitment of field investigators from among those who were well conversant with network analysis which draws relational data in addition to the individual socio-economic data. Taking this factor into consideration, field investigators were selected from the top few students of communication at higher academic levels at the University of Dhaka. A total of 10 investigators were recruited and they were placed under a field supervisor. The field supervisor had always been with the investigators for twin purposes of overall supervision of field work as well as first-

hand overview of the study area. The investigators were thoroughly explained about the objectives and methodology of this study in a series of discussion . Relevance of each question in the questionnaire to the study objectives was explained to them. The hypotheses were also made clear. After the conduct of pretesting of the draft questionnaire the investigators were directly involved in the redraft of the questionnaire for providing them an intimate idea of the purpose and objectives of this study as reflected through the questions therein. They were also given a feel of the statistical framework with which the data to be collected would be processed in order that they could take extra care during the collection of data from the study areas.

Organisation of Field Work and Data Collection:

The field work on this study started from January, 1984. I along with the supervisor and investigators had to visit the TTDC, Comilla and the GK, Savar almost every week to gather information, discuss problems with innovators and finally conduct pretesting of the draft questionnaire at two villages. These villages for pretesting were taken from areas far away from the study areas so as to keep the study location completely unalloyed. The pretesting over, the study areas were then

visited to establish rapport with the leaders of the locality. This proved to be very fruitful later on. During subsequent visits, observations about the study areas were made. Among other things the best time for conducting interviews in the areas was found out. The initial snowballs were decided and their availability for interviews ensured. The data collection was conducted in a quick sweep. The days of each week for interviews were Thursday, Friday, Saturday and Sunday for obvious reason of getting more respondents available at the village. This quickening of the data collection process was planned in order to avoid any bias that might come up from possible flow of information/discussion about the questions being asked which might influence the would-be respondents in reorganising answers about some important facts and figures which they might choose to conceal. The data collection work of investigators in each area was conducted with 1 field supervisor and 10 investigators - female 4 and male 6. Average collection of data per investigator per day was found to be 1 questionnaire, each questionnaire administration took more than 4 hours time, the number of questions in a questionnaire being 131. For those who could not finish answering in a single sitting because of household problems were approached at a suitable time the same day on suggestions by the respondents themselves. On the first day only the

initial snowballs were interviewed and after a quick scrutiny of the names referred to by the initial snowballs for the second stage interviews, the schedule for next interviews was fixed in consultation with the new snowballs so selected. This way the interviews continued in a phased out manner till the last day.

Observation of the study areas was also continued during the time of data collection. The investigators had been instructed to maintain separate notes to incorporate any other important facts that were relevant. They did accordingly and everyday they produced a rundown of what they observed in the area during the day. Their observations were later compiled to get an insight of the activities of the area.

Operationalisation of Variables:

Background and non-network Variables:

The questionnaire was designed to collect as much information as possible keeping in view the variables and their operationalisation in the process of analysis. In the parametric handling of data, religion and occupation with their nominal levels of measurement and education with the ordinal level per se posed a problem.

In the bivariate analysis the nominal data on religion and

occupation were avoided but education was ordered meaningfully for statistical manipulation. The models of prediction equations in the multiple correlational analysis however accommodated all these variables. In case of religion it considered the direction of coding from a lower figure to the higher one and in case of occupation the different categories arranged in order of their power of fetching lower income to higher returns were taken into consideration. Thus in a way even the nominal data were ordered. The study therefore handled two types of data — ordinal and interval. In doing so it agreed with Wimmer and Dominick (1987)[4] in making no distinction between ordinal and interval levels of data in the parametric analyses. The proposition ran as under :

'Statisticians disagree about the importance of the distinction between ordinal and interval scales and about the legitimacy of using interval statistics with data that may in fact be ordinal. Without delving too deeply into these arguments, it appears that the safest procedure is to assume interval measurement unless there is clear evidence to the contrary, in which case ordinal statistics should be employed. For example, for a research task in which a group of subjects rank a set of objects, ordinal statistics should be used. If, on the other hand, subjects are given an attitude score constructed by rating responses to various questions, the researcher would be justified in

using parametric procedures. ..... Additionally, there have been several studies in which various types of data have been subjected to different statistical analyses. These studies suggest that the distinction between ordinal and interval data is not particularly crucial in selecting an analysis method'.

This study, in most cases, reconstructed the scores by rating responses from a large array of items so as to provide a graded series of intensity of the variables for easy manipulation in parametric analyses assuming no distinction between ordinal and interval data.

Unlike the variables of religion, occupation and education, other background variables like land, family size and age with their scores in actual did not pose any problem in data analysis.

Non-network Variables:

Media exposure as a non-network variable was operationalised separately for cooperative and for family planning ideas and information. Scores regarding media nearness as well as programme listening/content reading on relevant topic (cooperative/family planning) were combined to get a crude rating of

exposure in respect of each of the three media under study i.e. radio, television and newspaper. The three crude scores on three media were then combined. For example a respondent was given a score on the basis of whether he listened to radio near at home or distant at community/relations' house. He was again given another score on the basis of what he listened - if he listened to programmes on, say, cooperative on the radio or not. The two scores of the respondent in respect of radio exposure were then combined to get a crude score. Thus a person listening to radio at a distant place and not particularly the relevant programmes on cooperative would get low crude score and the person listening to those programmes at home would enable him to get a high crude score on one medium. This way he would get three crude scores on the exposure to radio, TV and newspaper and when combined he would get a comprehensive score on media exposure in respect of say cooperative ideas and information. The comprehensive score fell in a longer range from 0 to 12. The same scoring process would be repeated for his media exposure on family planning ideas and information.

Almost the same way other non-network variables were operationalised. In respect of family planning workers' visit to the respondents two types of family planning personnel were

found to be visiting the intervention areas. They were the locally appointed visitors and visitors from the programme centre. The frequency of their visits to each respondent was recorded, scored separately and then added up allowing lower score for occasional meetings of respondents with one of the two types visitors and higher score for daily meetings with both the types.

Physical mobility of the respondents was taken to be the product of the nature of contact with programme centre and frequency of such contact. Occasional, weekly and daily contacts with programme centre both directly and indirectly provided 7 possibilities of intensity of physical mobility of the respondents. Thus indirect occasional contacts were rated low and frequent direct contacts rated high in physical mobility.

In the case of husband-and-wife communication on family planning three elements were combined from a number of items in the questionnaire. The elements were :

i. communication on the concept of family planning,

ii. communication on the ideal size of family and

iii. degree of convergence of communication.

Thus communication with divergence about the concept of family planning when one of the spouses believed in the concept but the other did not would be scored lower. Communication with convergence about the concept of family planning as well as about the size of two, meaning that the spouses shared identical views about the concept and size, in a situation where they really were the parents of two or less would have the highest score. Arranging the situations from the state of communication divergence with no practice of family planning method by either side of the spouses to that of communication convergence among them with faithful practice of family planning, a range of 8 graded sequences could be identified.

Network Variables :

Two general networks (social and economic) and two institutional networks (cooperative and family planning) in each study area emerged after all the dyads among the respondents were plotted in sociogrammes. Each individual was asked to name three persons with whom he/she maintained frequent communication relationship in each of the general and institutional matters. Accordingly a maximum of three such subject specific

links or referrals by each respondent were collected and the links or referrals that were included in the sample were retained in the sociogramme so as to make a personal/individual communication connectedness score (PCCS) meaningful within a network of sample size.

Thus : PCCS = The respondent's personal referrals within the sample + number of his being referred to by others in the sample - referrals twice recorded.

For example in a situation where an individual named 3 referrals as having frequent communicative relationship with him in respect of exchange of family planning information and ideas and other 6 persons within the sample referred him as one of their family planning communicative partners and if between the 3 originally referred and 6 naming him as their referral, 2 referrals were found to be common to both the sides, the configuration would then be 3 + 6 - 2 = 7 links. This would be the personal communication connectedness score. Again if the individual's original referrals i.e. 3 included a person who could not be included in the sample due to the person's infrequent visit to the locality from his place of work or could not be included for any other reason, this personal link miss-

ing in the sample was further deducted from the total links. In this case the PCCS would be 3 + 6 - 2 - 1 = 6 links.

This way each respondent received 4 separate personal communication connectedness scores in social, economic, cooperative and family planning networks which later could easily be statistically manipulated for analysis.

Behaviour Change Variables :

In the formulation of questionnaire, care was taken to secure a variety of answers to the variables under study. This was done 'to avoid the narrowness of forced responses demanded by the agree-disagree continuum'[5]. The answers from the items were put together to 'constitute a graded series of intensity'[6] in knowledge, opinion, advocacy and adoption.

For example,knowledge about family planning was measured by intensity from answers of items like (1) How does he/she define the concept of family planning ? (2) What are the sources of knowledge - formal, informal or both ? (3) Does he/she know

about the institutional intervention programme on family planning in the locality ? (4) Can he/she explain the institutional programme in some detail ?

Opinion about family planning was drawn from three planks : opinion about (a) the concept of family planning, (b) the institutional programme of family planning in the locality and (c) the programme personnel. The combination of likings and dislikings of the concept, the programmes and the personnel offered 6 possibilities from blanket disliking to liking of all available planks.

Advocacy of the concept or of the intervention programme could be standardised by taking into consideration the following questions :

(a) Whom does he/she advocate ?

(b) Who among others within the sample do name him/her as the advocate of the concept or the programme ?

Thus if respondent A advocating the concept or the programme to B got a score, he would get an additional score if respondent C referred to A's name as an advocate of the concept or the programme.

In finding scores regarding the knowledge, opinion and advocacy of cooperative information and ideas the same techniques as were applied to finding the scores of family planning knowledge, opinion and advocacy were followed.

Adoption/practice in respect of cooperative or family planning was the product of two distinct planks. In the adoption of cooperative, degree of corporate participation/involvement in cooperative venture was graded from 'no membership' scoring 0 to 'an executive himself' of the cooperative directly involving in decision making scoring a higher value, in this case it came upto 6. Then the nature of participation was scored separately in such a way that adoption by authoritative dictation was graded low at 1 and voluntary adoption rated high, in this case at 4. The graded series of degree of corporate participation was multiplied by scores of nature of participation, thereby producing a matrix of two dimensional components. The products in the matrix were then arranged in a score sequence beginning with '0' (0 x 1) and ending with any higher figure, in this case '24' (6 x 4).

In the case of family planning practice the same method was applied. The degree of intensity of adoption/practice was

graded in a series beginning with 0 for no adoption and ending with a high value, in this case 10 for respondents sterilised with 2 children. The nature of adoption was scored separately, scores ranging from 1 for authority adoption to 4 for voluntary adoption. The two series were multiplied yielding a matrix of two-dimensional components. The products of the matrix were ordered in a sequence. Thus the lowest score was 0 x 1 = 0 and the highest score was 10 x 4 = 40.

Coding, Classification and Scoring:

The questionnaire of the study tried to elicit exhaustive answers from an array of questions for each of the variables. However, obvious answers to questions on demographic variables could easily be drawn by posing straight questions. Most of the data on psychographic variables could be gathered from a number of items.

In total there were 131 questions in the questionnaire. The idea of posing greater number of questions had been to gather as much information as possible in order that a precise position of a respondent in respect of each of the variables could be identified.

This long array of questions was later converted into a number of 53 items. In some cases a single item could provide a single variable while in other cases a number of items had to be collapsed into a single variable.

For example,land holdings, family size, age and the like were presented in a single item producing a single variable while each of the variables like media exposure, physical mobility, husband-wife communication, taboo and non-taboo awareness, opinion and advocacy were identified from an array of items.

This way 53 items came down to 18 variables presented in the analytical framework.

The coding instruction (Appendix - II) showed various items with their corresponding question serials in the questionnaire and every item was coded for computer feed-in keeping in view the distinct classification of the items. For example,the item number 7 in the coding instruction showing occupation of the respondents could be ascertained from the question number 4 in the questionnaire and was classified into six different categories from day labourer to businessman, the former coded as 1 and the latter 6. The other classes of occupation within the range were housewife, farmer, fisherman and service holder/

professional who were coded as 2, 3, 4 and 5.

This is an example of a single item representing a single variable from a single question.

But in case of media exposure as a variable a number of items were drawn from various questions to produce single variable. Media exposure of a respondent were collected from 9 items, the item serials being 9 to 17 in the coding instruction. The code numbers against first three on media exposure relating to radio (Item serials 9 to 11) produced a graded series of intensity ranging from 0 to 4 and the second set of three items (Serials 12 to 14) again gave out a score of 0 to 4 for television and the last set (Serials 15 to 17) producing the same score range for newspaper.

A respondent's exposure to radio, television and newspapers were drawn from a set of nine items, three items being relevant for each medium. The three scores of an individual in respect of three media were then added up to ascertain the exposure profile of the respondent which came to be in a range from 0 to 12.

Apart from a single item producing a single variable or

a combination of items producing one variable, the third procedure of identifying the graded series of intensity of variables was by multiplying two graded series of intensity as could be seen in the matrices at the end of the format on classification and scoring. This was done to attain a greater precision in the scoring of variables like adoption of taboo and non-taboo ideas of a respondent.

Some items appeared in the coding instruction were shown but not used. They only helped in the comprehension of some of the important variables.

The double zeroes appearing in the coding instruction and in the classification and scoring format indicated a two digit figure as in the case of age in years or number of dyads in a network, while the triple zeroes indicated three digit figures as in the case of firm size in terms of decimals.

The variables and their classification and scoring were presented as per the following format. Item serial in the coding instruction had also been given in the format to facilitate easy reference of the variables from the coding instruction sheet (Appendix - II).

Format on Classification and Scoring of Variables

BACKGROUND VARIABLES:

Variables	Item Sl. in Coding Instruction	Classification	Score
Religion	1	Muslims	1
		Hindus	2
Education	3	No education	1
		Upto primary	2
		Upto Secondary	3
		Upto Higher Secondary and above	4
Occupation	7	Day Labour	1
		Housewife	2
		Fishermen	3
		Farmers	4
		Service Holders and Professionals	5
		Businessmen	6
Land	6	Land holding in decimals excluding homestead	000

Variables	Item Sl. in Coding Instruction	Classification	Score
Family Size	5	Members of family unit(parents and children)	00
Age	8	In years	00
NON-NETWORK VARIABLES:			
Media Exposure (Cooperative/Family Planning)			
Radio/Television/ Newspapers	9-17	Does not apply/ Does not listen	0
		Listens at community/neighbour but does not listen the relevant programme on cooperative/family planning	1
		Listens at home but does not listen the relevant programme on cooperative/family planning	2
		Listens at community/neighbour and listens the programme on cooperative/family planning	3

Variables	Item Sl. in Coding Instruction	Classification	Score
		Listens at home and listens/reads the relevant programme	4

This way separate scores on exposure to radio, television and newspaper could be ascertained:

Radio	Television	Newspaper
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4

Combining the scores on the three media one may get scores ranging from 0 to 12 for media exposure about cooperative ideas and information or for media exposure on family planning.

Variables	Item Sl. in Coding Instruction	Classification	Score
Physical Mobility (with the Centre)	18-19	Does not arise	0
		No contact	1
		Indirect contact occasionally	2

Variables	Item Sl. in Coding Instruction	Classification	Score
		Direct contact occasionally	3
		Indirect contact weekly	4
		Indirect contact every day	5
		Direct contact weekly	6
		Direct contact daily	7
Family Planning Workers' Visit	20-21	Does not arise	0
		None of the Central or Local visitors visit	1
		Only Central or Local visitors come occasionally	2
		Both Central and Local visitors come occasionally	3
		Only Central or Local visitors come weekly	4
		Of the two type of visitors, one type comes occasionally and the other comes weekly	5
		Only one of the two types of visitors comes daily	6

Variables	Item Sl. in Coding Instruction	Classification	Score
		One type of visitors come daily and other type occasionally	7
		One type of visitors come daily and the other type weekly	8
		Both types of visitors come daily	9
Husband and Wife Communication on Family Planning	22-23	Does not arise	0
		No communication on even the concept of family planning (FP)	1
		Communication with divergence about the concept of FP when he/she does not believe in the concept	2
		Communication with divergence about the concept of FP when he/she believes in the concept	3
		Communication with convergence about the concept and with convergence about the family size(FS) when the size is more than two (for both)	4

Variables	Item Sl. in Coding Instruction	Classification	Score
		Communication with convergence about the concept of FP and with divergence about the FS when he/she believes in more than two	5
		Communication with convergence about the concept of FP with divergence about the FS when he/she believes in two or less	6
		Communication with convergence about the concept of FP with convergence about the FS when he/she believes in two or less	7
NETWORK VARIABLES:			
Social Network	24	Exact Number of Links	00
Economic Network	25	Exact Number of Links	00
Institutional Network Cooperative	26	Exact Number of Links	00

Variables	Item Sl. in Coding Instruction	Classification	Score
Institutional Network Family Planning	27	Exact Number in Links	00

(Double zeroes indicated dyads of two digit figures)

BEHAVIOUR CHANGE VARIABLES:

Awareness	30-33	Does not arise	0
		No knowledge	1
		Knows the concept, cannot mention the source of knowledge	2
		Knows the concept, mentions formal media as the source	3
		Knows the concept, mentions informal media as the source	4
		Knows the concept, mentions both formal and informal media as the source	5
		Can also identify the institutional programmes in the locality	6

Variables	Item Sl. in Coding Instruction	Classification	Score
		Can also explain them correctly	7

(Used for both awareness about cooperative as well as about family planning ideas)

Opinion (Cooperative)	34-36	Does not arise	0
		Dislikes the concept	1
		Likes the concept, dislikes the programme and dislikes the programme personnel	2
		Likes the concept, dislikes the programme, likes the programme personnel	3
		Likes the concept, likes the programme and dislikes the programme personnel	4
		Likes the concept, likes the programme and likes the programme personnel	5
Opinion (Family Planning)	37-39	Does not arise	0
		Dislikes the concept of family planning	1

Variables	Item Sl. in Coding Instruction	Classification	Score
		Likes the concept of family planning, dislikes the programme at the locality, dislikes the programme personnel and wants children more than 2	2
		Likes the concept, the programme personnel but dislikes the programmes and wants children not exactly 2 or less	3
		Likes the concept, likes the programme, dislikes the personnel and wants children not exactly 2 or less	4
		Likes the concept, the programme, the personnel but wants children not exactly 2 or less	5
		Likes the concept, dislikes the programme and the personnel, but wants children exactly 2 or less	6
		Likes the concept and the personnel but not the programme, and wants children exactly 2 or less	7
		Likes the concept and the programme, not the personnel and wants children exactly 2 or less	8

Variables	Item Sl. in Coding Instruction	Classification	Score
		Likes the concept, the programme, the personnel and wants children exactly 2 or less	9
Advocacy	52-53	Does not arise	0
		Does not advocate innovation to others	1
		Does not advocate, only lends advice about innovation when some members of the system approach him/her	2
		Advocates innovation to other members of the system, but cannot name them properly, can name those who approach him/her for advice	3
		Advocates innovation to other members of the system, can also name them	4
		Advocates innovation to other members of the system, can name them, can also name those who approach him/her for such advice	5

Variables	Item Sl. in Coding Instruction	Classification	Score
		Advocates innovation to other members of the system, can name them, can also name those who approach him/her for such advice. Some respondents when interviewed name this respondent to be influential in pursuading them to be adopters of innovation	6

(Used for advocacy of cooperative as well as of family planning ideas and information to other members of the system).

Cooperative Adoption

(a) Degree of Corporate Participation (DCP)	41-42	Does not arise	0
		No membership	1
		Members only	2
		Participation not regular	3
		Regular but passive	4
		Regular and indirectly involves in decision making	5
		An executive himself but irregular and/or passive	6

Variables	Item Sl. in Coding Instruction	Classification	Score
		An executive himself indirectly involves in decision making	7
		Not an executive, but regular and directly involves in decision making	8
		An executive, regular and directly involves in decision making	9
(b) Nature of Adoption/ Participation(NA)	43	Authority Adoption	1
		Contingent Adoption	2
		Collective Adoption	3
		Voluntary Adoption	4

Cooperative Adoption could thus be ascertained from the following matrix producing scores from the product of DPC and NA.

Matrix producing scores on Cooperative Adoption

NA / DCP	1	2	3	4
0	0	0	0	0
1	1	2	3	4
2	2	4	6	8
3	3	6	9	12
4	4	8	12	16
5	5	10	15	20
6	6	12	18	24
7	7	14	21	28
8	8	16	24	32
9	9	18	27	36

Scores on cooperative adoption ranged from 0 to 36

Variables	Item Sl. in Coding Instruction	Classification	Score
Family Planning Adoption			
(a) Degree of Adoption (DA)	50, 51 and 53	Does not arise	0
		Does not practice	1

Variables	Item Sl. in Coding Instruction	Classification	Score
		Practiced but discontinued	2
		Natural control with children $\searrow$ 2	3
		Natural control with children $\swarrow$ 2	4
		Use device having children $\searrow$ 2	5
		Sterilised having children $\searrow$ 2	6
		Natural control having children $\swarrow$ 2 last issue more than months 24	7
		Use device having children $\swarrow$ 2 last issue $\swarrow$ 24 months	8
		Use device having children $\swarrow$ 2 last issue months 24 or more	9
		Sterilised, children $\swarrow$ 2	10
(b) Nature of Adoption (NA)	49	Authority Adoption	1
		Contingent Adoption	2
		Collective Adoption	3
		Voluntary Adoption	4

Thus combined score on Family Planning Practice (CSF) would be DA x NA :

Matrix producing scores on Family Planning Adoption

DA \ NA	1	2	3	4
0	0	0	0	0
1	1	2	3	4
2	2	4	6	8
3	3	6	9	12
4	4	8	12	16
5	5	10	15	20
6	6	12	18	24
7	7	14	21	28
8	8	16	24	32
9	9	18	27	36
10	10	20	30	40

Scores on family planning adoption ranged from 0 to 40.

Application of Statistical Tools :

The present study collected relational data (individuals and their relationships) as units of analysis and hence a sociometric survey was conducted. In the snowball sampling method of data collection an original sample of respondents called random starters were asked to name their sociometric referrals (communicative partners) who then became the respondents in the second stage of data collection. The second set of referrals would name the third set of respondents and the process would continue following interpersonal chains till any new referral would be the duplication of the referrals at the earlier stages.

The data collected from this sample of respondents were then processed through appropriate coding and classification technique. The variables were given scientific scores following a graded series of intensity of the measures from a lower figure to a higher one.

The variables were then analysed statistically with the help of the Pearsonean correlation and multiple regression analysis. The bi-variate correlations provided the first glimpse of the relationship between the independent, intervening and dependent variables. The multiple correlation provided the net

effect of the predictor variable on the dependent variable of behaviour change keeping the effects of all other variables constant. The intervariable relationship as well as influence was considered at 5 percent level of confidence. Those that were found significant at 1 percent or less were distinguished by additional asterices.

NOTES TO CHAPTER IV

1. E.M. Rogers and D.L. Kincaid : Communication Networks: Toward a New Paradigm for Research, (New York, The Free Press, 1981), p. 270.

2. Ibid, pp. 109-110

3. Ibid, p.109.

4. R.D. Wimmer and J.R. Dominick, Mass Media Research, (California, Wadsworth Publishing Company, Inc., 1987), pp. 56-57.

5. W.J. Goode and P.K. Hatt, Methods in Social Research, (New York, McGraw - Hill Book Company, Inc., 1952), p.277.

6. Ibid, p.278.

CHAPTER V

INTERVENING VARIABLES : GENERAL AND INSTITUTIONAL COMMUNICATION NETWORKS

The analytical framework of this study placed network variables between independent and behaviour change variables in a logical sequence of the communication process. In the network variables, however, the institutional networks (in this study the cooperative network and the family planning network) were taken to be the most relevant intervening variables, though the intervening influence of the general networks like social network and economic network on behaviour change was not ignored.

The inclusion of intervening network variables in this study was based on the proposition that 'an individual is more likely to adopt an innovation if more of the individuals in the personal communication network have adopted previously'.[1] The Korean data set from the Oryu Li experience and a wide variety of other diffusion investigations showed that 'there is considerable intellectual potential in incorporating network variables as additional independent variables in explaining a dependent variable of individual-level behaviour change'[2].

Four different sociometric types of questions were posed

that yielded the sociogrammes about the formation of networks. The questions were :

1. For Social Network : 'Of the people living in your area, who do you take advice from most often about social problems ? Name three frequent links'.

2. For Economic Network : 'Of the people living in your area, who do you take help from most often when you are in any financial problems ? Name three of them'.

3. For Cooperative Network : 'Of the people living in your area, who do you talk with or take advice from most often about cooperative ventures ? Name three such persons'.

4. For Family Planning Network : 'Of the people living in your area, who do you talk with or take advice from most often about family planning ? Name three persons'.

The relational links gathered from the above sociometric questions were used to chart out the following sociogrammes in the two areas. The explanation of the sociogrammes were given after the presentation of the figures.

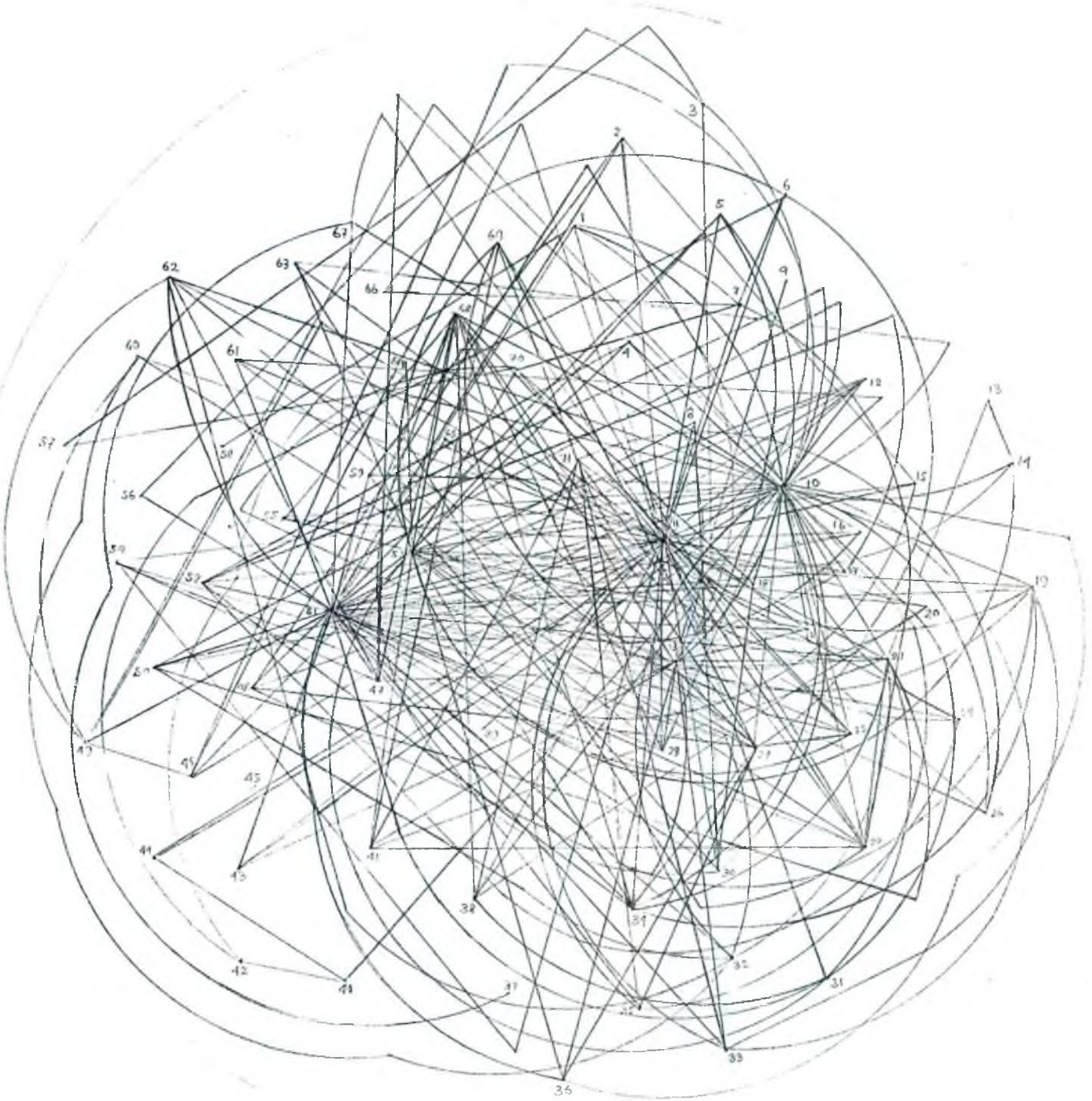


Figure 4 : Social Network - Comilla

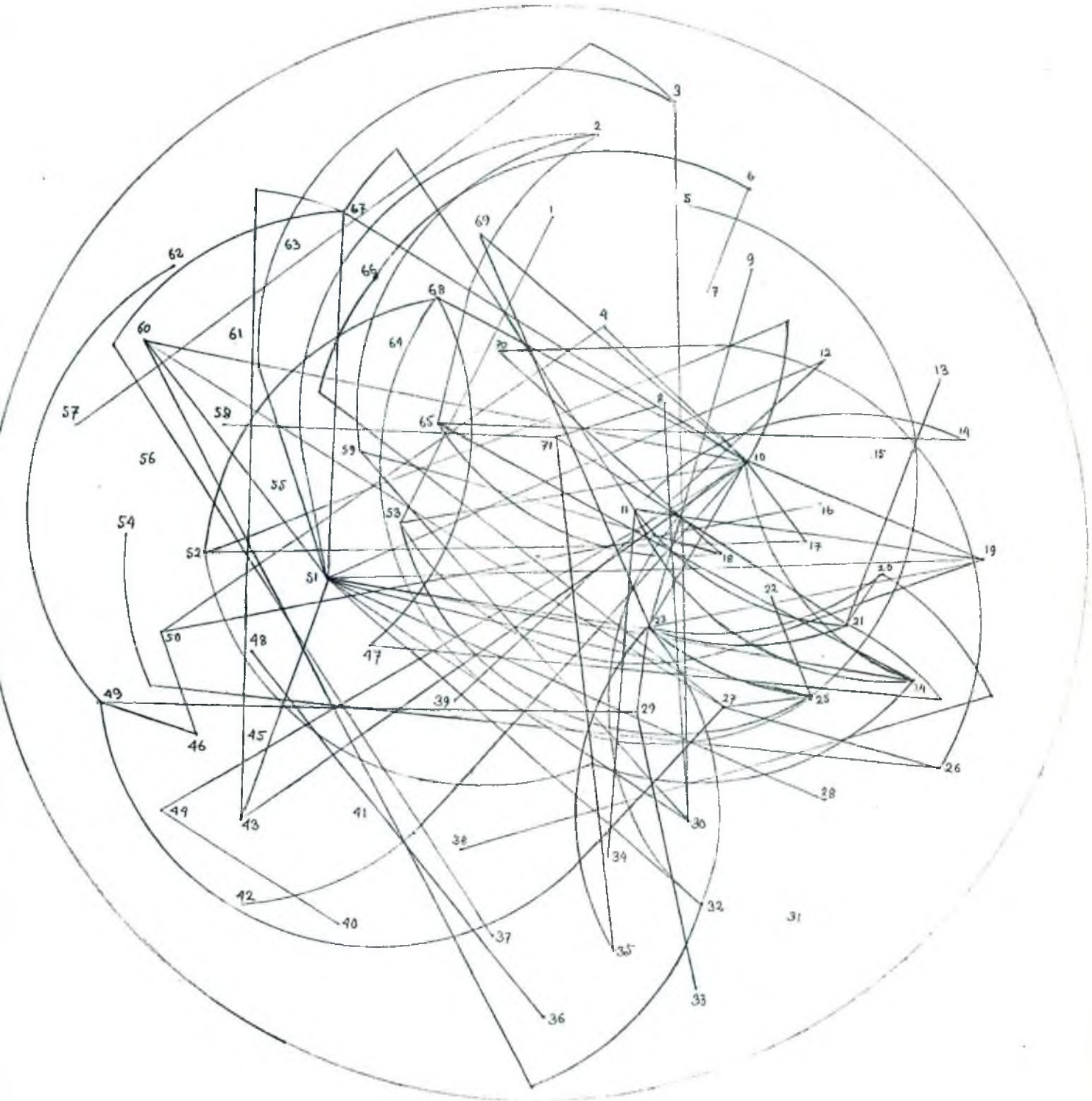


Figure 5 : Economic Network - Comilla

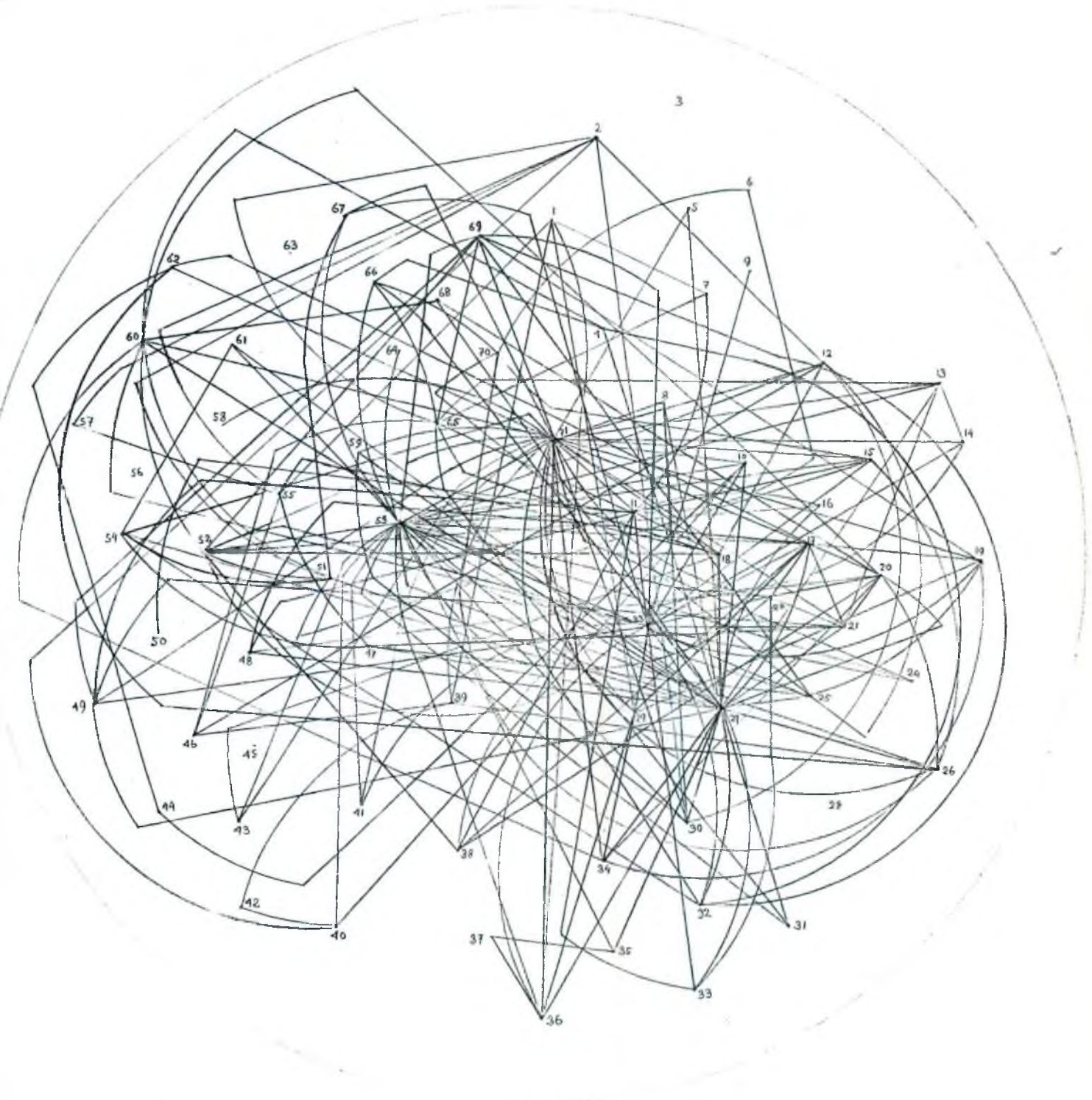


Figure 6 : Cooperative Network - Comilla

Figure 7 : Family Planning Network - Comilla

Figure 8 : Social Network - Savar

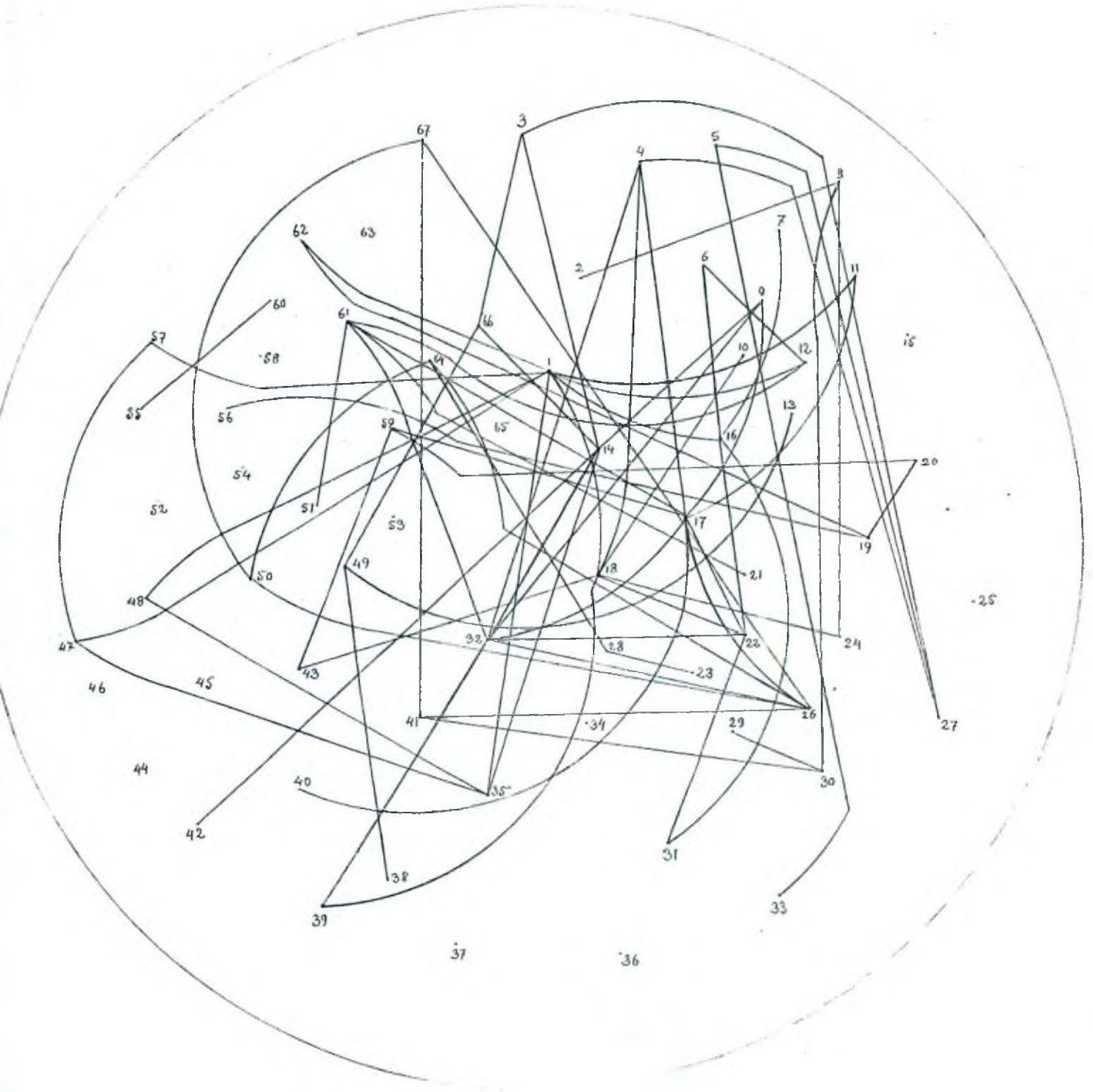


Figure 9 : Economic Network - Savar

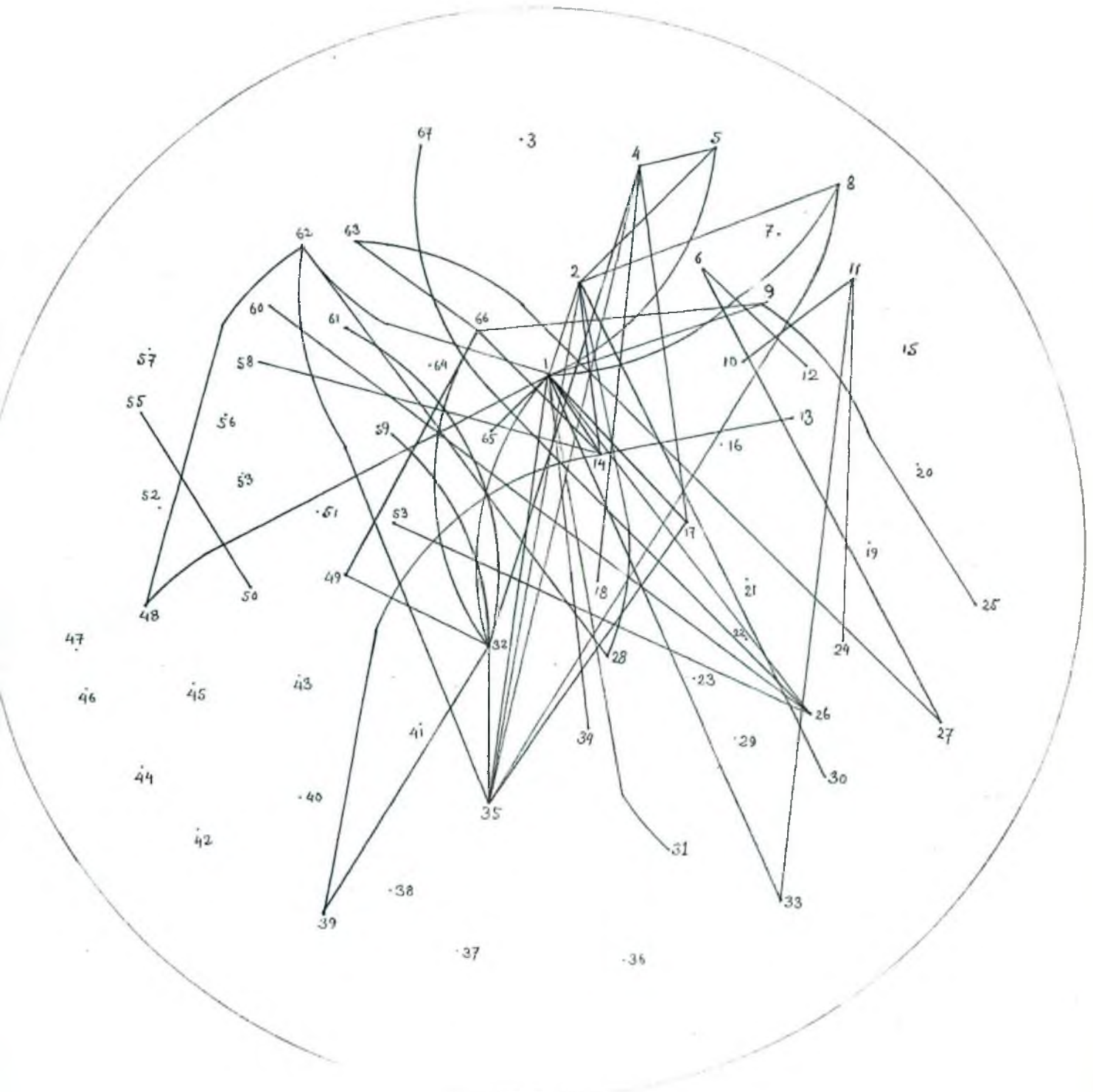


Figure 10 : Cooperative Network - Savar

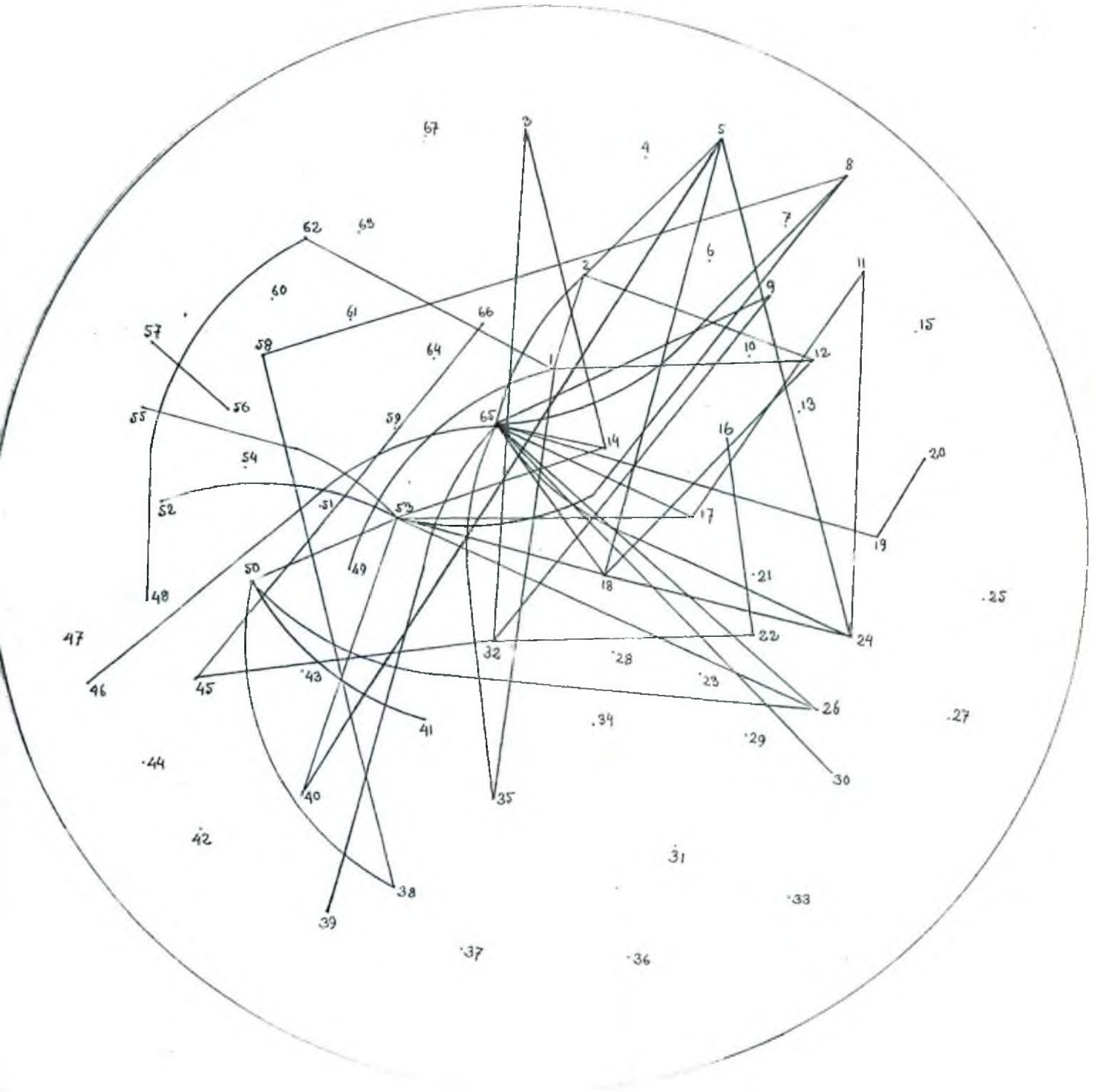


Figure 11 : Family Planning Network - Savar

The answers of the respondents regarding their communication links provided two sets of subject-specific sociogrammes for Comilla and Savar. The respondents might have more than three links but for standardising all the networks for meaningful statistical use only three frequent links in each of the four categories were considered for incorporation into the sociogramme.

Each of the respondents was given a serial number in order of the sequence of their interview. Number 1 in the sociogramme was the person who was interviewed first and number 71 in Comilla and 67 in Savar were the persons who were interviewed last. Each of the respondents from 1 to the last number referred to three names as their social links, three names as their economic links, three names as their cooperative communication links and three names as their family planning communication links. All the subject-specific links were scrutinised thoroughly to see if there was any referral who belonged to an area far away from the survey spot. These links were not considered for inclusion into the sociogramme. Again in the four stages of snowball sampling method there were many referrals who were but the duplication of the same referrals once referred to and already plotted into the sociogramme. Thus the total number of persons interviewed in this snowball method

could not reach beyond the highest number of communication partners in the network (71 in case of Comilla and 67 in case of Savar). All the numbers were manually connected by drawing links in a pie where the numbers were placed somewhat arbitrarily but allowing them to be interfaced so that the connecting links, might those be straight or parabolic, could be drawn.

For easy comparison the respondents were given the same point location in each of the four sociogrammes.

The reason for arranging the networks in a pie giving exact point location for each respondent was to make the networks readily understandable in respect of who were the leaders having maximum links in each network and which network was more integrated than the other in the same study area.

Some of the referrals could not be incorporated into the sociogrammes due to their long absence in the area or their not being referred to even once more by other respondents. In other words, the links were ultimately limited to the purposive 'starters' and the 'snowballs' that made up the total number of respondents. Each sociogramme included all the respondents identified through the snowball sampling method irrespective of whether they formed any dyad or not. The assumption

was that today's social communication dyad, for example, might turn into tomorrow's family planning communication dyad, or for that matter, all available role personalities at any of the four levels of sociometric choice might ultimately change or exchange their role positions. This was done for a logical circumference of the networks and for a meaningful personal communication network score for each respondent. In Comilla, for instance, 61 snowballs could be identified in stages at the four levels of sociometric questions with 10 starters making up total respondents to 71. The respondents were those persons in the locality who were frequently referred to either at social, economic, co-operative and/or family planning sociometric questions. They were thus important in the locality for their communication role at any one of the four levels or any combination thereof. All of them being important appeared in each of the sociogrammes allowing each of the respondents an even chance of scoring in each of the four networks. The maximum personal communication network score a respondent might attain in any sociogramme would then be 71-1 = 70 in Comilla and 67-1 = 66 in Savar. A further explanation might be that a snowball having 14 of the total possible 70 important links (N-1) in the social network in Comilla would have a personal network score of 14 and another person having 25 such links would get a score of 25. This meant that the communication network score of a respondent might be

any number from 0 to 70 in a network having 71 respondents or 70 (N-1) links.

This scoring scheme also helped determine the extent of integration of a network. The integration of any network would be in percentage from 0 to 100, through a simple calculation of $\frac{N(N-1)}{2}$ as maximum possible links where the integration score would be the ratio of actual links to maximum possible links.

In the preceding example the maximum possible links would be $\frac{71(71-1)}{2} = 2485$ in each of the four networks in Comilla and if 497 links could be identified out of 2485 potential links in the family planning network in that area, the family planning integration score would then be $\frac{\text{Actual Links}}{\text{Maximum Possible Links}} \times 100\% = \frac{497}{2485} \times 100\% = 20\%$.

The identification of the snowballs in the system in both the study areas was incidentally completed at the level of sociometric questions on social and economic problems. Sociometric questions on cooperative and family planning matters referred to the same set of respondents or snowballs adding no further fresh referrals. Of the respondents in Savar, however, only one was found to be an isolate who neither referred to

any snowball nor was referred to by others in the system. The isolate was one of the purposive starters.

From the four sociogrammes in each study area personal communication networks for each individual in two general and two institutional matters could now be found out by crude counting of individuals' links in the system. The network scores in respect of social, economic, cooperative and family planning matters for each respondent were then subjected to Pearsonean correlation that gave the first insight into the inter-network relationship within the communication structure of the two areas under study. The difference that came out in respect of inter-network correlationship in the two study areas might be attributable to the distinctiveness of the two rural development approaches of Comilla and Savar.

i. In Comilla, the area was equally saturated with facility and information while the area in Savar was more saturated with relevant information than the needed facilities.

ii. The Comilla approach emphasised on rural development primarily through cooperative ventures and in the integrated packet family planning as a

programme came next. The Savar approach laid emphasis on family planning in the main with institutional support for that and in the integrated ensemble cooperative efforts went with it without institutional support.

The inter-network correlationship in the two areas ran as under :

Table 5.1 : Correlation Among the Communication Network Variables (N=71) in Comilla.

Variables	Correlation Coefficient		
	2	3	4
1. Social Network SN	.770 t=10.02 P 0.001	.415 t=3.78 P 0.001	.029 t=0.24 Ns
2. Economic Network EN	-	.393 t=3.55 P 0.001	.033 t=0.27 Ns
3. Cooperative Network INC	-	-	.414 t=3.78 P 0.001
4. Family Planning Network INF	-	-	-

Table 5.2 : Correlation Among the Communication Network Variables (N=67) in Savar.

Variables	Correlation Coefficient		
	2	3	4
1. Social Network SN	.766 t=9.61 P 0.001	.601 t=6.06 P 0.001	.273 t=2.28 P 0.05
2. Economic Network EN	-	.585 t=5.82 P 0.001	.217 t=1.79 Ns
3. Cooperative Network INC	-	-	.315 t=2.68 P 0.01
4. Family Planning Network INF	-	-	-

Relationship Among Communication Networks:

When the general and institutional communication networks were interfaced in a correlational measure, a high degree of association could be seen among all the networks except for the institutional network for family planning which only in the case of Savar maintained some relationship with social network.

1. General Communication Networks: Correlation.

The relationships between Social Network (SN) and Economic Network (EN) were very high at .77 for both Comilla as well as Savar significant at .001 levels of probability. The two study areas being distant and even the nature and structure of institutional support in the two areas being different, the identical result in the measure of correlationships between Social and Economic networks in the two areas might be attributable to independent character of the variables.

2. General and Institutional Networks: Correlation.

Social network and institutional cooperative network had a correlation of .42 in Comilla and of .60 in Savar, both significant at $P < 0.001$ level. Economic network also maintained a positive correlation with institutional network about cooperative ideas and information, r = .39 in Comilla and r = .59 in Savar, both at a very high significant level. Social network and institutional network on family planning in Savar were correlated at r = .27 with the level of significance at 5 percent. Institutional network on cooperative and institutional network on family planning were positively correlated, the r

being .41 in Comilla and .32 in Savar, significant at .001 and .01 levels respectively.

3. Discussion:

An overall view of the two areas in respect of correlationship among the networks projected a better picture in Savar than in Comilla. Higher correlation between economic network (EN) and institutional network on cooperative (INC) in Savar than in Comilla indicated that the economically well off were more involved in the exchange of cooperative ideas and information. Equally higher correlation between social network and institutional network on cooperative (INC) in Savar than in Comilla further indicated high network overlap between SN, EN and INC. In other words, most of the high scorers in SN, EN and INC were the same persons in Savar. A scan of the network leadership overlap also approved of this fact.

Table No. 5.3 Top 12 Social Network Leaders Sharing Leadership in other Networks:

Networks / Study Areas	Social Network No. of leaders (%)	Economic Network No. of leaders (%)	Cooperative Network No. of leaders (%)	Family Planning Network No. of leaders (%)
Comilla	12 (100.00)	9 (75.00)	6 (50.00)	4 (33.33)
Savar	12 (100.00)	9 (75.00)	7 (58.33)	7 (58.33)

The preceding table gave a rundown of replication of leadership from social network into other networks. 12 top scorers in social network in each of the two areas were identified by a simple rank order of the respondents' personal communication links. Three other sets of 12 top scorers in each of the remaining networks (economic, cooperative and family planning) were also identified to see the replication of the original set of 12 social network leaders into these three sets. The result corroborated with the networks correlation matrices of the two areas. Higher inter-network correlation in Savar thus went with higher leadership overlap between networks in that area. The replication of leadership from social network into other networks showed that in Savar out of the 12 top social network leaders, 9(75.00%) were among top 12 leaders in economic network, 7(58.33%) in cooperative network and 7(58.33%) in family planning network. The replication of social network leadership in Comilla is 9(75.00%) in economic network, but 6(50.00%) and 4(33.33%) in cooperative and family planning networks respectively.

The diagramatic representation of Table No.5.3 runs as under :

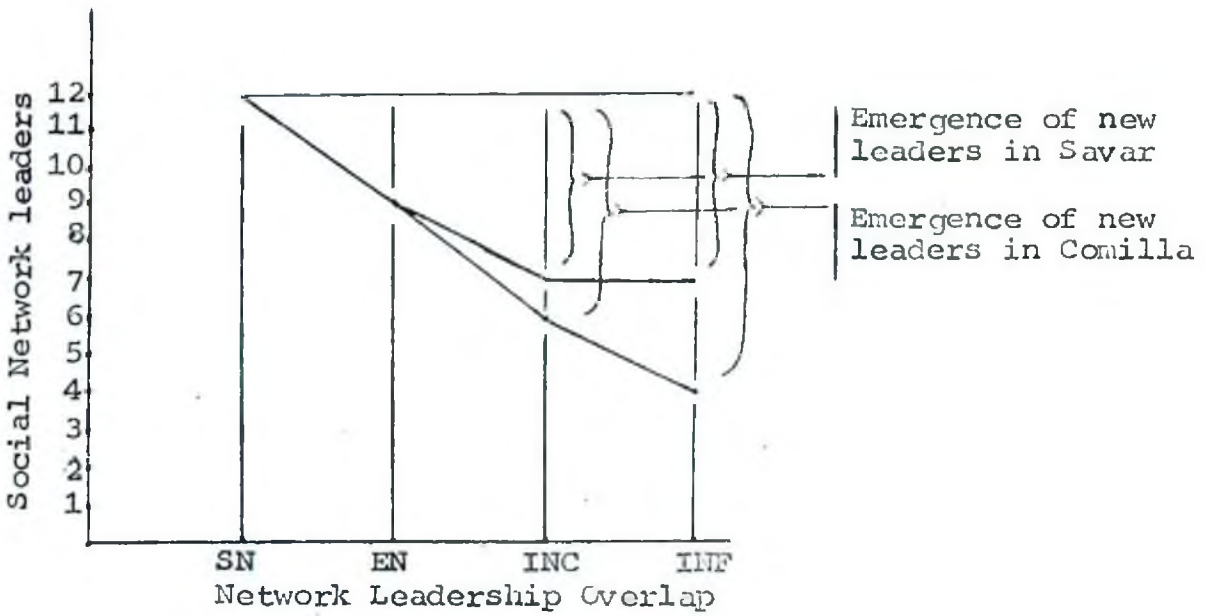


Figure 12 Diagramatic Representation of Network Leadership Overlap :

The sharp decline in leadership overlap in the institutional networks on cooperative and family planning in the study area of Comilla as compared to higher leadership overlap in Savar indicated the emergence of newer leaders on cooperative and family planning in Comilla and quadruplication of role positions

for the same set of leaders in Savar. In fact the set of leaders prominent in social network in Savar came to be responsible for organising cooperative ventures as well as spreading family planning ideas which with a number of constraints like lack of ready institutional support for cooperative and a sort of one-to-one facility and information funnelling by the centre made the task of bringing about a convergence in the locality all the more arduous. Hence the same set of leaders or one set of leaders could not weave intricate links in cooperative and family planning simultaneously. On the other hand, new sets of leaders in the institutional networks in Comilla could concentrate separately on creating newer links for respective network in cooperative and/or family planning. In Comilla a sharp decline in network leadership overlap from general to institutional networks allowed greater margins for the emergence of new leadership in the institutional networks and new leaders meant increasing links. In Savar replication of the same set of leadership into other networks allowed a limited scope for new leaders to offer increasing links. Therefore, a pattern of leadership in the institutional networks developed which was a combination of leadership overlap from social network and the emergence of new leadership for the institutional networks.

Table No.5.4 Pattern of Leadership in the Institutional Networks

Study Areas	Leadership	In Cooperative Network			In Family Planning Network		
		No.of Leaders out of top 12	Mean Position/ Average	Dispersion	No.of Leaders out of top 12	Mean Position	Dispersion
COMILLA	Social Leadership Overlap	6	4.00th ± 2.83		4	8.00th ± 2.94	
	Emerging Leadership	6	9.00th ± 2.37		8	5.75th ± 3.85	
			Mean Position in Social Leadership			Mean Position in Social Leadership	
	Displaced Social Leadership due to Emerging Leadership	6	7.17th ± 4.26		8	6.50th ± 4.04	
SAVAR	Social Leadership Overlap	7	4.57th ± 3.10		7	7.29th ± 3.64	
	Emerging Leadership	5	9.20th ± 2.39		5	5.40th ± 3.65	
			Mean Position in Social Leadership			Mean Position in Social Leadership	
	Displaced Social Leadership due to Emerging Leadership	5	8.20th ± 1.92		5	9.00th ± 1.58	

The pattern of leadership in the institutional networks on cooperative and on family planning was ascertained by finding as to what extent the leaders in the social network in an area duplicated their role positions in the institutional networks too. Efforts were made to see if the entry of new leaders into the institutional networks could displace the positions of individuals scoring high in social network. Thus a set of 12 leaders was found out from the highest scorers of communication connections in social network. They were taken to be the leadership base in an area. Similar set of 12 top scorers in each of the communication networks regarding economic, cooperative and family planning matters was also found out. Once these sets of leaders from four communication networks were listed it became easier to see to what extent the social leaders overlapped their role positions into other networks. As the economic network had a very high correlation with the social network in each of the study areas and as the social networks had a high integration scores (nearly 10 percent integrated in each study area), the social network in each area was taken to be representative of the two general networks (social and economic). Hence the emphasis had been to see the extent of leadership overlap directly from social to cooperative and family planning networks and to see the displacement of leadership positions by the emerging leaders in the institutional networks. If, for example, 6 of the

top 12 leaders in social network duplicated their role positions into cooperative network, it could be said that leadership overlap from social network to cooperative network had been 50 percent. But it failed to suggest whether the 6 social leaders could maintain their leadership positions in the cooperative network similar to the positions they held in the social network. The method adopted to ascertain the displacement of leadership positions had been to find the median of the top 12 positions which had been 6.5 ($\frac{N + 1}{2}$ or $\frac{12 + 1}{2}$) and then to see if the position average of the set of overlapped leaders fell above or below the median. Now if the 6 social leaders having leadership positions in cooperative network had a leadership position average of say 3.5 in social network (the mean of first 6 positions), and if the same set of 6 individuals occupied the last 6 leadership positions in cooperative network (the mean position being 9.5 i.e. $\frac{7 + 8 + 9 + 10 + 11 + 12}{6}$), that would suggest that the 6 social leaders duplicating their role positions into the cooperative network could not maintain uniformity of their leadership positions in the two networks. The statistical indicator here was the median, which was 6.5. In this example, the leaders having their position average of 3.5 in the social network had thus been displaced in the institutional network by the emerging leaders forcing them to occupy a position average of 9.5, far below the median of 6.5.

Of the 12 top personal network scorers in each of the two institutional networks in the preceding table there were some who shared leadership in social network and the remaining ones were those who emerged in the respective institutional network. In cooperative network in Comilla 6 top scorers were the set of top 12 social network leaders. The position average of this sub-set of 6 was 4.00 meaning that the leadership overlap was still holding positions above the median 6.5. The emerging leadership together held mean position of 9.00, far beyond the median, displacing those leaders among top 12 in the social network whose mean position in that network had not been good either, 7.17, but the wide range of dispersion($\pm$ 4.26) indicated that some top social leaders had also been displaced in the process. In Savar 7 top scorers in social network also shared leadership in the cooperative network holding the position average of 4.57. The emerging leaders, 5, occupied positions at the bottom of the first 12 positions, mean position being 9.20 with dispersion of 2.39, displacing the set of leaders of social network holding position below the median.

In family planning network in Comilla new leaders emerged whose mean position of leadership was 5.75 which was above the median displacing social leaders whose mean position was exactly the median i.e. 6.5 with a wide range of dispersion of

± 4.04. In Savar 5 new leaders emerged to take up leadership with mean position of 5.40 displacing social leaders whose position in social network had been at the bottom. The overlap of leadership of a set of 7 from social to family planning network had a mean position of 7.29 far below the median of 6.5.

The pattern of leadership in respect of overlap and emergence in the institutional network brought forth the following traits:

Cooperative : 1. In Comilla most of the social leaders with their intricate links came to take up leadership with better position average in cooperative network. This area was supported by adequate facilities from an organised cooperative programme.

2. In Savar too, the social leaders came to be the leaders with better position average in cooperative network but here they had no organised programme support.

Family Planning : 1. In Comilla two-thirds of the top 12 leaders

in family planning network were new and occupied position average well above the median and displacing most of the social leaders to take up any key role position in the institutional network.

The programme of family planning being locally discussed and the leadership roles formally distributed among field level workers with some strategies for persuasive communication, a sort of convergence could take place locally that contributed newer dyads into the family planning network.

2. In Savar the emerging leaders, a set of 5, had taken up a better position average. The range of dispersion was however wide. Though the leadership overlap, a set of 7, was below the median, the dispersion range was almost of the same width as in the case of the emerging leaders. With equal range of dispersion for both the overlapped and emerging leaders, significant exchange of positions in the leadership could be identified.

The pattern of leadership partly explained the integration of communication networks.

Table 5.5 : Integration of General Communication Networks in Comilla and Savar.

Study Areas	General Communication Network	Social Network Communication Dyads			Economic Network Communication Dyads		
		Maximum possible	Actual	Percentage	Maximum possible	Actual	Percentage
Comilla	2485	263	10.58	2485	92	3.70	
Savar	2211	219	9.91	2211	74	3.35	

The table showed that the degree of integration in social network had been found to be 10.58% in Comilla and 9.91% in Savar. In economic networks the integration ratio was 3.70% and 3.35% respectively. The social networks were nearly 3 times higher integrated than the economic networks.

Table 5.6 : Integration of Institutional Networks in Comilla and Savar.

Study Areas	Institutional Communication Network	Cooperative Network Communication Dyads			Family Planning Network Communication Dyads		
		Maximum possible	Actual	Percentage	Maximum possible	Actual	Percentage
Comilla		2485	216	8.69	2485	124	4.99
Savar		2211	52	2.35	2211	50	2.26

The table showed that in the study areas of Comilla the cooperative network was better integrated (8.69%) than the family planning network (4.99%). But compared with the corresponding network integration scores in respect of cooperative (2.35%) and of family planning (2.26%) in Savar, Comilla was 4 times better integrated in cooperative and 2 times better integrated in family planning.

Combining all the facets of interpretation of networks, the following observations could be made:

1. Social network and economic network were highly

correlated in both the areas and their relative network integration ratio was 3:1. Therefore the social network was taken to be the leadership base and was used for leadership overlap into other networks.

2. Higher inter-network correlation went with higher leadership overlap, as in Savar.

3. Other things remaining the same, network leadership overlap was inversely related to network integration. The lower the leadership overlap from general to institutional network, the higher was the scope for emergence of new leadership with new additional links, as in the case of family planning in Comilla.

4. Leadership overlap could be positively related to network integration with adequate programme and facility support, as in the case of cooperative in Comilla.

5. The areas saturated with relevant information left little scope for people to converge. Homophily stagnated communication, as in the case of family planning in Savar.

6. The areas saturated with programme facilities provided scopes for immediate reward which allowed communication and convergence, as in the case of cooperative in Comilla.

7. In facility saturated areas, social network was hardly related to taboo communication network as in Comilla. In the information saturated areas of Savar, they were positively related.

NOTES TO CHAPTER V

1. E.M. Rogers and D.L. Kincaid : Communication Networks : Toward a New Paradigm for Research, (New York, The Free Press, 1981), p. 233.

2. Ibid, p.254.

CHAPTER VI
INDEPENDENT AND INTERVENING VARIABLES

In the previous chapter the general and institutional networks were studied from various planks. The intra-network integration and the leadership emergence in the institutional networks, the inter-network correlationship and the leadership overlap from social to institutional networks, and above all the state of networks in the two development approaches were given to qualitative and quantitative scrutiny. It was more of an indepth understanding of the networks, the intervening variable of this study.

This chapter would concentrate on the study of independent variables classified as background and non-network variables that were considered to be the correlates of the intervening communication network variables. The statistical technique used was the Pearsonean correlation. The correlationship within the independent variables was measured first and then the correlationship between the independent variables and the communication network variables was studied.

Each respondent's personal communication network scores

on social, economic, cooperative and family planning matters provided the data set for the intervening network variables. The effort had been to ascertain the correlationship of the independent variables with the intervening network variables so as to identify if any bivariate relationship among them existed. If any significant relationship between the independent and intervening variables had come forth, that was used in the succeeding interpretations of the dependent behaviour change variables.

Ten independent variables were considered to be the correlates of the communication network variables. They were: religion, education, family size, land holdings, age, media exposure on cooperative, media exposure on family planning, family planning workers' visit, husband and wife communication on family planning and physical mobility of the respondents with the programme centre. However in a bivariate situation, religion and occupation as correlates did not provide any adequate range for statistical manipulation and hence were not included though in a multivariate situation they could be manipulated.

The correlation coefficients within 9(nine) independent variables and between the independent variables and four

measures of intervening network variables were presented in separate tables appended after independent sections thereof. The most commonly used measure of the degree or strength of linear relationship between two variables had been the Pearson r correlation coefficient , the square of which could be interpreted as the proportion of variance in one variable explained by the variation in the other variable. For example, in Comilla the physical mobility of the respondents with the programme centre (PM) and family planning workers' visit to the respondents (FPWV) were highly correlated, the r being .50. This meant that about 25 percent (.50 x .50 x 100 = 25%) of the variance in the family planning workers' visit to the respondents could be explained by the variation in the physical mobility of the respondents (PM) or vice versa. To explain further, the family planning workers mostly visited those respondents whose contact or physical mobility with the programme centre which controlled the activities of the family planning workers was frequent.

1. Relationship within independent variables:

In the study areas of Comilla and Savar, three relationships within the nine independent variables were found to be

identical. The relationships were between family size and age, husband and wife communication and age and between the physical mobility of the respondents and the family planning workers' visit . In Comilla the family size was moderately large with the family leaders of higher age (AGE). The correlation coefficient was r = .28. In Savar the family size was larger still with family leaders of higher age (AGE), r = 40.

In general the marital partners of lower age brackets both in Comilla and Savar exchanged family planning ideas more than the spouses of higher age brackets. In Savar the correlation coefficient between husband and wife communication (HWC) and age (AGE) was-.41 as against -.27 in Comilla, indicating frequent such communication among the spouses of lower age brackets in Savar than in Comilla. Considering the above situations in both the areas, it could be inferred that inter-spouse communication was frequent among the respondents of lower age and belonging to comparatively smaller families.

In both the study areas of Comilla and Savar the physical mobility of the respondents (PM) was highly positively correlated with the family planning workers' visit (FPWV), the rs being .50 and .45 respectively. This meant that the persons who were mobile and kept regular contact with the programme centre were

the ones most visited by the family planning workers in the respondents' localities. This might be due to a fear complex on the part of the family planning visitors about the possible reportage to the programme centre by the mobile respondents about any non-visit.

Education offered a commonality of relationships with other variables. Respondents with high educational status went with high media exposure on family planning and cooperative and with land holdings.

The study area of Comilla provided a set of additional correlationships. They were among the family size, land, physical mobility, media exposure on cooperative and media exposure on family planning.

Media exposure on cooperative (MXC) in Comilla was negatively correlated with family size (FSZ) ($r = -.27$), and positively correlated with land holdings (LND) ($r = .45$) and with physical mobility (PM) ($r = .30$). There was thus a high media exposure to cooperative ideas and information among (a) the members of small family units, (b) the families of high land holdings and (c) those whose physical mobility with the programme centre was frequent.

Media exposure on family planning (MXF) was negatively correlated with the family size (FSZ) (r = -.27), and with age (AGE) (r = -.26). It was positively correlated with land holdings (LND) (r = .44), with the family planning workers' visit (FPWV) (r = .25) and with the husband and wife communication on family planning (HWC) (r = .27). This meant that media exposure to family planning ideas was high among (a) the small family units, (b) the family leaders of lower age brackets, (c) the high land holding families and (d) persons moderately visited by the family planning workers. The media exposure on family planning and the husband and wife communication on family planning were also moderately related (r = .27). All the correlation coefficients were statistically significant.

The tables showing correlation coefficients among the independent variables in both the areas follow.

Table 6.1 : Correlations Among Independent Variables (N = 71) in Comilla.

	2 MXC	3 P M	4 FWV	5 HWC	6 FSZ	7 LND	8 AGE	9 E D
1. Media Exposure (Family Planning) MXF	.766***	.231	.251*	.268*	-.268*	.440**	-.261*	.435**
2. Media Exposure (Cooperative) MXC	-	.299*	.257*	.094	-.269*	.445**	-.096	.449**
3. Physical Mobility PM	-	-	.494**	-.011	.090	.095	.079	.104
4. Family Planning Workers' Visit FWV	-	-	-	.066	-.124	.035	.053	.078
5. Husband and Wife Communication HWC	-	-	-	-	-.153	.150	-.266*	.061
6. Family Size FSZ	-	-	-	-	-	-.230	.282*	-.174
7. Land Holdings LND	-	-	-	-	-	-	-.026	.357*
8. Age in Years AGE	-	-	-	-	-	-	-	-.076
9. Education level ED	-	-	-	-	-	-	-	-

Table 6.2 : Correlations Among Independent Variables (N = 67) in Savar.

	2 MXC	3 P M	4 FWV	5 HWC	6 FSZ	7 LND	8 AGE	9 E D
1. Media Exposure (Family Planning) MXF	.869***	-.018	.095	.210	-.123	.138	-.170	.554**
2. Media Exposure (Cooperative) MXC	-	.030	.085	.180	-.019	.163	-.083	.485**
3. Physical Mobility PM	-	-	.448**	.190	-.196	.133	-.266*	.164
4. Family Planning Workers' Visit FWV	-	-	-	.142	-.121	.069	-.096	.145
5. Husband and Wife Communication HWC	-	-	-	-	-.038	.065	-.413**	.031
6. Family Size FSZ	-	-	-	-	-	-.002	.400**	-.142
7. Land Holdings LND	-	-	-	-	-	-	.018	.255*
8. Age in Years AGE	-	-	-	-	-	-	-	-.067
9. Education Level ED	-	-	-	-	-	-	-	-

2. Relationship between independent and network variables :

After the correlations within the independent variables were studied, this section would look into the independent variables as possible correlates of the four network variables. Religion and occupation could not be graded from low to high and hence was avoided at the level of measuring correlation coefficients.

Social network which gave out the personal communication connections of the respondents on social matters depicted two distinct features in Comilla and Savar. In Comilla the social network was positively and significantly correlated with age. This suggested that the existence of social network leaders in Comilla was among the persons who were moderately older in age. In Savar, however, the social network was positively correlated with the size of the family of the respondents. Social leaders having relatively larger families could therefore add additional dyads to their personal communication networks. The additional dyads could be the contribution of the other members of the family.

Educational status and age of an individual were found to be two other correlates of the social network in Savar.

Economic network in Comilla was correlated with media exposure on cooperative and on family planning. This finding suggested that the persons who were economically well-off were exposed to media contents on both cooperative and family planning.

Media exposure on both taboo (family planning) and non-taboo (cooperative) matters was again highly significantly related to land holdings and educational status of individuals. Land and education were also inter-related. Therefore a combined explanation might be that a logical dependency relationship existed among economic network, media exposure, land and education in Comilla.

In Savar, economic network was only related to media exposure on cooperative which was again correlated with educational status of individuals. One explanation might be that the economically well-off persons of the locality exposed themselves to the media ostensibly to improve further their ideas about cooperative pursuits. Education might have been an added impetus for them to seek relevant cooperative information from the media.

Institutional network on cooperative in Comilla was positively significantly correlated with physical mobility of

the respondents to the programme centres, age of the individuals and the media exposure on cooperative. This meant that the formation of personal communication network of an individual might be due to persons' physical mobility to the centre for cooperative information and exposure to the media for further information. These people were found to be of older age brackets.

In Savar the institutional network on cooperative was correlated with media exposure and educational status. This was consistent with the scenario in this area in respect of economic network and its correlates. Thus in the absence of any organised cooperative bodies at the programme centre and with the existence of some concerted efforts mostly by the educated locals, the cooperative leaders had to fall back upon whatever information they could gather from the media.

As for the institutional network on family planning, the two study areas of Comilla and Savar provided different sets of correlates. In Comilla the personal family planning communication network was found to be highly correlated with physical mobility and with family planning workers' visit. The physical mobility and family planning workers' visit already maintained a high correlationship ($r = .50$) explaining 25% of the variance ($r^2 = .50 \times .50$) of one at the variance of other

variable.

Therefore an increasing number of communication dyads of an individual might be due to the respondents' frequent visits to the programme centre for information gathering as well as the frequent visit of family planning workers to the respondents for further information furnishing. In other words the two-way flow of visits that made the individual a leading source of information in the locality of the study area of Comilla helped in increasing the personal communication connections. This interpersonal chain of communication might have taken away the role of mediated communication in the formation of the institutional network on family planning.

In Savar the significant correlates of the institutional network on family planning had been media exposure and education meaning that the educated and the highly media exposed persons wielded increasing numbers of communication dyads. In the absence of any local structure to look after the family planning activities (as in the case of Comilla) and consequently a very low physical mobility of respondents for taboo information gathering from the programme centre, a sort of a two-step flow of communication from the media through the educated to the mass operated in the area for the formation of taboo communication network.

It could thus be inferred that in most of the network formation, age and physical mobility in Comilla while education and media exposure in Savar proved to be the dominant correlates. In matters of taboo and non-taboo information flow, inter-personal communication chains were gradually taking over the role of mediated communication in Comilla while in Savar mediated communication still remained operative in the absence of any organised inter-personal communication structure in the locality.

The tables showing correlation coefficients between independent and network variables follow.

Correlation Coefficients between the Independent Variables and the four Measures of Intervening Network Variables in C o m i l l a.

Table 6.3 : Measures of Intervening Network Variables (Sample-Size)

Independent Variables	SN(71)	EN(71)	INC(71)	INF(71)
Media Exposure on Family Planning (MXF)	.158	.257*	.129	-.066
Media Exposure on Cooperative(MXC)	.201	.314**	.352**	.074
Physical Mobility (PM)	.102	.040	.395***	.405***
Family Planning Workers Visit (FWV)	.081	.147	.238	.325**
Husband and Wife Communication(HWC)	-.111	-.111	-.221	.017
Family Size (FSZ)	-.041	-.045	.106	-.075
Land Holdings (LND)	.214	.183	-.023	-.210
Age in Years (AGE)	.251*	.198	.375**	.039
Education (ED)	.218	.194	.138	-.011

Correlation Coefficients between the Independent Variables and the four Measures of Intervening Network Variables in S a v a r:

Table 6.4 : Measures of Intervening Network Variables (Sample-Size)

Independent Variables	SN(67)	EN(67)	INC(67)	INF(67)
Media Exposure on Family Planning (MXF)	.168	.237	.111	.330**
Media Exposure on Cooperative(MXC)	.219	.298*	.248*	.334**
Physical Mobility (PM)	.037	-.008	.063	.096
Family Planning Workers Visit (FWV)	.165	.160	.107	.214
Husband and Wife Communication (HWC)	-.026	.119	-.015	.091
Family Size (FSZ)	.320**	.207	.121	-.133
Land Holdings (LND)	.220	.278*	.177	.022
Age in Years (AGE)	.244*	.107	.093	-.046
Education (ED)	.318**	.329**	.268*	.279*

CHAPTER VII

DEPENDENT VARIABLES : BEHAVIOUR CHANGE

The dependent variables in this study were certain measures of behaviour change in respect of awareness, opinion, advocacy and adoption of cooperative or of family planning ideas. In the two study areas of Comilla and Savar, cooperative and family planning were the two major thrusts of the integrated rural development efforts given by the respective programme centres. Separate scores were given in respect of behaviour change about cooperative as well as family planning for a meaningful statistical manipulation. Three behaviour change variables were drawn from the innovation-decision model (Everett M. Rogers, 1973). The additional variable of advocacy was taken from the theory of mobility multiplier (Daniel Lerner, 1958) which stipulated the creation of mobile personality who would not only accept change but also advocate the same to others.

A question might arise as to the distinction between a person's communication connectedness and the advocacy. Communication connectedness (network) and advocacy were different in many ways.

(a) Personal communication connectedness in this context was the two-way interaction among the communicative partners within the network while the advocacy was a purposive one-way communication flow from the respondents to persons who might not constitute the networks under study.

(b) Communication connectedness was indicative of the exchange of both positive and negative views on the innovation while the essence of advocacy was the spread of favourable opinion about the innovation to others.

(c) Personal communication connectedness was measured in terms of scores by giving more weightage to the statement of the referrals than to that of the respondent while advocacy was scored mainly on the basis of the statement of the respondent.

The present conceptualisation therefore consisted of four stages in the innovation-decision process making up four distinct variables.

1. Awareness : The individual was expected to know about the innovation as well as the existence of innovative programmes in the locality.

2. Opining : The individual was expected to form a favourable or unfavourable opinion toward the innovation, the programme and the programme personnel.

3. Advocacy : The individual might not only accept the innovation as useful but also feel the need for the spread of the innovation to the knowledge and acceptance of others and so he would advocate the innovation to others.

4. Adoption : The individual might adopt the innovation on a small or a full scale.

Of the four stages, the first was assumed to precede the second; the first two together (awareness and opinion) must precede the last two stages (advocacy and adoption). Advocacy and adoption might be simultaneous or one of these two variables might only operate. Thus a person with adequate knowledge about an innovation and being favourably disposed to it, might advocate to others but not adopt, might adopt but not advocate, or might advocate and adopt simultaneously.

1. Correlationship within dependent behaviour change variables :

Correlation coefficients among the four stages of behaviour change in respect of cooperative as well as family planning in both the areas were separately studied to have a comparative idea of each of the programmes in one area against the same programme in the other.

Table 7.1 : Correlation Coefficients among four Measures of Behaviour Change of the Respondents in Respect of Cooperative in Comilla and Savar.

		Measures of Behaviour Change (Sample Size)			
	Measures of Behaviour Change	Awareness AWC(71)	Opinion OPC(71)	Advocacy AVC(71)	Adoption ADC(71)
Comilla	Awareness AWC	-	.709***	.569***	.474***
	Opinion OPC		-	.599***	.344***
	Advocacy AVC			-	.542***
	Adoption ADC				-
		Awareness AWC(67)	Opinion OPC(67)	Advocacy AVC(67)	Adoption ADC(67)
Savar	Awareness AWC	-	.914***	.604***	.618***
	Opinion OPC		-	.584***	.582***
	Advocacy AVC			-	.524***
	Adoption ADC				-

Table 7.2 : Correlation Coefficients among four Measures of Behaviour Change of the Respondents in Respect of Family Planning in Comilla and Savar.

		Measures of Behaviour Change (Sample-Size)			
	Measures of Behaviour Change	Awareness AWF(71)	Opinion OPF(71)	Advocacy AVF(71)	Adoption ADF(59)
Comilla	Awareness AWF	-	.403***	.390***	.244NS
	Opinion OPF		-	.298*	.317*
	Advocacy AVF			-	.375**
	Adoption ADF				-
		Awareness AWF(67)	Opinion OPF(67)	Advocacy AVF(67)	Adoption ADF(52)
Savar	Awareness AWF	-	.513***	.420***	.314*
	Opinion OPF		-	.355**	.307*
	Advocacy AVF			-	.378**
	Adoption ADF				-

* = Significant at 5 percent level of probability

** = Significant at 1 percent of probability

*** = Significant at .1 percent of probability

The correlation coefficients among the four measures of behaviour change of the respondents in respect of cooperative and of family planning in the two study areas showed that the awareness and opinion maintained a high correlation in all the correlational matrices. The correlations between awareness and opinion were .71 and .91 in respect of cooperative in Comilla and Savar and .40 and .51 in respect of family planning in the two areas respectively. All of these relationships were significant at .1 percent level of probability which indicated that a possible cause and effect relationship might exist between these two measures of awareness and opinion about both non-taboo (cooperative) and taboo (family planning) matters. When squared, these sequence of correlations mentioned earlier produced variances of 50 percent, 82 percent, 16 percent and 26 percent. Following the cause and effect continuum indicated by the analytical framework, awareness and opinion were proved to have strong association between them. Other strong variances were between opinion and advocacy and between advocacy and adoption in respect of non-taboo matters in the two areas. The variances in these cases were within a range of 26 to 36 percent. In taboo matters these variances dropped to a range of 9 percent to 15 percent, a very low measure of variance in a bi-variate situation. The multiple regression

analysis in the subsequent chapters might throw additional proof of any dependency of the subsequent behaviour change variable on the preceding one.

2. Networks as correlates of Behaviour Change :

The analytical framework of this study had taken the relevant institutional communication networks to be the correlates of behaviour change. The institutional network on cooperative or family planning was supposed to go with the change of behaviour from the levels of awareness and opinion to the levels of advocacy and adoption. For example a person maintaining a high communication network on family planning ideas and information was expected to be more aware about the concept and the programme of family planning and might also accept the idea and information as useful. This person might start advocating the idea to others and in the process might ultimately adopt family planning. He/she might only advocate, but not practise due mainly to communication divergence with the marital partner or due to any other reasons. He/she might only practise family planning in private life, but might be shy to advocate to others. All these stages or the combination of stages were assumed to be the effect of the variation in his/

her communication connections on family planning (family planning network). The respondents' communication connections on co-operative were also assumed to be the dominant correlates of behaviour change. However for a better comprehension of the change of behaviour toward the practice of both the innovations, the general networks (social and economic) were studied as correlates of awareness, opinion, advocacy and adoption. The low network leadership overlap from social to taboo network and high leadership overlap from social to non-taboo network in Comilla as against the duplication of the same set of leaders from social to taboo and non-taboo institutional networks in Savar made the study of general networks (social and economic) as correlates of behaviour change all the more relevant in this section.

Correlation Coefficients between the Intervening Network Variables and the four Measures of Behaviour Change of the Respondents in Respect of Cooperative in Comilla and Savar.

Table 7.3 : Measures of Behaviour Change (Sample-Size)

	Networks	Awareness AWC(71)	Opinion OPC(71)	Advocacy AVC(71)	Adoption ADC(71)
Comilla	Social Network (SN)	.256*	.198NS	.349**	.291*
	Economic Network (EN)	.243*	.235NS	.352**	.312**
	Institutional Network (INC)	.377**	.323**	.500***	.393***
		Awareness AWC(67)	Opinion OPC(67)	Advocacy AVC(67)	Adoption ADC(67)
Savar	Social Network (SN)	.339**	.264*	.418***	.257*
	Economic Network (EN)	.369**	.300**	.416***	.240*
	Institutional Network (INC)	.457***	.423***	.664***	.519***

Correlation Coefficients between the Intervening Network Variables and the four Measures of Behaviour Change of the Respondents in Respect of Family Planning in Comilla and Savar.

Table 7.4 : Measures of Behaviour Change (Sample-Size)

	Networks	Awareness AWF(71)	Opinion OPF(71)	Advocacy AVF(71)	Adoption ADF(59)
Comilla	Social Network (SN)	.232	.051	-.121	.066
	Economic Network (EN)	.217	.114	-.014	.062
	Institutional Network on Family Planning (INF)	.328**	.073	.464***	.026
		Awareness AWF(67)	Opinion OPF(67)	Advocacy AVF(67)	Adoption ADF(52)
Savar	Social Network (SN)	.113	.077	.206	-.047
	Economic Network (EN)	.288*	.121	.346**	-.021
	Institutional Network on Family Planning (INF)	.160	.267*	.318**	.263

The correlation coefficients between the intervening variable and the four measures of behaviour change in respect of cooperative yielded higher correlations in Savar than in Comilla. Institutional networks on cooperative were highly positively correlated with the four measures of behaviour change in both the areas. Social and economic networks in Savar were also positively correlated with each of the four measures of behaviour change but in Comilla social and economic networks had no relation with opinion of cooperative ideas though they maintained relationship with others. In these two matrices of relationship between network and behaviour change variables in two areas higher significant correlations accounting for a variance (r^2) of 20 percent or more were between the institutional network on cooperative and the advocacy in Comilla and between the institutional network and the measures of awareness, advocacy and adoption in Savar. Thus in Comilla the advocacy of cooperative ideas by a respondent varied positively with the variance of the personal communication network score on cooperative. In Savar, awareness, advocacy and adoption of cooperative ideas varied positively with the variance of institutional network score of a person.

This phenomenon ratified the high network overlap and high inter-network relationship in Savar and low network overlap and

the resultant low inter-network relationship in Comilla as could be seen in the preceding chapter on the intervening network variables.

As for the correlations between network variables and four measures of family planning behaviour change, the two areas of Comilla and Savar yielded almost identical scenario. The social network in both the areas had no relations with the change of family planning behaviour. The institutional network on family planning maintained significant positive relations with the advocacy of family planning in Comilla ($r = .46$) and Savar ($r = .32$). If the variance (r^2) of 10 percent was to be taken for an indicator of significance to confirm any strength of association, the only relationship that survived was between the institutional network on family planning and the advocacy. Therefore it could be inferred that the advocacy of family planning in the two study areas of Comilla and Savar varied significantly with a variance in a respondent's score on family planning network. In other words, a person maintaining high institutional network links would be the one advocating the idea of family planning to other members of the system of which the network would be a part.

3. Independent variables as correlates of behaviour change :

The independent background and non-network variables were listed as correlates of the four measures of behaviour change to see if any independent factors had direct significant relations with the dependent variables. These independent variables were earlier studied as correlates of the intervening network variables and later in this chapter the network variables were seen as correlates of the change of behaviour. Combining the results of the earlier chapter and the results of the preceding section of this chapter it was found that the intervening networks in respect of cooperative and of family planning took the intervening role between a number of independent variables and some measures of behaviour change. This section would therefore attempt to identify if there were still any correlates from the independent variables left which had direct significant relations with the change of behaviour.

Table : 7.5

Correlation Coefficients between the Independent Variables and the four Measures of Behaviour Change of the Respondents in respect of Cooperative in Comilla and Savar.

		Measures of Behaviour Change(Sample-Size)			
		Awareness AWC(71)	Opinion OPC(71)	Advocacy AVC (71)	Adoption ADC(71)
	Independent Variables				
Comilla	Media Exposure on Cooperative MXC	.293*	.281*	.287*	.184
	Physical Mobility PM	.496***	.453***	.458***	.304*
	Family Size FSZ	-.075	-.034	.026	-.119
	Land Holdings LND	-.279*	-.192	-.118	-.031
	Age AGE	.156	.256*	.231	.213
	Education ED	.126	.135	.349*	.228

		Measures of Behaviour Change(Sample-Size)			
		Awareness AWC(67)	Opinion OPC(67)	Advocacy AVC (67)	Adoption ADC (67)
	Independent Variables				
Savar	Media Exposure on Cooperative MXC	.390**	.391**	.347**	.072
	Physical Mobility PM	.169	.146	.152	.002
	Family Size FSZ	.206	.110	.015	.123
	Land Holdings LND	.162	.177	.223	.106
	Age AGE	.117	.147	.116	.061
	Education ED	.350**	.388**	.428***	.131

Table : 7.6

Correlation Coefficient between the Independent Variables and the four Measures of Behaviour Change of the Respondents in Respect of Family Planning in Comilla and Savar.

		Measures of Behaviour Change(Sample-Size)			
		Awareness AWF(71)	Opinion OPF(71)	Advocacy AVF (71)	Adoption ADF (52)
	Independent Variables				
Comilla	Media Exposure on Family Planning MXF	.253*	.423***	.168	.111

		Measures of Behaviour Change(Sample-Size)			
	Independent Variables	Awareness AWF(71)	Opinion OPF(71)	Advocacy AVF (71)	Adoption ADF (52)
	Physical Mobility PM	.410***	.152	.289*	.106
	FP Workers Visit FWV	.308*	.176	.276*	.117
	Husband and Wife Communication HWC	.123	.619***	.175	.219
	Family Size FSZ	-.140	-.473***	-.222	-.090
	Land LND	-.181	.202	-.153	-.166
	Age AGE	.116	-.290*	-.069	-.111
	Education ED	.104	.325**	.182	.234
		Awareness AWF(67)	Opinion OPF(67)	Advocacy AVF (67)	Adoption ADF (52)
Savar	Media Exposure on Family Planning MXF	.353**	.379**	.368**	.200
	Physical Mobility PM	.185	.142	.074	.221
	FP Workers Visit FWV	.207	.162	.432***	.311*
	Husband and Wife Communication HWC	.319**	.518***	.236	.419**

Independent Variables	Measures of Behaviour Change (Sample-Size) Awareness AWF(67)	Opinion OPF(67)	Advocacy AVF (67)	Adoption ADF (52)
Family Size FSZ	-.110	-.298*	.138	-.003
Land LND	.057	.063	.070	.066
Age AGE	-.333**	-.247*	.016	-.176
Education ED	.397**	.298*	.268*	-.025

In Comilla, media exposure and physical mobility were highly correlated with the four measures of behaviour change in respect of cooperative. Age and education also worked as the correlates. As for the change of behaviour regarding family planning, media exposure and physical mobility together worked with family planning workers' visit maintaining correlationship with awareness, opinion and advocacy of taboo ideas and information. Husband and wife communication, age and education were correlated with the formation of opinion only.

In Savar, media exposure and education were correlated with awareness, opinion and advocacy of cooperative innovation.

The four measures of behaviour change regarding family planning innovations had their correlates in media exposure, education, family planning workers' visit and husband and wife communication. All these correlations were positive. In this area, family size was inversely correlated with the formation of taboo opinion. Age was also correlated in the same direction with the formation of both awareness and opinion of taboo matters. The negative direction of these relationships seemed logical.

Combining the results of the preceding chapter with those in this section, it could be said that media exposure in Savar, which was already correlated with the institutional networks of cooperative and family planning, simultaneously maintained direct correlations with the measures of behaviour change. In Comilla, physical mobility which had correlationships with institutional networks was also directly related with the measures of behaviour change. Thus both the taboo and non-taboo networks intervened between the measures of behaviour change on one end and media exposure in Savar or physical mobility in Comilla on the other.

CHAPTER - VIII

PREDICTORS OF NETWORK AND BEHAVIOUR CHANGE VARIABLES : MULTIVARIATE ANALYSIS.

The Pearsonean correlation in a bivariate situation allowed us to tell in the preceding chapters that a relationship between X and Y existed but it did not tell anything about the nature of a causal relationship, if any, between the independent, intervening and dependent variables. In other words, this bivariate relationship by itself was not a proof of causal relationship. The relationship might be a mere coincidence or be causative. This warranted a precision of prediction which was improved by subjecting the variables to the multiple regression analysis. The models developed for the purpose followed the cause-effect continuum indicated by the analytical framework. Thus there were two stages of analysis. First, the independent variables explained the intervening variables. Then the independent and intervening variables together explained the dependent variables. In other words, the relative influence of independent background and non-network variables in explaining the four network variables was ascertained at the outset. Finally, from an array of independent and intervening variables the best predictors of the four measures of behaviour change (the dependent variables) were identified. This second stage

of analysis also incorporated in the list of predictors those behaviour change variables that were presumed to occur earlier than the occurrence of the variable whose predictors were being ascertained through a regression model. Thus awareness which was presumed to precede opinion formation was followed by advocacy and then adoption. Accordingly, among the predictors of adoption were included the rest behaviour change variables of awareness, opinion and advocacy, among the predictors of advocacy were included the preceding stages of awareness and opinion, and among the predictors of opinion was included the lone preceding stage of awareness.

Statistically a dependent variable Y was assumed to be a linear function of combination of variables x_1, x_2, x_3, ... x_n that was $Y = a + b_1 x_1 + b_2 x_2 + b_3 x_3 + \ldots\ldots\ldots\ldots b_n x_n$. Using standard computer programmes, the least square estimates of the coefficients (a, b_1, b_2, b_3 ..... b_n) were obtained.

The basic results of the multiple regression analyses were presented in two sections. In the first section, the prediction equations for the intervening network variables were presented. Here the network variables were taken to be dependent on the background and non-network variables. Thus the

general prediction equations for the social network (SN) as well as the economic network (EN) contained 9 independent variables each. The institutional network on cooperative ideas and information (INC) had 8 predictors and the institutional network on family planning ideas and information (INF) had 10 depending on their relevance to cooperative or to family planning.

In the second section there were four regression models for the change of cooperative behaviour and four for that of family planning behaviour. Thus the prediction equations for the awareness of cooperative ideas and information (AWC) contained a combination of all independent and intervening variables. The predictors for AWC were 11, for the opinion about cooperative (OPC) were 12 (11 + AWC), for the advocacy of cooperative ideas and information (AVC) were 13 (11 + AWC + OPC) and for the adoption of cooperative ideas and information (ADC) were 14 (11 + AWC + OPC + AVC). Similarly the predictors for the awareness of family planning ideas and information (AWF) were 13, for the opinion about family planning ideas and information (OPF) 14, for the advocacy of family planning ideas and information (AVF) 15 and for the adoption of family planning (ADF) 16, each time the preceding behaviour change variables being added up with the relevant independent and intervening

variables,in this case numbering 13.

The prediction equations were useful in explaining the existence of the influence of the predictor variables on the dependent variables. Thus if the total variance explained by the predictor variables in any regression equation was 50%, the equation would show the total strength all the variables through their coefficients i.e. b_1, b_2, b_3 ..... b_n with their corresponding levels of significance.

The following models developed for computer use explained the additional inclusions in the list of predictors of the four measures of behaviour change. The models were developed separately for cooperative and family planning behaviour change.

Models for the predictors of four measures of cooperative behaviour change :

Model ADC = Constant + SN + EN + INC + MXC + PM + REL + ED + FSZ + LND + OCC + AGE + AWC + OPC + AVC

Model AVC = Constant + SN + EN + INC + MXC + PM + REL + ED + FSZ + LND + OCC + AGE + AWC + OPC

Model OPC = Constant + SN + EN + INC + MXC + PM + REL
+ ED + FSZ + LND + OCC + AGE + AWC

Model AWC = Constant + SN + EN + INC + MXC + PM + REL
+ ED + FSZ + LND + OCC + AGE

Models for the predictors of four measures of family planning behaviour change :

Model ADF = Constant + SN + EN + INF + MXF + PM + REL
+ ED + FSZ + LND + OCC + AGE + FWV + HWC
+ AWF + OPF + AVF

Model AVF = Constant + SN + EN + INF + MXF + PM + REL
+ ED + FSZ + LND + OCC + AGE + FWV + HWC
+ AWF + OPF

Model OPF = Constant + SN + EN + INF + MXF + PM + REL
+ ED + FSZ + LND + OCC + AGE + FWV + HWC
+ AWF

Model AWF = Constant + SN + EN + INF + MXF + PM + REL
+ ED + FSZ + LND + OCC + AGE + FWV + HWC

Models for the predictors of four measures of communication network (two general and two institutional networks):

Model SN = Constant + REL + ED + FSZ + LND + OCC + AGE + MXC + MXF + PM

Model EN = Constant + REL + ED + FSZ + LND + OCC + AGE + MXC + MXF + PM

Model INC = Constant + REL + ED + FSZ + LND + OCC + AGE + MXC + PM

Model INF = Constant + REL + ED + FSZ + LND + OCC + AGE + MXF + PM + FWV + HWC

Predictors of Network Variables:

The multiple regression analysis explained the predictors of behaviour change from an array of both independent and intervening variables. Before this was done efforts had been to ascertain those independent variables which had contributed significantly to the formation of the networks. This helped understand the influence of independent variables on the intervening ones before identifying any significant influence of the independent and intervening variables on the change of behaviour.

The first step of multiple regression analysis therefore showed the contribution of independent background and non-network variables on the formation of four intervening networks. As already indicated the formation of social network (SN) as well as economic network (EN) was studied in the light of nine independent variables, the institutional network on cooperative (INC) and on family planning (INF) were studied in terms of eight and ten relevant variables respectively. The results of the regression analyses based on four models showed the significant predictors from the independent variables. The overall measure of the coefficient of multiple determination (R^2) of the models with their significance levels were also presented

at the foot of each table so as to provide the proportion of variance that was accounted for or explained by the influence of the predictor variables on the dependent ones. The coefficient of multiple determination might be fairly close to 0 or fairly close to 1 or might be between the two positions. A coefficient of multiple determination close to 0 would indicate that the independent variables together would be of little help in predicting the dependent variables. In other words, the R^2 away from 0 would indicate the explanatory power of the model and $1-R^2$ would be the unexplained variance due to certain variables remaining outside the model. In each of the models the R^2 went with the significance level. Thus an R^2 with more than 5 percent level of probability would indicate that the model itself was not significant but that did not preclude any significant predictors to be considered in the study.

For an easy comparison, all the predictors of the four measures of network variables in the two study areas were presented in the following tables and thereafter the explanation followed.

PREDICTORS OF NETWORK VARIABLES

Table 8.1 : Predictors of Social Network(SN)

Estimate of SN	Comilla			Savar		
Variables	Coeffi-cient	P (2-tail) T	P	Coeffi-cient	P (2-tail) T	P
Constant	-0.656	-0.10	0.921	-6.746	-1.51	0.136
Religion (REL)	-5.678	-1.55	0.125	-0.268	-0.14	0.888
Education (ED)	1.286	0.82	0.414	2.819	2.63	0.011*
Family Size (FSZ)	-0.189	-0.61	0.542	0.694	2.06	0.044*
Land(LND)	0.008	1.58	0.119	0.003	1.18	0.244
Occupation (OCC)	0.525	0.66	0.510	-1.064	-1.49	0.143
Age(AGE)	0.196	2.17	0.034*	0.106	1.75	0.085
Media Exposure on Cooperative (MXC)	0.060	0.09	0.930	0.395	0.60	0.550
Media Exposure on Family Planning (MXF)	0.297	0.51	0.611	-0.049	-0.08	0.934
Physical Mobility (PM)	-0.134	-0.19	0.851	0.262	0.59	0.556

R^2 = 0.190,
where N = 71 and DF = 61
F = 1.594 P = 0.137

R^2 = 0.308,
where N = 67 and DF = 57
F = 2.817 P = 0.008

Table 8.2 : Predictors of Economic Network (EN)

Estimate of EN	Comilla			Savar		
Variables	Coeffi-cient	P (2-tail) T	P	Coeffi-cient	P (2-tail) T	P
Constant	-0.742	-0.38	0.705	-0.226	-0.16	0.876
Religion (REL)	-0.868	-0.80	0.426	-0.336	-0.55	0.585
Education (ED)	-0.200	-0.43	0.668	0.685	1.99	0.052
Family Size (FSZ)	-0.008	-0.09	0.932	0.149	1.38	0.174
Land(LND)	0.001	0.98	0.332	0.002	1.65	0.104
Occupation (OCC)	0.436	1.86	0.068	-0.154	-0.67	0.506
Age(AGE)	0.049	1.02	0.313	0.009	0.47	0.639
Media Exposure on Cooperative (MXC)	0.204	1.81	0.075	0.232	1.10	0.278
Media Exposure on Family Planning (MXF)	0.163	0.95	0.346	-0.094	-0.49	0.625
Physical Mobility (PM)	-0.269	-1.27	0.207	-0.037	-0.26	0.794

R^2 = 0.223,
where N = 71 and DF = 61
F = 1.940 P = 0.063

R^2 = 0.246,
where N = 67 and DF = 57
F = 2.068 P = 0.048

Table : 8.3: Predictors of Institutional Network on Cooperative (INC)

Estimate of INC	Comilla			Savar		
Variables	Coeffi-cient	P (2-tail) T	P	Coeffi-cient	P (2-tail) T	P
Constant	-7.193	-2.00	0.050	-0.602	-0.35	0.725
Religion (REL)	-2.215	-1.09	0.280	-0.863	-1.15	0.253
Education (ED)	-0.397	-0.46	0.646	0.512	1.26	0.214
Family Size (FSZ)	0.161	0.94	0.352	0.093	0.70	0.484
Land (LND)	-0.001	-0.51	0.609	0.001	0.78	0.436
Occupation (OCC)	0.933	2.12	0.038*	-0.042	-0.15	0.882
Age (AGE)	0.151	3.11	0.003**	0.017	0.71	0.482
Media Exposure on Cooperative (MXC)	0.961	3.38	0.001**	0.126	0.83	0.410
Physical Mobility (PM)	0.781	1.97	0.053	0.102	0.60	0.551

R^2 = 0.456, where N = 71 and DF = 62
F = 6.507 P = 0.000

R^2 = 0.152, where N = 67 and DF = 58
F = 1.297 P = 0.263

Table 8.4 : Predictors of Institutional Network on Family Planning (INF)

Estimate of INF	Comilla			Savar		
Variables	Coeffi-cient	P (2-tail) T	P	Coeffi-cient	P (2-tail) T	P
Constant	-1.912	-0.76	0.451	-1.954	-1.13	0.264
Religion (REL)	2.789	2.08	0.042*	0.745	1.11	0.272
Education (ED)	0.059	0.11	0.917	0.112	0.30	0.766
Family Size (FSZ)	-0.035	-0.32	0.753	-0.037	-0.32	0.751
Land(LND)	-0.005	-2.56	0.013*	-0.001	-0.58	0.566
Occupation (OCC)	0.046	0.16	0.875	0.195	0.79	0.433
Age (AGE)	0.003	0.08	0.939	0.004	0.18	0.861
Media Exposure on Family Planning (MXF)	-0.170	-1.04	0.302	0.189	1.55	0.127
Physical Mobility(PM)	0.898	3.16	0.002**	0.009	0.05	0.958
Family Planning Workers' Visit(FWV)	0.208	0.97	0.334	0.128	0.98	0.333
Husband and Wife Communication on Family Planning (HWC)	0.087	0.49	0.626	0.060	0.43	0.666

R^2 = 0.322,
where N = 71 and DF = 60
F = 2.847 P = 0.006

R^2 = 0.194,
where N = 67 and DF = 56
F = 1.348 P = 0.229

Of the general networks, the social networks in Savar varied with a variation in education and family size.In Comilla age had a moderately significant impact on the formation of social network. Of the two regression models, the one in Savar explained a variance of 31% in social network due to the variances in the predictor variables. The explanatory power of the regression model for social network in Comilla was comparatively very poor.

The economic networks which had low integration scores, nearly one-third of that of the social networks in both the areas, could not weave sufficient communication links and therefore most of the respondents could not provide network scores for statistical manipulation. The economic networks thus could not be explained through the regression models. In the list of the variables none emerged as predictors of the economic networks.

In respect of the institutional networks on cooperative and family planning, the regression models in Comilla were found to be predictive of causality.

The predictors from the background and non-network variables which influenced the formation of institutional networks

in Comilla showed that the aged of higher occupational status with high exposure to the media commanded institutional leadership regarding cooperative. The family planning network leadership in this area went to those who had a high physical mobility with the programme centre. Religion wise most of the taboo network leaders were Hindus. Ostensibly their faith allowed them to take up a leadership role in matters of taboo communication.

The explanatory powers of the models of the institutional network on cooperative and on family planning in this area were 46% and 32% respectively significant at .01 level of probability. In Savar the explanatory powers of the corresponding models were very low at less than 20% leaving an unexplained variance of more than 80%. The reasons that might be ascribed to this phenomenon were :

(a) the absence of organised local structure to bring about a convergence of innovative ideas and information in Savar and

(b) a sort of one-to-one dependency relationship between the programme centre and the clientele in matters of the dispensing of facilities in that area.

There had thus been a change of the predictive role of the same set of independent variables on the formation of networks. In Comilla, the independent variables seemed to be more operative in the formation of both taboo and non-taboo institutional networks while in Savar these variables influenced the formation of social network only. As the communication integration scores (more intricate links within the network among the respondents) were around 10 percent in both the social networks, it was expected that the same set of independent variables as predictors in both the models would provide more or less identical coefficients of multiple determination in both the areas. But the results of the regression models proved otherwise. The existence of an organised programme intervention in Comilla and consequent convergence of innovative ideas and information might have made the institutional networks on cooperative and family planning potential enough to have snapped the relation between the independent variables and social network. In Savar the institutional networks with lower integration scores were yet to take away the traditional relationship between the independent and the intervening (social network) variables.

Another notable feature was that the networks with an integration score of 4 percent or less failed to provide adequate

communication links to be shared by the respondents. In these cases the multiple regression equations offered a very low predictive power of the independent variables. Economic networks in Comilla and Savar with 3.70 percent and 3.35 percent integration scores and the institutional network on cooperative and family planning in Savar with 2.35 percent and 2.26 percent integration scores respectively were cases in point. The R^2s in all the cases were very low and not significant.

Therefore, it could be inferred that a network must reach a certain integration level (in this study the level was 5 percent or more) to take the role of a criterion variable having significant relations with independent variables in a cause and effect continuum in a communication study.

Predictors of Behaviour Change Variables :

The second stage of multiple regression analysis showed the contribution of background, non-network and network variables on the four measures of behaviour change in respect of both co-operative and family planning in the two study areas. In the light of the analytical framework awareness building was presumed to take place before opinion formation which preceded advocacy and adoption of innovation. The number of predictors for each of the four measures of behaviour change varied due to inclusion of the preceding behaviour change variable(s) into the independent variables to make the multiple regression equation meaningful in a cause and effect sequacity. This inclusion of preceding behaviour change variable(s) into the list of predictors of the succeeding behaviour change variable proved to be valid as

1. such inclusion improved the coefficients of multiple determination (R^2, the explanatory powers of the overall regression models), and

2. the premise that each succeeding behaviour change variable was dependent on the preceding behaviour change variable had also been vindicated from the findings of the regression models in Comilla and partly in Savar.

The findings of the multiple regression analyses for the change of behaviour of development participants were presented in stages :

(a) First, the explanatory power of the regression model as well as the number of predictors of behaviour change at each of the four measures of awareness, opinion, advocacy and adoption was identified.

(b) Each behaviour change variable with a direct bearing on the making of the succeeding variable as indicated in the analytical framework of the study was then discussed.

(c) The state of the network variables as predictors of the change of behaviour was seen thereafter. If the network variables maintained associative positions separately with both the independent and dependent variables but the independent and dependent variable did not maintain any direct relationship between them, the network variables in those cases were discussed in the light of their intervening role.

(d) Finally, the direct impact of independent variable on the dependent variable of behaviour change was presented.

PREDICTORS OF BEHAVIOUR CHANGE (COOPERATIVE)

Table 8.5 : Predictors of Awareness of Cooperative(AWC)

Estimate of AWC	C o m i l l a			S a v a r		
Variables	Coeffi-cient	P T	(2-tail) P	Coeffi-cient	P T	(2-tail P
Constant	4.747	4.22	0.000	-0.614	-0.35	0.729
Social Network(SN)	0.047	1.40	0.166	-0.049	-0.65	0.531
Economic Network(EN)	0.027	0.24	0.808	0.150	0.64	0.528
Institutional Network on Cooperative (INC)	0.035	-0.87	0.390	0.390	2.44	0.018*
Media Exposure on Cooperative (MXC)	0.278	2.84	0.006*	0.247	1.61	0.113
Physical Mobility(PM)	0.522	4.13	0.000*	0.278	1.61	0.113
Religion (REL)	-0.245	-0.39	0.698	0.580	0.76	0.448
Education (ED)	0.147	0.55	0.583	0.184	0.42	0.673
Family Size (FSZ)	-0.042	-0.79	0.430	0.279	2.04	0.046*
Land(LND)	-0.004	-4.29	0.000*	-0.000	-0.18	0.860
Occupation (OCC)	0.065	0.46	0.646	0.345	1.19	0.238
Age(AGE)	0.021	1.36	0.180	0.006	0.25	0.806

R^2 = 0.549,
where N = 71 and DF = 59
F = 6.535 P = 0.000

R^2 = 0.405,
where N = 67 and DF = 55
F = 3.397 P = 0.001

Table 8.6 : Predictors of Opinion about Cooperative (OPC)

Estimate of OPC	Comilla			Savar		
Variables	Coeffi-cient	P (2-tail) T	P	Coeffi-cient	P (2-tail) T	P
Constant	-0.196	-0.22	0.823	-0.610	-1.12	0.269
Social Network(SN)	-0.009	-0.38	0.707	-0.023	-0.94	0.349
Economic Network(EN)	0.056	0.76	0.453	-0.027	-0.36	0.717
Institutional Network on Cooperative (INC)	-0.029	-1.05	0.300	0.041	0.80	0.430
Awareness about Cooperative (AWC)	0.348	3.93	0.000*	0.563	13.52	0.000*
Media Exposure on Cooperative (MXC)	0.087	1.23	0.225	0.025	0.51	0.610
Physical Mobility(PM)	0.156	1.59	0.116	-0.015	-0.27	0.789
Religion(REL)	-0.153	-0.36	0.722	0.112	0.47	0.638
Education(ED)	0.060	0.33	0.744	0.165	1.23	0.224
Family Size (FSZ)	-0.004	-0.11	0.917	-0.054	-1.23	0.225
Land (LND)	-0.001	-0.94	0.354	0.000	0.51	0.616
Occupation (OCC)	0.050	0.51	0.609	-0.040	-0.44	0.660
Age (AGE)	0.022	2.05	0.045*	0.012	1.61	0.114

R^2 = 0.569,
where N = 71 and DF = 58
F = 6.388 P = 0.000

R^2 = 0.858,
where N = 67 and DF = 54
F = 27.174 P = 0.000

Table 8.7 Predictors of Advocacy of Cooperative (AVC)

Estimate of AVC	Comilla			Savar		
Variables	Coeffi-cient	P (2-tail) T	P	Coeffi-cient	P (2-tail) T	P
Constant	-1.165	-0.98	0.333	-0.995	-1.17	0.246
Social Network (SN)	0.006	0.19	0.847	-0.002	-0.04	0.967
Economic Network (EN)	0.079	0.78	0.441	-0.035	-0.31	0.757
Institutional Network on Cooperative (INC)	0.079	2.06	0.044*	0.326	4.06	0.000*
Awareness about Cooperative (AWC)	0.074	0.54	0.592	0.180	1.35	0.184
Opinion about Cooperative (OPC)	0.407	2.27	0.027*	0.009	0.04	0.965
Media Exposure on Cooperative (MXC)	-0.047	-0.48	0.636	0.021	0.28	0.782
Physical Mobility (PM)	0.204	1.50	0.140	0.036	0.43	0.668

Estimate of AVC	Comilla			Savar		
Variables	Coeffi-cient	P (2-tail) T	P	Coeffi-cient	P (2-tail) T	P
Religion (REL)	-0.407	-0.69	0.490	0.014	0.04	0.969
Education (ED)	0.633	2.54	0.014*	0.232	1.11	0.272
Family Size (FSZ)	0.015	0.30	0.768	-0.066	-0.96	0.341
Land (LND)	-0.001	-0.70	0.484	0.000	0.45	0.651
Occupation (OCC)	0.082	0.62	0.535	0.033	0.24	0.813
Age (AGE)	0.000	-0.01	0.993	0.010	0.87	0.391

R^2 = 0.613,
where N = 71 and DF = 57
F = 6.947 P = 0.000

R^2 = 0.607,
where N = 67 and DF = 53
F = 6.287 P = 0.000

Table 8.8 : Predictors of Adoption of Cooperative (ADC).

Estimate of ADC	C o m i l l a			S a v a r		
Variables	Coeffi-cient	P (2-tail) T	P	Coeffi-cient	P (2-tail) T	P
Constant	-11.882	-1.19	0.238	5.446	0.73	0.471
Social Network (SN)	-0.124	-0.47	0.639	0.073	0.22	0.825
Economic Network (EN)	0.713	0.84	0.406	-0.858	-0.87	0.386
Institutional Network on Cooperative (INC)	0.235	0.71	0.478	1.665	2.07	0.043*
Awareness about Cooperative (AWC)	2.359	2.08	0.042	2.026	1.70	0.095
Opinion about Cooperative (OPC)	-1.559	-1.00	0.320	1.015	0.56	0.580
Advocacy of Cooperative (AVC)	2.395	2.18	0.033*	1.188	0.99	0.327
Media Exposure on Cooperative (MXC)	-0.743	-0.91	0.366	-1.332	-2.04	0.046*

Estimate of ADC	Comilla			Savar		
Variables	Coeffi-cient	P (2-tail) T	P	Coeffi-cient	P (2-tail) T	P
Physical Mobility (PM)	0.006	0.00	0.996	-1.066	-1.46	0.151
Religion (REL)	1.888	0.39	0.700	-0.330	-0.10	0.917
Education (ED)	0.773	0.35	0.724	-1.435	-0.78	0.440
Family Size (FSZ)	-0.473	-1.16	0.251	0.038	0.06	0.949
Land (LND)	0.003	0.36	0.722	0.001	0.24	0.881
Occupation (OCC)	0.143	0.13	0.897	0.694	0.57	0.571
Age (AGE)	0.101	0.78	0.437	-0.118	-1.14	0.259

R^2 = 0.403,
where N = 71 and DF = 56
F = 2.705 P = 0.000

R^2 = 0.545,
where N = 67 and DF = 52
F = 4.445 P = 0.000

The state of awareness about cooperative ideas and information (AWC) among the respondents in Comilla and Savar was assumed to depend on 11 variables of which 3 were network variables (SN,EN,INC) and the rest were background and non-network variables. The predictors of the opinion on cooperative were 12, those of advocacy 13, and of adoption 14, at each stage the preceding behaviour change variables being added up with the total of 11. The explanatory power of the set of four models for Comilla and Savar each ranged from 41 percent to a maximum of 86 percent, meaning that the unexplained variances in the models were in most cases less than 50 percent.

As for the dependency of succeeding behaviour change variables on the preceding one, Comilla offered a consistency where awareness influenced opinion formation, opinion promoted advocacy and finally advocacy induced the needed adoption. Savar partially ratified this dependency domino effect. Only opinion was found to be dependent on awareness about cooperative ideas and information.

As for network variables, the awareness of cooperative (AWC) depended on the institutional network on cooperative. This meant that the awareness of cooperative depended on

increasing number of institutional communication links of a respondent in Savar.

Increasing communication links also influenced the respondents' advocacy of cooperative ideas to others in both the study areas. Adoption in Savar only depended on the institutional network on cooperative. Thus institutional network on cooperative in Savar mostly took the role of an independent variable influencing awareness, advocacy and adoption of cooperative. In Comilla it assumed the role of an intervening variable between the independent variables of age, occupation and media exposure on cooperative and the dependent variable of behaviour change at the level of advocacy of cooperative ideas.

The independent background and non-network variables also directly influenced the behaviour change variables in Comilla. Awareness of cooperative ideas depended on a respondent's exposure to media and his frequency of physical mobility to the programme centre. Those who were poor in landholdings were high in awareness of cooperative. The income generation activities in non-agricultural cooperatives might have influenced them to be attentive to cooperative ventures at the locality.

In Savar, the size of the family positively influenced the awareness of respondents about cooperative ideas. The family size of respondents which influenced the formation of social leadership pattern might be instrumental in increasing their awareness about cooperative ideas and information.

The lone independent predictor of opinion about cooperative was age in Comilla, meaning that the aged were favourably disposed toward cooperative ideas. Savar had no predictor in this case.

Advocacy in Comilla depended on those who were high in education. Adoption in Savar was inversely dependent on media exposure.

The cooperative innovation, normative of existing values, followed a pattern of causality in Comilla and Savar though the situations were peculiar to the two areas. In Comilla the interpersonal communication links regarding cooperative (INC) functioned as an occasional facilitator in augmenting the advocacy of cooperative ideas. In Savar these interpersonal communication links of the respondents helped improve the levels of their awareness, advocacy and adoption of cooperative ideas.

In the analytical framework of the study the awareness

was assumed to operate before the formation of opinion followed by advocacy and adoption. In Comilla the sequacity was maintained; in Savar it was operative only partially.

In the initial stage of awareness dependent on a certain preceding variable or a combination of variables it was found that awareness in Savar depended on a person's higher interpersonal communication network while in Comilla awareness was the outcome of one's exposure to the media.

Opinion in both the areas depended on awareness.

Advocacy in Comilla depended on a favourable opinion about cooperative. The added impetus came from a person's higher education level and higher interpersonal communication network. As indicated earlier, advocacy depended on interpersonal communication in case of Savar. The adoption of innovation of a respondent in Comilla was concomitant upon his/her being an advocate of the innovation.

Media exposure in addition to the contributory effect of the interpersonal communication network decided the level of adoption of a respondent in Savar.

The direction of all these influences was positive and significant.

PREDICTORS OF BEHAVIOUR CHANGE(FAMILY PLANNING)

Table 8.9 : Predictors of Awareness of Family Planning(AWF)

Estimate of AWF	Comilla			Savar		
Variables	Coeffi-cient	P (2-tail) T	P	Coeffi-cient	P (2-tail) T	P
Constant	4.616	3.53	0.001	6.689	7.10	0.000
Social Network(SN)	0.037	1.02	0.314	-0.035	-0.98	0.332
Economic Network(EN)	0.023	0.19	0.852	0.210	1.93	0.059
Institutional Network on Family Planning(INF)	0.065	0.97	0.336	-0.021	-0.28	0.780
Religion (REL)	-0.074	-0.10	0.920	0.374	1.03	0.306
Education (ED)	0.066	0.22	0.824	0.335	1.60	0.116
Family Size (FSZ)	-0.069	-1.20	0.237	0.035	0.54	0.591
Land (LND)	-0.003	-2.67	0.010*	0.000	-0.91	0.367
Age (AGE)	0.028	1.58	0.119	-0.020	-1.62	0.112
Occupation (OCC)	0.009	0.06	0.956	0.035	0.26	0.799
Media Exposure on Family Planning(MXF)	0.189	2.13	0.038*	0.050	0.77	0.446
Family Planning Workers' Visit (FWV)	0.014	0.12	0.905	0.037	0.52	0.606
Husband and Wife Commu-nication on Family Planning(HWC)	0.132	1.42	0.160	0.091	1.23	0.225
Physical Mobility(PM)	0.327	2.00	0.050*	0.031	0.34	0.735

R^2 = 0.419,
where N = 71 and DF = 57
F = 3.162 P = 0.001

R^2 = 0.371,
where N = 67 and DF = 53
F = 2.410 P = 0.012

Table 8.10 : Predictors of Opinion of Family Planning(OPF)

Estimate of OPF	Comilla			Savar		
Variables	Coeffi-cient	P (2-tail) T	P	Coeffi-cient	P (2-tail) T	P
Constant	0.373	0.27	0.791	-2.612	-1.20	0.234
Social Network(SN)	-0.028	-0.80	0.430	0.083	1.39	0.172
Economic Network(EN)	0.122	1.04	0.305	-0.241	-1.30	0.200
Institutional Network on Family Planning(INF)	-0.050	-0.76	0.453	0.069	0.57	0.573
Awareness of Family Planning(AWF)	0.403	3.13	0.003*	0.693	3.06	0.003*
Religion (REL)	0.276	0.39	0.700	0.655	1.09	0.281
Education (ED)	0.330	1.15	0.255	0.095	0.27	0.790
Family Size (FSZ)	-0.172	-3.06	0.003*	-0.295	-2.76	0.008*
Land (LND)	0.000	0.44	0.663	-0.000	-0.04	0.972
Age (AGE)	-0.023	-1.33	0.190	0.030	1.45	0.154
Occupation (OCC)	0.211	1.41	0.165	-0.057	-0.25	0.801
Media Exposure on Family Planning(MXF)	-0.013	-0.15	0.882	0.127	1.16	0.249
Family Planning Workers' Visit(FWV)	-0.006	-0.06	0.955	-0.038	-0.32	0.747
Husband and Wife Communi-cation on Family Planning (HWC)	0.575	6.26	0.000*	0.554	4.46	0.000*
Physical Mobility(PM)	0.005	0.03	0.975	-0.059	-0.40	0.691
R^2 = 0.688, where N = 71 and DF = 56 F = 8.806 P = 0.000				R^2 = 0.553, where N = 67 and DF = 52 F = 4.593 P = 0.000		

Table 8.11 : Predictors of Advocacy of Family Planning (AVF)

Estimate of AVF	Comilla			Savar		
Variables	Coeffi-cient	P (2-tail) T	P	Coeffi-cient	P (2-tail) T	P
Constant	-0.037	-0.03	0.978	-4.402	-2.41	0.019
Social Network(SN)	-0.076	-2.29	0.026*	-0.087	-1.72	0.092
Economic Network(EN)	0.164	1.46	0.149	0.282	1.81	0.076
Institutional Network on Family Planning(INF)	0.180	2.88	0.006*	0.136	1.34	0.185
Awareness of Family Planning(AWF)	0.155	1.17	0.245	0.260	1.27	0.209
Opinion about Family Planning(OPF)	0.065	0.52	0.608	0.158	1.37	0.176
Religion(REL)	-0.147	-0.22	0.828	0.161	0.32	0.751
Education(ED)	0.783	2.86	0.006*	-0.024	-0.08	0.935
Family Size (FSZ)	-0.085	-1.48	0.146	0.219	2.31	0.025*
Land (LND)	-0.002	-1.61	0.114	-0.000	-0.19	0.852
Age (AGE)	0.012	0.74	0.464	0.012	0.66	0.511
Occupation (OCC)	-0.408	-2.83	0.007*	0.038	0.20	0.840
Media Exposure on Family Planning(MXF)	0.013	0.15	0.880	0.118	1.29	0.204
Family Planning Workers' Visit(FWV)	0.035	0.34	0.733	0.327	3.36	0.001*
Husband and Wife Communication on Family Planning (HWC)	0.013	0.11	0.909	-0.001	0.00	0.996
Physical Mobility(PM)	0.150	0.97	0.337	-0.077	-0.62	0.535
R^2 = 0.485, where N = 71 and DF = 55 F = 3.453 P = 0.000				R^2 = 0.509, where N = 67 and DF = 51 F = 3.528 P = 0.000		

Table 8.12 : Predictors of Adoption of Family Planning (ADF)

Estimate of ADF	Comilla			Savar		
Variables	Coeffi-cient	P (2-tail) T	P	Coeffi-cient	P (2-tail) T	P
Constant	-2.916	-0.30	0.764	-25.679	-1.51	0.139
Social Network (SN)	0.357	1.20	0.238	0.234	0.65	0.522
Economic Network (EN)	-0.781	-0.85	0.402	- 0.787	-0.70	0.489
Institutional Network on Family Planning (INF)	-0.813	-1.73	0.091	1.327	1.64	0.109
Awareness of Family Planning (AWF)	-0.198	-0.24	0.814	3.478	1.76	0.087
Opinion of Family Planning (OPF)	0.684	0.68	0.500	- 2.357	-1.90	0.065
Advocacy of Family Planning (AVF)	2.447	2.72	0.009*	1.511	1.35	0.187
Religion (REL)	-4.996	-0.79	0.433	- 1.036	-0.27	0.792

Estimate of ADF	Comilla			Savar		
Variables	Coeffi-cient	P (2-tail) T	P	Coeffi-cient	P (2-tail) T	P
Education (ED)	-0.364	-0.19	0.849	-4.759	-2.27	0.029*
Family Size (FSZ)	0.212	0.57	0.574	0.402	0.53	0.597
Land (LND)	0.000	0.01	0.992	0.001	0.25	0.802
Age (AGE)	-0.023	-0.16	0.870	-0.054	-0.32	0.750
Occupation (OCC)	2.234	2.22	0.032*	3.628	2.28	0.029*
Media Exposure on Family Planning (MXF)	-0.123	-0.21	0.833	-1.269	-1.52	0.137
Family Planning Workers' Visit (FWV)	-0.147	-0.21	0.832	-0.348	-0.41	0.683
Husband and Wife Communication on Family Planning (HWC)	0.733	0.58	0.566	4.234	2.67	0.011*
Physical Mobility (PM)	0.019	0.02	0.986	1.269	1.49	0.146
R^2 = 0.370, where N = 59 and DF = 42 F = 1.539 P = 0.131				R^2 = 0.470, where N = 52 and DF = 35 F = 1.920 P = 0.053		

The behaviour change in respect of family planning innovation which was to be distruptive of the norms of the system provided differing situations in the two development settings. The reasons could be that :

(a) the integration score of the institutional network on family planning in Comilla was two times greater than that in Savar,

(b) the correlationship between the social and family planning networks in Savar was significant but in Comilla no such significant relationship could be seen,

(c) the leadership overlap from the social to the family planning network in Savar was higher than that in Comilla and

(d) the correlation coefficients among the four measures of family planning behaviour change were better in Savar than in Comilla.

Moreover, the operation of disruptive innovation might render a causality between the criterion and predictor variables

altogether different than what could be seen in case of the normative innovation. This presumption did not deemphasise the sequence of causality charted out in the analytical framework. Attention was glued to see if the presumption held true.

The four measures of behaviour change (awareness, opinion, advocacy and adoption) in respect of family planning innovation had varying sets of 13,14,15 and 16 predictors in the regression models respectively. Of the 13 variables, three were networks (SN, EN and INF) and the rest were the background and non-network variables. The incremental number of variables of the four measures of behaviour change was accounted for by the addition of the preceding behaviour change variable(s) into the list of predictors of the succeeding variables.

The regression models for family planning opinion and advocacy explained a variance of 50 percent or more with the variation in the predictor variables. Other models for awareness and adoption moderately explained the influence of the predictor variables on the change of the family planning behaviour, the R^2s in this case were more than 37 percent.

As for the dependency of the succeeding behaviour change variable on the preceding one in family planning, Comilla once

again offered a consistency of causality like that found in respect of cooperative behaviour change. Awareness in this area was built through the respondents' interaction with the media and their being physically exposed to the development environment due mainly to the frequency of the mobility. The formation of opinion depended on the level of awareness.

The advocacy of taboo matters was influenced by the intervening institutional network (interpersonal communication links regarding family planning). Advocacy finally influenced the adoption of family planning ideas due mainly to the existence of a formal local structure to look after, even through the family planning workers, the practice of family planning.

In Savar, the operation of family planning behaviour change did not follow any consistent pattern. Only the level of awareness could influence the formation of opinion. The institutional network (family planning) had no influence whatsoever on the change of behaviour of the respondents. Advocacy was left to the influence of the frequency of visits to the respondents by the family planning workers. Adoption of family planning depended on the convergence of ideas between the spouses.

However, some consistency could be noticed in the pattern

of influence on the change of disruptive behaviour in both the areas. Opinion depended on awareness, husband and wife communication and small family size. Advocacy depended on the level of education or the size of the family.

Thus a higher level of education of the respondents proved to be one of the prime movers in making them realise the very essence of the small family size norm which in their personal family organisation they hardly could introduce. In other words the dictates of a burden of a larger family or the attainment of some level of education to understand the problem of a bigger family contributed greatly for the respondents to take up the role of an advocate of taboo ideas.

Advocacy in both the areas did not depend on the formation of family planning opinion. These two measures of behaviour change worked in two distinct entities. The formation of opinion was operative in a psychological domain while the advocacy remained a social interaction. This consonance of the phenomenon in the two areas reemphasised the fact that a person might be favourably disposed toward family planning ideas, the status one would employ only for intimate interspouse relations but not for extra-familial use. To be an advocate, one had to be careful enough to protect any possible erosion of one's social

image. With higher level of education one tended to be relatively forthright in expressing one's convictions even if they were disruptive of norms.

CHAPTER IX
SUMMARY AND DISCUSSION

The present dissertation aimed at the understanding of the role of interpersonal communication of rural development messages in the formation of behaviour change of development participants without ignoring the role of mass media.

The study was phased out in two broad stages. The first stage dwelt upon the state of communication networks in the two study areas. The state of communication networks were observed in terms of :-

1. the leadership pattern of the flow of two types of development messages by eliciting answers to two questions as to (a) how communication leadership overlapped between networks and how they were inter-related, and (b) how new leadership emerged for networks, and

2. the intensity of the flow of the development messages among participants by measuring the extent to which communication links were interconnected within a network.

This part of the study was done to understand the structure of the flow of interpersonal communication, herein referred to as communication networks. The results of this part of the study were interpreted in the light of inter-network relationship. If the same set of persons took up communication leadership in different networks it would be likely that there existed a high correlationship between the networks. Inversely, if for every network new sets of persons emerged to take up leadership, the inter-network relationship would likely be either negative or non-existent. As for network intensity, if all the networks were equally highly integrated which meant that the communication links within each network were higher that might not guarantee a high inter-network correlationship.

Phase one therefore saw to the state of different communication networks in terms of a combination of four elements - leadership overlap, leadership emergence, intra-network integration and inter-network correlation.

The state of communication networks was studied separately at the very outset as the analytical framework presupposed a crucial role of interpersonal communication networks in

effecting a change of behaviour in respect of innovations. Hence an attempt was made to find answers to all available queries about how and to what extent the communication flows among development participants became patterned over time to form a communication structure (or network) which was likely to be relatively stable and predictive of behaviour.

The second phase of the study was devoted to the identification of variables responsible for the formation of communication network and the influence of communication networks on the change of behaviour of development participants. Thus communication networks explained the change of behaviour of the participants and was explained by the factors responsible for their formation.

Combining the two phases, the study therefore

(a) saw the pattern and intensity of the interpersonal communication of two types of development messages (taboo and non-taboo) and

(b) observed the role of interpersonal and mediated communication in the behaviour change of development participants.

Theory

The theoretical framework in the study was based on a hybrid of the application of traditional diffusion model(Rogers, 1962) and the emerging exercise of the convergence model of communication (Kincaid, 1979). Both mediated and interpersonal communication were therefore taken into consideration while constructing the analytical framework. A logical sequence of the analytical framework placed the communication variables like media exposures and personal communication networks to be the correlates of the behaviour change variable. Socio-economic status also provided additional insights as independent variables.

In the context of rural development in a developing country 'planning in the small' (Wignaraja, 1977)[1] dovetailed with 'local strategy' of communication for development (Schramm, 1979)[2] was emphasised here rather than 'planning in the large' along with the magic role of the big media. The planning in the small thus presupposed an effective local participation in an atmosphere of a horizontal convergence of relevant development ideas and information mostly through interpersonal networks. However, the significance of the diffusion of such messages through mediated communication was not altogether ignored.

The resultant behaviour change due to the flow of communication was classified into four measures : awareness, opinion, advocacy and adoption of development messages.

Methodology

The nature of the present study warranted a methodological approach or a combination of approaches appropriate for the collection of analysis of relational data. Both the individuals and their relationship being the units of analysis in a study of communication networks, a sociometric survey was found to be relevant. A sample survey of data collection was avoided and a snowball sampling method was adopted. Data were analysed applying the needed statistical tools and the available computer programme, the SPSS(Statistical Package for the Social Sciences).

Under the snowball sampling method of data gathering an original sample of respondents called random starters representing at least one from every available occupation were asked to name who others in the system should be the respondents at the subsequent stages of data collection. The first set of referrals by the random starters determined the second set of respondents, the second set determined the third and so on until the fresh referrals turned to be but a duplication of the preceding

referrals. From the random starters to the subsequent sets of referrals, interviews were conducted following the interpersonal communication chains.

After the collection of sociometric data, the communication networks in respect of the traditional as well as the institutional message flows among the development participants were charted out in the form of four sociogrammes in the study areas. The sociogrammes were then scrutinised to see the state of communication networks in terms of a number of elements such as leadership pattern and intensity of communication connectedness. The personal communication links of the individuals within the network were counted to get their communication network scores for use in the statistical analysis of the impact of networks on behaviour change.

Findings

1. The State of Communication Networks:

Accumulated evidence todate showed that somewhat different network structures occured for different topics. The research question was how did dyadic communication for one topic, say cooperative, differed from that of another topic, say family planning ideas.

Parsons'(1973) sociometric survey in a Philippines village indicated that communication networks were different from the diffusion of contraceptive methods than for communication of other innovations[3]. Marshall's (1971) study in an Indian village also showed that network for a family planning method was markedly different than that for a new wheat variety[4]. Bhowmik's (1972) study concentrated on two types of communication dyads in eight Indian villages[5]:

(a) those linking friends and

(b) those through which agricultural innovations diffused.

The finding was that friendship dyads were more homophilous (between the likeminded) and the innovation diffusion dyads were more heterophilous (between people of divergent ideas).

These studies or the kindred studies saw

(a) how did the formation of friendship dyads differ from that of innovation diffusion dyads and

(b) how did the formation of innovation diffusion dyads for one topic differ from that for another topic ?

In the light of the above, the state of communication in the two study areas of Comilla and Savar was identified through inter-network leadership overlap, emergence of network leadership, intra-network integration and inter-network correlation.

A scrutiny of the communication networks in respect of social and economic matters gave out an identical picture in the two study areas. The social network was found to be 3 times better integrated than the economic network in both the areas. The two networks were highly equally correlated, the r being .77. Better integration meant higher frequency of interpersonal links among participants on social problems than on economic problems and high correlation here meant that those having higher links in social network were mostly the same set of people having higher links in the economic network. Thus social network was taken to be the leadership base for identifying leadership overlap onto the institutional networks on cooperative and family planning.

In the study area of Comilla the cooperative network was better integrated than the family planning network. But compared with the corresponding integration scores in the study

area of Savar, cooperative network in Comilla was better integrated by four times and family planning network by two times.

The reason for more communication links in the cooperative network than in the family planning network in Comilla could be due to the programme preference for cooperative ventures in the area. Family planning component of the programme was introduced as an adjunct of the cooperative venture. The other reasons could be the regular convergence of cooperative participants to weekly meetings and periodic monitoring of the activities by the programme centre. These meetings oftentimes oversaw family planning activities though the leadership in this case went to a different set of persons, mostly the family planning programme personnel in the area.

Area-wise, efforts in Savar were found to be mostly isolated endeavours of individuals with incoherent programme support as against some community activities organised by formal structures at the local level in Comilla. This partly explained the high network integration in Comilla than in Savar.

In the study area of Comilla, a sharp decline in network leadership overlap from the social network to the institutional

network on cooperative and a further decline to the institutional network on family planning allowed a greater chance of the emergence of new leadership in the two institutional networks. New leaders meant newer links between the leaders and the participants contributing to an increase in the interpersonal connectedness in a network. But in the study area of Savar, the same set of social leaders replicated their role positions in the institutional networks too which reduced the scope for new leaders to emerge to offer newer links.

Higher leadership overlap was therefore inversely associated with network integration. To put it other way, the more new leaders could emerge, the more links a network could wield.

The correlation coefficients among social, economic, cooperative and family planning networks in Savar showed an edge of strength over the coefficients among networks in Comilla. This was also consistent with the higher leadership overlap between networks in Savar.

Combining the three elements of intra-network integration, inter-network overlap and inter-network correlation, it was seen that if the same set of leaders with their personal

communication connectedness made up the networks, these networks would be highly correlated. In this case the number of links might be fewer as was seen in Savar. There could be more links within the networks but without any significant inter-network correlationship as it was the case in Comilla.

In the study area of Savar, both cooperative and family planning facilities flowed in a limited way either among a few beneficiaries or came down in an administrative fashion of dependency relationship from the programme centre or any other sources to the clientele. This direction of the limited facility flow could hardly elicit a regular convergence of innovative ideas among the participants. In matters of family planning information flow a sort of homophily was created by the isolated diffusion of the same information and ideas along with limited facilities stagnated the process of inter-personal communication.

The fewer number of links in the institutional networks on cooperative and family planning in Savar was partly due to this homophilous environment that blocked the possibility of any convergence in the form of weekly meetings in the area.

The study area of Comilla being highly saturated with facilities from the programme centre, a high convergence of

people at the local level took place due mainly to the immediate reward that these facilities offered to the participants.

In fine, the four factors viz, leadership overlap, intra-network integration, inter-network relationship and the direction of information flow contributed to provide two divergent scenarios for the study areas of Comilla and Savar. These scenarios helped to understand the state of communication networks before embarking on any scientific analysis of the impact of communication networks on the change of behaviour of the development participants.

2. Impact of Communication Networks on Behaviour Change:

The state of communication networks seen through a critical scrutiny, efforts were then made to see the influence of communication networks on the change of behaviour of development participants. Both the chance relations and the cause-and-effect relationship between background, non-network, network and behaviour change variables provided a scientific basis to the analysis. The chance relations between variables in a bivariate situation referred to here as correlates and the causal relationship between variables in a multivariate situation

referred to as predictors together helped better comprehend the role of communication in the development process of the two study areas.

The results of this section of the study were arranged mostly by striking a comparison with authoritative research findings in respect of the role of both normative/non-taboo (viz. cooperative) and disruptive/taboo (viz. family planning) development message flows.

Korzenny and Farace (1978) synthesized twenty-one studies of communication network and behaviour change in developing countries (usually these investigations focused on the village as a system of study). The proposition was that the degree of interpersonal communication was positively related to the degree of behaviour change[6].

Following the lead of Barnes (1954), Bott (1955 and 1957) concluded that network connectedness of her respondents intervened between the independent variables and the dependent variables.[7]

A variety of other diffusion investigations have found network variables, especially individual connectedness, related

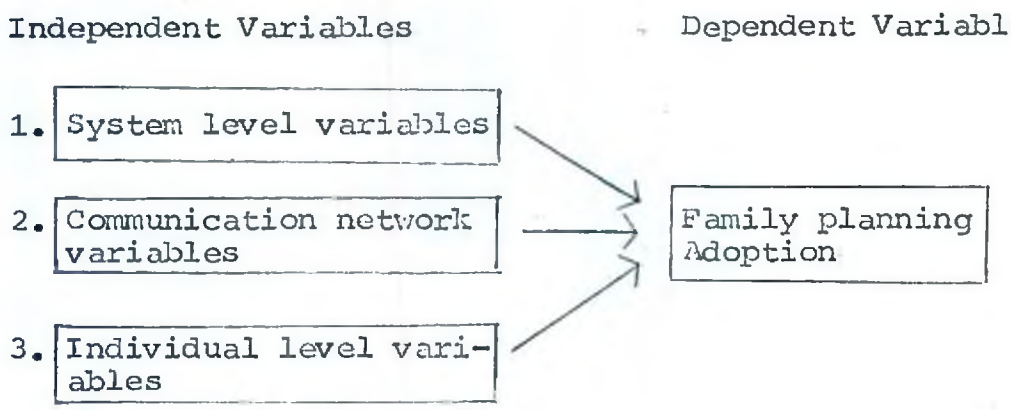
to innovation. Guimaraes (1972) found individual connectedness related to agricultural innovativeness in 20 Brazilian villages.[8]

The generalisation from past diffusion researches that individual connectedness was positively related to innovativeness was qualified somewhat on the basis of the type of innovation (Kincaid 1981):

(a) If innovation was compatible with the norms of the system (a normative innovation like cooperative behaviour) the generalisation held true.

(b) But if the innovation was disruptive of the norms of the system (a distruptive innovation like family planning behaviour), the generalisation might not hold true.[9]

Lee (1977) analysed the data from 1003 women in 24 Korean villages in terms of three types of independent variables related to individual adoption of family planning[10]:



Of the individual level variables related to the adoption of family planning, six had correlation coefficient significantly different from zero. They were :

(a) husband and wife communication about family planning,

(b) husband and wife communication about number of children,

(c) family planning field workers' contact,

(d) number of living sons,

(e) membership in mothers' club, and

(f) family planning knowledge.

These authoritative research findings brought forth a

number of propositions in respect of the role of communication network variables and some individual level variables in effecting a change of the behaviour of development participants. They were :

(a) communication network variables as intervening between independent and dependent variables,

(b) communication network variables directly influencing the normative behaviour change (the generalisation might not hold true in case of disruptive behaviour change), and

(c) some individual level variables having direct bearing on the change of behaviour.

The individual level variables referred to as background and non-network variables in the present study of development settings in Comilla and Savar were subjected to correlational analysis in both bivariate and multivariate situations to see the significant correlates as well as predictors of behaviour change variables. The findings relevant to family planning information flow in Comilla and Savar partially corroborated the results of Lee's study of Korean villages.

In both the study areas of Comilla and Savar the bivariate analysis showed that

i. the media exposure was correlated with family planning awareness,

ii. the husband-and-wife communication about small family size norm was positively correlated with the favourable opinion about family planning, and

iii. the frequent visits of the family planning workers was highly correlated with the advocacy of family planning.

In Savar adoption of family planning was also related with the husband-and-wife communication about small family size norm.

The multivariate analysis also ratified the results of the bivariate analysis for both the areas. The additional predictors of the measures of behaviour change were that

1. the family planning awareness also depended on the physical mobility of development participants in Comilla,

2. the favourable opinion about family planning also depended on the small family size in both the areas,

3. the advocacy of family planning in both the areas was influenced by a high level of education, and

4. the adoption of family planning in Comilla depended on the advocacy of taboo ideas and information.

It could therefore be said that in Comilla a respondent's increasing contacts with the development environment through his/her being physically mobile and the increasing exposure to development messages through mediated communication were helpful in making him/her adequately aware about family planning ideas and information.

As for a favourable opinion formation regarding family planning, the intimate interspouse communication proved to be influential in both the areas. The interspouse communication was within the families of smaller size. This consistency of keeping the family small and a favourable opinion about family planning influenced by intimate interspouse communication seemed logical. Contrasted with this, the families of bigger size

advocating for planned family in both the areas had snapped the assumed sequacity of a favourable opinion to precede advocacy of taboo ideas by the same set of respondents. Two distinct sets of respondents therefore appeared. They were the families of smaller size and of bigger size.

The former set was operating in a psychological domain of opinion formation while the latter in the sociological domain of advocating the concept to others in the system. As advocacy of taboo ideas warranted a sort of enterprising step, it came from those who went through the bitter experience of a bigger family and those who were high in educational status.

The frequency of visits of the family planning workers to the respondents in Savar was also instrumental in the increased advocacy of family planning. Adoption in this area depended on the convergence of ideas between husband and wife and on the respondents' high occupational status. In Comilla adoption of family planning had no predictors from among the background and non-network variables.

The analytical framework assumed some influence of the communication networks on the change of family planning behavi-

our. The multivariate analysis showed no significant role of network variables on the change of behaviour at the levels of awareness and opinion in both the areas, though in a bi-variate analysis there existed a chance relation of personal communication network with awareness in Comilla and with opinion in Savar.

In both the analyses, advocacy of taboo matters in Comilla was found to be the result of a person's communication network. In Savar only a bivariate relation existed between these two variables. The social network in Comilla was found to have an adverse influence on the advocacy of family planning. This was indicative of a fear complex on the part of the social leaders to go for advocacy of taboo matters at the risk of loosing their leadership in the area. This very phenomenon again allowed the emergence of a new set of leadership for the institutional network on family planning. It virtually had given rise to two tracks of leadership pattern - one normative of existing values and the other disruptive of norms.

From the predictors of the three measures of awareness, opinion and advocacy of family planning in the two areas certain salient features came to the fore.

(a) If the social network remained normative of traditional values it would allow a separate communication structure to grow with newer leadership to take over responsibilities disruptive of norms (taboo communication).

(b) If the social leadership was accommodative to disruptive responsibilities, the same set of leaders would duplicate their role positions for both social and taboo matters.

(c) Irrespective of the social network being normative or accommodative to disruptive norms two sets of respondents emerged for the change of disruptive behaviour, one set operative at the psychological level of opinion formation about family planning and the other set at the social level of advocating taboo matters to the members of the system.

Adoption in Comilla had no predictors from both independent and network variables, but adoption in Savar depended on the convergence of ideas between husband and wife. In Comilla the advocates were the adoptors of family planning.

The cooperative innovativeness being compatible with the norms of the system, it was expected that there existed a significant role of both medicated and interpersonal communication in the change of behaviour.

Media exposure was found to be correlated with most of the four measures of behaviour change in both the study areas. The additional correlate in Comilla was physical mobility.

The interpersonal communication network in respect of cooperative ideas (INC) maintained a bivariate correlationship with awareness, opinion, advocacy and adoption of the innovation in both the areas. In Comilla the additional correlates of the cooperative network were age and physical mobility of the respondents while in Savar they were media exposure and education. This meant that the development participants with high communication connectedness pertaining to cooperative ideas were the aged but mobile in Comilla and were those that ranked high in education and exposed to media in the study area of Savar.

These relationships partially survived in a multi-variate situation. The precision of predictions that came out showed that the awareness about cooperative pursuit in the study area

of Comilla was due to one's exposure to the mediated communication and one's physical mobility between the locality and the programme centre. In Savar, neither the mediated communication nor the physical mobility could play any significant role in the creation of cooperative awareness. The awareness in this case depended on the interpersonal communication networks of cooperative ideas.

The formation of favourable opinion depended on the adequate awareness of the respondents in both the areas. In Comilla, the respondents within high age brackets held favourable opinion about cooperative pursuit and those with a high level of education took up the task of advocating the same to others. In both the areas the advocacy of cooperative ideas depended on the respondent's high communication connectedness. In Comilla, the communication connectedness was higher with those that were exposed to the media and those with high occupational status. In Savar, the cooperative communication connectedness (INC) of a person was instrumental in the adoption of cooperative innovation. Adoption here also depended on media exposure.

On the face of it, the influence of the institutional cooperative network (INC) had been on awareness, advocacy and

adoption in Savar and only on advocacy in Comilla. But the logical sequence that flowed from awareness to opinion formation, from opinion to advocacy and from advocacy to adoption in Comilla could not be found in Savar except for the opinion formation which depended on the creation of awareness. The sequential flow among the four measures of behaviour change could be ascribed to the influence of both psychological mobility through media and physical mobility of a respondent to the programme centre on the creation of adequate awareness and the intervening influence of the institutional network (INC) on the increased advocacy of cooperative ideas. The thrust of media and mobility on the creation of awareness provided the initial phillip to organise opinion which induced advocacy. The added impetus of the institutional network (INC) on the advocacy made it work farther towards taking it to the level of adoption. In Savar, the institutional cooperative network had direct influence on awareness, advocacy and adoption and the measures of behaviour change were yet to be related to one another into a logical sequence of influence as was the case in Comilla.

NOTES TO CHAPTER IX

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3. J.S. Parsons, quoted in E.M. Rogers and L.D. Kincaid, Communication Networks : Toward a New Paradigm for Research (New York, Free Press, 1981), p.133.

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5. D.K. Bhowmik, quoted in Rogers and Kincaid, Ibid, p.133.

6. F. Korzenny and R.V. Farace, quoted in Rogers and Kincaid, Ibid, p.90.

7. E. Bott, quoted in Rogers and Kincaid, Ibid, p.95.

8. L.L. Guimaraes, quoted in Rogers and Kincaid, Ibid, p.228.

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CHAPTER X
CONCLUSION AND SIMULATION OF A MODEL FOR COMMUNICATION

Two divergent scenarios could be seen in the study areas of Comilla and Savar partaining to :

(a) the pattern of communication convergence of development ideas, both normative and disruptive,

(b) the intervening influence of the communication networks on behaviour change, and

(c) the consistency of a sequential nature of causality from mediated and interpersonal communication to adequate change of behaviour of development participants.

In Comilla, the findings were that there were

1. a high convergence of both normative and disruptive information and ideas with a supportive role by a formal local structure,

2. the growth of two tracks of leadership - one for

normative and the other for disruptive innovation, and the consequent low correlationship or low leadership overlap between networks, and

3. the existence of a predictable sequacity of causality between the mediated and interpersonal communication and the change of behaviour of development participants.

The sequacity of causality in Comilla ran as under :

i. A person's media exposure and his/her physical mobility raised the level of awareness which influenced the formation of a favourable opinion about both normative and disruptive innovation.

ii. The institutional networks (both normative and disruptive) intervened to influence advocacy and to elevate a person's degree of behaviour change from advocacy to the level of adoption.

iii. The formation of opinion influenced the advocacy in case of normative innovation but these two measures of behaviour change operated as separate entities in the case of disruptive innovation.

In Savar, the findings were that there were

1. a low convergence of both normative and disruptive innovation in the absence of any formal local structure,

2. the duplication of leadership for all the networks and the consequent high correlationship between the networks, and

3. the absence of a definite sequacity of causality between the flow of communication and the change of behaviour of development participants.

The only predictable sequacity of causality in Savar was that for both normative and disruptive behaviour change opinion depended on awareness.

There were some similarities in the influence of the independent variables on the change of disruptive behaviour in the two areas.

(a) Interspouse communication and small family size had an influence on the formation of a favourable opinion about family planning.

(b) A higher level of education and a bigger size of family were instrumental in the advocacy of family planning.

In Savar, opinion and advocacy of disruptive innovation also operated as separate entities as in Comilla. As for normative behaviour change in Savar, communication connectedness (INC) had a direct bearing on awareness, advocacy and adoption. Though there was a causality between awareness and opinion in both normative and disruptive behaviour change, yet opinion, advocacy and adoption could not be linked into any sequential order of cause and effect relationship in Savar as was indicated in the analytical framework.

Simulation of a Communication Model for Development:

Based on the realities in the two study areas pertaining to the nature and intensity of the flow of development messages and the role of communication networks in the shaping of behaviour of development participants, a model for effective communication was simulated.

The model tried to provide a sequence of communication events that hoped to ensure an effective convergence of development ideas as well as a consistency in the formation of networks and the impact of networks on behaviour change.

The model attempted to strike a balance between the experiences of the two approaches. Comilla depicted a situation where a high convergence of development information and ideas went with a low consistency of internetwork and intervariable (between network and behaviour change) relationship. In contrast, Savar could not weave any high convergence of development information and ideas as was manifest through lower network integration scores. But the internetwork and intervariable relationships were consistently high in that area.

If the positive experiences of the two rural development approaches were considered for the making of a communication model for development, the expected combination of situations would then be

(a) a high communication convergence of development innovation,

(b) a high inter-network relationship, and

(c) a predictive sequacity of causality between communication and behaviour change.

The basic difference between the models operative in the two areas lay in the absence or the presence of a formalised structure at the local level which hindered or helped in the generation of the convergence of communication for development. The expected consistency of internetwork and intervariable relations could be attributed to the nature and extent of the reach of the programme centres with the end-users of the development messages. Thus the model that should strive for a high convergence with a high consistency demanded a mix of tutored communication of messages by some sort of formalised local structure and spontaneous flow of development information and ideas generated through the creation of 'felt need' among the people by doses of direct unstructured stimuli from the programme centres.

This package of ideal situations together might be attainable in phases and hence the simulation of a communication model for development process stipulated a modest beginning in two temporal stretches. The short-run phase could be a starter while the long-run phase should be an interactive process to bring together both high convergence of development messages and high consistency in network formation and its influence on behaviour change in a predictable sequacity.

The model suggested that an initial information feed-in from the centre to the clientele would help create an appraisal of the needs of the locality and when these felt-needs found articulation by some amount of convergence of the locals, the programme centre could begin its long run activities. The activities include the creation of a formal structure at the local level to take up the role of both the initiator and the collator of development messages to address the problems.

The model however would concentrate on the creation of mobile personalities who would not only accept change but would advocate the same to others. Once the advocates could be created, the adoption of innovation was expected to follow.

The consistency among the four measures of behaviour

change that the model suggested meant that the awareness of development ideas would lead to the formation of a favourable opinion. The opinion leaders would then infuse mobility in the form of advocacy of innovations which would lead to the set goal of adoption.

In the light of the findings of this study, the model gave a crucial role of mediated communication to the creation of awareness but when it was the question of linking the four measures of behaviour change into a consistent and logical sequence, the model gave credence to the role of interpersonal communication (network) among development participants.

The efficacy of the model lay in the programme components to be highly and equally integrated to liquidate any barrier between taboo/disruptive (e.g. family planning) and non-taboo/normative (e.g. cooperative) communication.

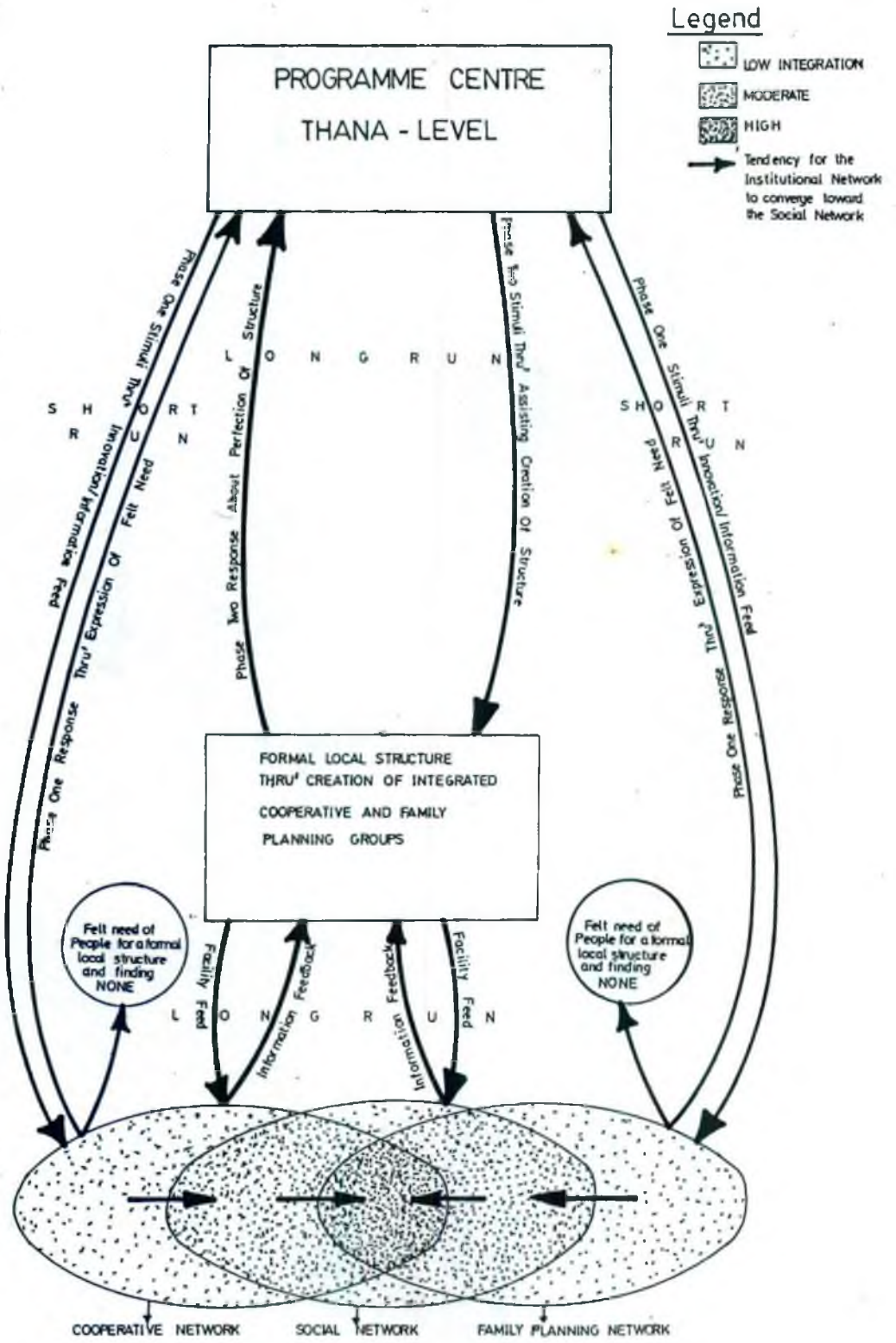

Figure 13 : Simulation of a Model for Communication

The phases of the model could be described as under:

1. The first phase included an initial stimuli from the innovators at the programme centres to the end-users of messages for creating 'felt need' among them and assessment of their feedback about ways and means to organise or formalise the convergence of development information and ideas. This would be a short run phase where both interpersonal and mediated forms of communication could be exploited.

2. The second phase which would be a long run endeavour would include concretisation of 'felt need' in terms of a judicious combination of information and facility funneling by the programme centres through the creation of a formalised structure at the local level to bring about

i) a communication convergence with high integration within each network, and

ii) a high consistency in the relationship between the institutional and general networks and between the independent, intervening and dependent variables.

This communication model of convergence and consistency which was a hybrid of the positive situations in the two approaches of Comilla and Savar warranted an application in any innovative development setting whence it should be the endeavour of future researchers to see the efficacy or otherwise of the proposed model.

APPENDIX - 1

QUESTIONNAIRE

SECTION A

1. Name of the respondent :

2. Marital status :

3. Religion :

4. Size of family : ..... persons.
(Dining together)

Name	Age	Occupation		Sex	Education	Relation with the head of the family
		Primary	Secondary			
i.						
ii.						
iii.						
iv.						
v.						
vi.						
vii.						
viii.						
ix.						
x.						
xi.						
xii.						
xiii.						
xiv.						
xv.					Joint	Unitary

5. Have you lost any children ? Yes No

6. Number of children died : .....

7. Cause of death :

8. Your land holdings:

Nature of land	Own	Mortgage		Lease		Total
		In	Out	In	Out	
i. Arable						
ii. Not arable						

9. Your family income :

Income from agriculture			Cost of production						Net Income
Crop	Quantity	Price	Irrigation	Fertilizer	Plough	Labour	Other expenses	Total	
i. Aus									
ii. Aman									
iii. Boro									
iv. Cash crop									
Business									
Service									

10. Your monthly expenditure : .....

11. Valuable things bought/sold last year :

i. Land _____
ii. Gold _____
iii. Radio/TV _____
iv. Bi/Tricycle _____
v. Others _____

12. Your economic status (according to you):

Rich Solvent Near solvent Poor

13. To interviewer's opinion, the status should be :

Rich Solvent Near solvent Poor

SECTION B

14. What do you think the problems of you, your village and the country are ? (Serialise the problems in order of gravity).

Personal	Of your village	Of the country
i.		
ii.		
iii.		
iv.		
v.		

15. How do you think these problems can be solved ?

Personal	Of your village	Of the country
i. Cooperative persuit	i.	i.
ii. Family planning	ii.	ii.
iii. Creation of job opportunity	iii.	iii.
iv. Education	iv.	iv.
v.	v.	v. .....

16. Do you find any activities in the locality in line with your suggestions ?

Yes No
(If No, please proceed on with Q.19)

17. If Yes, what are they ?

18. Do you think these activities would help your locality ?

Yes No

19. What are the endemic diseases in your locality ?

i.
ii.
iii.

20. What do you think the preventive measures should be ?

Good food

Preventive vaccines

Cleanliness drive

Drinking of boiled water

21. Whom do you repose your confidence in for treatment ?

_____ Ayurved

_____ Homeopath

_____ Religious healers

_____ Health workers

_____ Certified doctors

_____ Hospital (Private/Public)

_____ .....

22. Do you consider more children to be a problem ?

Yes No
(If No, please proceed on with Q. 25).

23. If Yes, why do you think so ?

It increases both needs and sufferings

It increases pressures on land

Proper schooling of the children becomes difficult

It increases demands on job opportunities

24. Where did you gather this concept of family planning from ?

_____ Health worker _____ Cooperators

_____ Radio/TV _____ Meetings

_____ Newspaper _____ Friends

_____ Union parishad members

_____ Local leaders

_____ .....

_____ .....

25. If you do not consider more children to be a problem, why so ?

_____ Children are God-sent

_____ Number is strength

_____ Children are a security

_____ More property can accommodate more children

_____ .....

26. What are the problems of farming in your locality ?

27. What alternative should be adopted to improve agricultural yield ?

_____ Individual farming

_____ Cooperative farming

_____ Traditional irrigation

_____ Modern irrigation

_____ Use of local variety

_____ Use of high yielding variety

_____ Local manure

_____ Chemical fertilizer

_____ Traditional method of farming

_____ Mechanised farming

28. Where did you get these ideas about farming from ?

_____ Cooperators

_____ Health workers

_____ Newspapers

_____ Meetings

_____ Radio/TV

_____ Friends

_____ Union parishad members

_____ Local leaders

_____ .....

29. How do you explain cooperative as a concept ?

30. Do you believe that cooperative can help improve your lot ?

Yes No

31. Name the sources of your ideas about cooperative :

_____ Cooperator
_____ Newspapers
_____ Radio/TV
_____ Union parishad members
_____ .....
_____ Health workers.
_____ Meeting
_____ Friends
_____ Local leaders

SECTION C

32. Frequency of meetings in your locality :

Regular Occasionally Never

(If Never, please proceed on with Q.37)

33. Do you attend these meetings ?

Regularly Occasionally Never

(If Never, please proceed on with Q.37)

34. Do you consider such participation beneficial ?

Yes No

(If No, please proceed on with Q.36)

35. Can you cite an example of how did such participation help you ?

36. What are the subjects of discussion in such meetings ?

i. Health/family planning
ii. Agriculture
iii. Cooperative
iv. Education
v. Entertainment
vi. .....

37. Do you go to see/enjoy the theatre, jatra or kabigaan ?

Yes No
(If No, please proceed on with Q.40)

38. What are the topics those folk media cover ?

i. Health/family planning
ii. Agriculture
iii. Cooperative
iv. Education
v. Entertainment
vi. .....

39. How is such exposure helpful ?

i. Can gather agricultural information
ii. Learn about family planning
iii. Can better take care of health
iv. Take it for a source of entertainment
v. Do not find it beneficial anyway
vi. .....

40. Do you listen to the radio programmes ?

Yes No
(If No, please proceed on with Q.46)

41. Where do you listen to the radio ?

_____ Own house
_____ Friend's house
_____ Relation's house
_____ Local leader's house
_____ Shop/Marketplace
_____ Club
_____ Union parishad
_____ .....

42. Frequency of listening :

Everyday Weekly/biweekly Occasionally

43. When do you listen to the radio most ?

_____ Morning	_____ Evening
_____ Noon	_____ Night
_____ Afternoon	_____ .....

44. Which programme do you listen to most ?

i. Health and family planning
ii. Agriculture and development through cooperative
iii. Drama/jatra
iv. Music
v. Education
vi. News
vii. Religious affairs
viii. .....

45. Do you benefit from listening to radio programme ?

i. Learn about agriculture development
ii. Learn about family planning
iii. Can take good care of health
iv. Take it for a source of entertainment
v. Do not find it helpful anyway
vi. .....

46. Do you view television ? Yes No
(If No, please proceed on with Q.51)

47. Where do you view television ?

_____ Own house	_____ Shop/Marketplace
_____ Friend's house	_____ Club
_____ Relation's house	_____ Union parishad
_____ Local leader's house	_____ .....

48.(a) How long a day ? ..... Hour/s

(b) Frequency of viewing :

Everyday	Weekly/biweekly	Occasionally

49. From the television do you get relevant information/advice for use for the solution of your problems ?

Yes No
(If No, please proceed on with Q.51)

50. Name the programmes you get the desired information from ?

i. .....
ii. .....
iii. .....

51. Do you read newspaper ? Yes No
(If No, please proceed on with Q.54)

52. What items do you read ?

i. .....
ii. .....
iii. .....

53. Do these items carry solutions to your problems ?

Yes No

54. If you cannot read newspapers, do you take help of others to read them for you ?

Yes No
(If no, please proceed on with Q.56)

55. Whom do you take help from ? Name them.

i. .....
ii. .....
iii. .....

SECTION D

56. Whom do you take advice from most when you are in a social problem ? Name three.

i.

ii.

iii.

57. Whom do you take advice from most when you are in an economic/financial problem ? Name three.

i.

ii.

iii.

58. Name three local leaders. Why do you consider them to be the leaders of the locality ?

	Name	Reason
i.		
ii.		
iii.		

59. Do you go to them ?

Yes No

(If No, please proceed on with Q.61)

60. Why do you go to them usually ?

	Ist referral	2nd referral	3rd referral
i. For arbitration	_____	_____	_____
ii. For help in bad times	_____	_____	_____
iii. For advice only	_____	_____	_____
iv. For employment	_____	_____	_____
v.	_____	_____	_____

61. If you do not go, why ?

	Ist referral	2nd referral	3rd referral
i. To avoid disputes	_____	_____	_____
ii. Do not feel it necessary	_____	_____	_____
iii.	_____	_____	_____

62. Of the persons you have named so far, who are the ones that come to you and for what purpose ?

	Name	Purpose
i.		
ii.		
iii.		

63. Besides the names mentioned, who else do come to you for advice ?

	Name	Reason
i.		
ii.		
iii.		

64. Name a person who is not well-off but quite knowledgeable about agriculture/cooperative/family planning/health/social problems.

SECTION E

65. What programmes of the BARD/TTDC and GK/Medical are introduced in your village ?

i.

ii.

iii.

iv.

v.

66. How do you like the programmes ?

Good Fair Not good Skeptical

67. How do you keep contact with the programme centres (Abhoy Asram/TTDC in Comilla and Gana Shasthya Kendra/ GK in Savar) ?

Directly _____ Through workers _____ Through local leaders _____ Do not keep contact _____

68. What is the frequency of your contract ? (If no, please proceed on with Q.74)

Daily Weekly Monthly

69. Do you contact the programme personnel yourself or do they come to you of their own ?

I go myself They come Both I go and theycome

70. What sort of assistance do you receive from the programme centres ?

_____ Regarding health

_____ Agricultural cooperative

_____ Education

_____ Family planning

_____ Women's organisation

71. Do you accept their assistance ? Yes No (If No, please proceed on with Q.73)

72. Why do you accept ?

_____ It is cheaper

_____ In the hope of getting other facilities

_____ There is no way out

_____ We deem it necessary

_____ .....

73. Why do you refuse to accept any programme assistance ?

_____ I am suspicious of their activities

_____ The programme personnel are not well-behaved

_____ I do not like their prescriptions

_____ I am stopped by influentials

_____ .....

74. Are you a member of the cooperative ?

Yes I was No
(If No, please proceed on with Q.76)

If you, are or were, for how long ? Years .....
Months .....

75. Why are you a member ?

_____ In the hope of getting loan

_____ In the hope of receiving improved farming facilities

_____ In the hope of freeing us from exploitation of the landlords

_____ As I like the cooperative programme

_____ .....

76. Why are you not a member ? Or why have you discontinued ?

_____ I cannot repose confidence in what they say

_____ I do not want to be involved in any problem

_____ I am not in need

_____ .....

77. Are you on the cooperative committee ?

Yes | Once I was | No (If No, please proceed on with Q.79)

78. In what capacity ? Now or then ?

79. If you are or were not on the committee, how do you intend to be involved in future ?

80. What benefit have you derived from cooperative ?

_____ Received loans

_____ Received irrigation facilities

_____ Received seeds and fertilizer

_____ Received mechanised farming facilities

_____ Could improve my economic condition

_____ .....

81. Have you taken loan this year ? If so, for what purpose ?

	Yes			No	
	Cultivation	Cottage industries	Social festivals	Others	Total
Amount					
Rate of Interest					
Amount of loans due					
Loans repaid					

82. i. Could you repay the loans taken ?

Yes No

ii. If No, why ?

iii. Do other members of the cooperative exert pressures on you to repay loans ?

Yes No

83. i. Do you have irrigation facilities ?

Yes No

ii. If Yes, what type of facilities do you have ?

Mechanised Traditional

iii. Why are mechanised irrigation facilities not available ?

iv. If available, who did provide you the facilities ?

84. i. What are the advantages and disadvantages of modern irrigation facilities ?

ii. Do you receive these facilities as and when required ?

Yes No

85. i. Do you use improved seeds and fertilizer ?

Yes No

ii. If No, why ?

iii. If Yes, who advised you to do that ?

86. i. What are the merits and demerits of using improved seeds and fertilizer ?

ii. What types of seeds do you use most ?

iii. What is the yield per acre ?

87. i. Do you use tractor ? Yes No

ii. If No, why ?

iii. If Yes, who does provide you these facilities ?

iv. Do you get these facilities as and when needed ?

Yes No

88. Do you participate in the cooperative meeting ?

Yes No

(If No, please proceed on with Q.97)

89. The frequency of your participation :

Weekly Monthly Occasionally

90. How are the decisions taken in your meetings ?

_____ Authoritative decisions

_____ Oligopolistic decisions

_____ Collective decisions

91. Do you participate in the discussion ?

Yes No

(If Yes, please proceed on with Q.93)

92. If No, why ?

_____ Do not get a chance

_____ Do not understand what they discuss

_____ My participation matters little

93. Could you make your points accepted ?

Yes No

94. Have you anything important which you could not carry through ?

Yes No

95. If Yes, cite an example.

96. If No, can you say, why could you not carry your points through ?

97. How do you see your cooperative leader ?

_____ He is desirous of doing good

_____ He is capable of doing good

_____ He lacks in such qualities

_____ .....

98. For how long is he the leader ? ..... Year/s

99. Do you think there is any other better person to take up leadership in your village ?

Yes No

100. If Yes, why is he not chosen a leader ?

101. What is the prospect of your cooperative ?

Good Bad Static

102. Do the health and family planning workers from the programme centres come regularly ?

Everyday Weekly Fortnightly Monthly Irregular

103. Do the centres have the local health and family planning workers ?

Yes No
(If No, please proceed on with Q.106)

104. If Yes, frequency of their visits :

Daily Weekly Fortnightly Monthly Irregular

105. If they visit, what advice do they give ?

_____ Late marriage

_____ Use of contraceptives

_____ Maternity and child health care

_____ .....

106. Have you adopted yourself any family planning device ?

Yes No
(If No, please proceed on with Q.113)

107. If Yes, which device ?

Temporary	Permanent
i. Pill	
ii. Condom	i. Ligation
iii. Foam tablet	ii. Vasectomy
iv. Jelly	
v. Injection	
vi. M.R.	
vii. Herbal	

108. Have you discontinued family planning practice ? Or do you contemplate doing that ?

Yes No
(If No, please proceed on with Q.110)

109. If Yes, why ?

_____ The devices are not effective

_____ The devices pose health hazards

_____ The health and family planning workers do not visit regularly

_____ There is a fear of erosion of social image

110. Does your spouse object to your adoption of family planning ?

Yes No

111. If Yes, do you try to persuade your marital partner ?

Yes No

112. If No, why do not you do that ?

113. What in your opinion should be the ideal number of children in a planned family ?

1 2 3 4 5

114. Does your marital partner hold the same opinion ?

Yes No

115. If No, how divergent is the opinion about the ideal size ?

1 2 3 4 5

116. How did you decide to be a member of cooperative and family planning movement ?

	Cooperative	Family flanning
Voluntary adoption	_____	_____
Authoritative adoption	_____	_____
Contingent adoption	_____	_____
Collective adoption	_____	_____

117. State your impressions about BARD/TTDC and GK/Medical workers :

	BARD/TTDC	GK/Medical
Efficient	_____	_____
Shirker	_____	_____
Tolerant	_____	_____
Corrupt	_____	_____
.....	_____	_____

118. Name three persons who are knowledgeable about cooperative and family planning :

Cooperative

Name	Occupation	Relationship	You visit	You are visited
i.				
ii.				
iii.				

Family flanning

Name	Occupation	Relationship	You visit	You are visited
i.				
ii.				
iii.				

119. Whom did you influence to be the members of the cooperative ? Name three.

Name	Occupation	Relationship
i.		
ii.		
iii.		

120. Who was instrumental in influencing you to be a cooperator ?

Name	Occupation	Relationship

121. Is he or she a cooperator ? Yes No

122. How many did you persuade to adopt family planning ?

..... persons

123. Name three of them :

Name	Occupation	Relationship
i.		
ii.		
iii.		

124. Who was instrumental in persuading you to adopt family planning ?

Name	Occupation	Relationship

125. Name three persons ignorant about cooperative and family planning who visit you for advice.

Cooperative

Name	Occupation	Relationship
i.		
ii.		
iii.		

Family planning

Name	Occupation	Relationship
i.		
ii.		
iii.		

126. When you are in a problem, do you visit any one of the adjacent village for advice ?

Yes No

127. Whom do you visit ? Name three.

Name	Village	Occupation	Relationship	Nature of problem
i.				
ii.				
iii.				

128. Does anyone visit you? Name three.

Name	Village	Occupation	Relationship	Nature of problem
i.				
ii.				
iii.				

129. Do you visit the nearby town ?

Name of town	Purpose	Frequency

130. Time taken in interviewing : ..... hour/s

131. Overall impression of the respondent by the interviewer.

Signature of the interviewer.

Date _____

ORIGINAL BENGALI QUESTIONNAIRE

এক

ক বিভাগ।

১। উত্তরদাতার নাম মকবুল আহমেদ মণ্ডল।

২। বৈবাহিক অবস্থা [বিবাহিত ✓] [অবিবাহিত]

৩। ধর্ম [মুসলিম ✓] [হিন্দু] [বৌদ্ধ] [খৃষ্টান]

৪। পরিবারের সদস্য সংখ্যা 8 জন
(এক সংগে খাওয়া দাওয়া করে)

	নাম	বয়স	পেশা: প্রধান	পেশা: অপ্রধান	লিংগ (পু / স্ত্রী)	শিক্ষাগত যোগ্যতা	পরিবার প্রধানের সাথে সম্পর্ক।
১।	—	৫৫	চাকুরী		পু	[illegible]	প্রধান
২।	আজিমন খাতুন	৩৫	গৃহিনী		স্ত্রী	—	স্ত্রী
৩।	মিজান	১০	ছাত্র		পু	[illegible]	ছেলে
৪।	রহিমা	১২	—		স্ত্রী	[illegible]	মেয়ে
৫।							
৬।							
৭।							
৮।							
৯।							
১০।							
১১।							
১২।							
১৩।							
১৪।							
১৫।							

*(দুই মেয়ে তিন [illegible])
* এক [illegible]

[যৌথ] [একক]

৫। আপনার কোন ছেলেমেয়ে মারা গেছে কি? [হ্যাঁ ✓] [না]

৬। কয়জন মারা গেছে ? 2 জন।

৭। কি হয়েছিল তাদের ? [illegible] / [illegible]।

৮। আপনার কতটুকু জমি আছে ?

জমির প্রকৃতি	ক নিজের	খ বন্ধকী নেয়া	গ বন্ধকী দেয়া	ঘ বর্গা নেয়া	ঙ বর্গা দেয়া	মোট
আবাদী						
অনাবাদী						

[illegible] ২½ [illegible]

দুই

৯। আপনার পরিবারের মোট বার্ষিক আয় ?

কৃষিখাত থেকে আয়			উৎপাদন ব্যয়					নীট আয়
উৎপাদিত শস্য	পরিমান	মূল্য	বেচ	মাশু	হাল	শ্রম	অন্যান্য	মোট	
ক। আউষ খ। আমন গ। বোরো	ইরি								
ঘ। রবিশস্য									
ব্যবসা	৫০০×১২								৬০০০
চাকুরী	৬০০×১২								৭২০০

১০। আপনার মাসিক খরচ কত ? ১১০০-১২০০ টাকা।

১১। গত বছরে আপনি কি কি মূল্যবান সামগ্রী কেনা/বেচা করেছেন ?

সামগ্রীর নাম	ক্রয় পরিমান	মূল্য	বিক্রয় পরিমান	মূল্য
জমি				
স্বর্ণ				
রেডিও				
সাইকেল				
অন্যান্য				

১২। অর্থনৈতিক মর্যাদার বিবেচনায় আপনি নিজেকে কোন শ্রেণীভুক্ত মনে করেন ?

ধনী | মচ্ছল | মোটামুটি মচ্ছল | গরিব

১৩। সাধারণভাবে গ্রামে ধনী | মচ্ছল | মোটামুটি মচ্ছল | গরিব

খ বিভাগ।

১৪। আপনার মতে নিম্নের গ্রামের এবং দেশের মূল সমস্যাগুলি কি কি ?
(গুরুত্বানুসারে সাজাতে হবে)

	ব্যক্তিগত	গ্রামের	দেশের
১।			
২।			
৩।			
৪।			
৫।			

১৫। কিভাবে এই সমস্যাগুলোর সমাধান হবে বলে আপনি মনে করেন ?

ব্যক্তিগত	গ্রামীন	দেশের
ক। মধবায়	ক। ✓	ক। ✓
খ। পরিবার পরিকল্পনা	খ।	খ।
গ। কুসংস্কার	গ। ✓	গ। ✓
ঘ। শিক্ষা	ঘ। ✓	ঘ। ✓
ঙ। ___________	ঙ। ___________	ঙ। ___________

১৬। আপনি যে সমাধানগুলোর কথা বললেন, সেভাবে কোন কাজকর্ম আপনার গ্রামে চলছে কি ?

[✓ হ্যাঁ] [না]

১৭। (উত্তর হাঁ হলে) কি কি কাজকর্ম চলছে ?

১৮। এইসব কাজকর্মে গ্রামের উন্নতি হবে কি ? [✓ হাঁ] [না]

১৯। আপনাদের এখানে কি কি অসুখ বিসুখ হয় ?

১। ___________

২। ___________

৩। ___________

২০। কি কি করলে অসুখ বিসুখ হবেনা বলে আপনার মনে হয় ?

ভাল খাওয়াদাওয়া করলে

টীকা-ইনজেকশন নিলে

✓ পরিবেশ পরিস্কার পরিচ্ছন্ন রাখলে

পানি ফুটিয়ে খেলে

২১। অসুখ বিসুখের চিকিৎসার জন্য আপনার কার উপর আস্থা বেশী ?

[ ] বৈদ্য/কবিরাজ

[ ] গ্রামের হোমিওপ্যাথ ডাক্তার

[ ] পীর-ফকির

[ ] স্বাস্থ্যকর্মী

[✓] পাশ করা ডাক্তার

[ ] হাসপাতাল (গণস্বাস্থ্য/সরকারী)

[ ] ___________________________

২২। আপনি কি বেশী ছেলেমেয়েকে সমস্যা মনে করেন ?

[হাঁ] [না]

(না হলে ২৪ নং প্রশ্নে চলে যান)

২৩। কেন সমস্যা মনে করেন ?

অভাব অনটন বাড়ে।
জমির উপর চাপ বাড়ে।
ছেলেমেয়েদের লেখাপড়া করাতে কষ্ট হয়।
[illegible]

২৪। স্বাস্থ্য ও পরিবার পরিকল্পনা সম্পর্কে এগুলোর আপনার কেমন করে জানালো ?

[ ] স্বাস্থ্যকর্মী [ ] সমবায় কর্মী
[ ] রেডিও/টিভি [ ] সভাসমিতি
[ ] পত্রপত্রিকা [ ] বন্ধু বান্ধব
[ ] ইউ, পি, সদস্য [ ] গ্রামের মাতব্বর
[ ] [illegible]

২৫। কেন সমস্যা মনে করেন না ?

[ ] ছেলেমেয়ে আল্লাহর দিয়াতে
[ ] সংখ্যাই শক্তি
[ ] ভবিষ্যতের নিরাপত্তা
[ ] আমার অনেক সম্পত্তি আছে
[ ] _____

২৬। আপনাদের এলাকায় চাষাবাদের সমস্যা কি কি ?

২৭। তুমি উৎপাদন বাড়ানোর জন্য কি করা উচিত বলে আপনার ধারণা ?

[ ] ব্যক্তিগত খামার [ ] সমবায় চাষ
[ ] পুরানো সেচ ব্যবস্থা [ ] আধুনিক সেচ ব্যবস্থা
[ ] দেশী বীজ [ ] উন্নত বীজ
[ ] দেশী সার [ ] রাসায়নিক সার
[ ] হাল বলদ [ ] ট্রাক্টর

২৮। কৃষি উৎপাদন সংক্রান্ত ধারণাগুলো কেমন করে পেলেন ?

- [ ] সমবায় কর্মী
- [ ] স্বাস্থ্যকর্মী
- [ ] পত্রপত্রিকা
- [ ] সভাসমিতি
- [ ] রেডিও/টিভি
- [ ] বন্ধু বান্ধব
- [ ] ইউ,পি সদস্য
- [ ] মাতব্বর
- [x] BIRD

২৯। সমবায় বলতে আপনি কি বোঝেন ? [illegible]

৩০। আপনি কি বিশ্বাস করেন সমবায়ের মাধ্যমে আপনার ভাগ্য উন্নয়ন সম্ভব ?

- [x] হ্যাঁ
- [ ] না

৩১। সমবায় সংক্রান্ত এ ধারণা কেমন করে জন্মালো ?

- [ ] সমবায় কর্মী
- [ ] স্বাস্থ্যকর্মী
- [ ] পত্রপত্রিকা
- [ ] সভাসমিতি
- [ ] রেডিও/টি ভি
- [ ] বন্ধু বান্ধব
- [ ] ইউ,পি,সদস্য
- [ ] মাতব্বর
- [x] BARD

গ বিভাগ।

৩২। আপনার গ্রামে কোন সভাসমিতি হয় কি ?

- [x] নিয়মিত
- [ ] মাঝেমধ্যে
- [ ] কখনোই না

৩৩। আপনি কি সেগুলিতে যোগ দেন ?

- [ ] নিয়মিত
- [x] মাঝেমধ্যে
- [ ] কখনোই না

৩৪। সভা-সমিতিতে যোগদিয়ে আপনি কি উপকৃত হয়েছেন ?

- [x] হ্যাঁ
- [ ] না

৩৫। উপকৃত হবার একটি উদাহরণ দিতে পারেন কি ? [illegible]

৩৬। আপনার গ্রামে কি বিষয়ে সভাসমিতি হয়ে থাকে ?

(ক) স্বাস্থ্য/জনসংখ্যা (খ) সমবায়

(গ) কৃষি (ঘ) শিক্ষা

(ঙ) চিত্ত বিনোদন (চ) ____________

৩৭। আপনি কি নাটক/যাত্রা/কবিগান শোনেন ? [ ] হাঁ [✓] না

৩৮। কি কি বিষয়ে এগুলো হয়ে থাকে

[ক] [খ] [গ] [ঘ] [ঙ] [চ]

৩৯। সেগুলি শুনে আপনার কি কোন লাভ হয় ?

(ক) কৃষি উন্নয়নের জ্ঞান লাভ করি ।
(খ) পরিবার পরিকল্পনার বিষয় জানতে পারি ।
(গ) স্বাস্থ্য বিষয়ে যত্নবান হই ।
(ঘ) শুধু বিনোদন হয় ।
(ঙ) কোন লাভই হয় না ।
(চ) _____

৪০। রেডিও শোনেন কি ? [✓] হাঁ [ ] না

৪১। কোথায় রেডিও শোনেন ?

[ ] নিজ বাড়ী [ ] বাজার/দোকান
[ ] বন্ধু বাড়ী [ ] ক্লাব
[✓] পাড়ার বাড়ী [ ] ইউনিয়ন পরিষদ
[ ] মাতবর বাড়ী [ ] _____(অন্যান্য)

৪২। প্রতিদিন শোনেন ? [✓] হাঁ সপ্তাহে দু/একবার মাঝে মাঝে

৪৩। কখন বেশী শোনেন ?

সকাল দুপুর [✓] বিকাল সন্ধ্যা রাত [ ]

৪৪। কোন্ ধরনের অনুষ্ঠান বেশী শোনেন ?

(ক) স্বাস্থ্য/জন্মনিয়ন্ত্রণ বিষয়ক (ঙ) বিতর্কসভা
(খ) কৃষি, চাষ ও উন্নয়ন (চ) খবর
(গ) নাটক/যাত্রা (ছ) ধর্ম বিষয়ক
(ঘ) গান বাজনা (জ) _____

৪৫। রেডিও অনুষ্ঠান শুনে আপনার কি কোন লাভ হয় ?

(ক) কৃষি উন্নয়ন সম্পর্কে জানতে পারি ।
(খ) পরিবার পরিকল্পনা বিষয় জানতে পারি ।
(গ) স্বাস্থ্য বিষয়ে যত্নবান হই ।
(ঘ) শুধু বিনোদন হয় ।
(ঙ) কোন লাভই হয় না ।
(চ) _____

৪৬। টেলিভিশন দেখেন কি ? [হাঁ] [না]

(উত্তর না হলে ৫১ নং প্রশ্নে চলে যান)

৪৭। কোথায় দেখেন ? _____

৪৮। কতক্ষণ দেখেন ? _____ ঘন্টা।

[প্রতিদিন] [সপ্তাহে ১/একবার] [মাঝে মাঝে]

৪৯। আপনার সমস্যা সেটানোর মত খবর/উপদেশ টিভি থেকে পান কি ?

[হাঁ] [না]

৫০। কোন্ কোন্ অনুষ্ঠানে তা পান ?

১। _____

২। _____

৩। _____

৫১। খবরের কাগজ পড়েন ? [হাঁ] [না]

(উত্তর না হলে ৫৪ নং প্রশ্নে চলে যান)

৫২। কি কি বিষয়ে খবর আপনি পড়ে থাকেন ?

১। _____

২। _____

৩। _____

৫৩। তাতে আপনার সমস্যার সমাধান থাকে কি ? [হাঁ] [না]

৫৪। না পড়তে পারলে যারা খবরের কাগজ পড়েন তাদের কাছে খবরা খবর শুনতে যান কি ?

[হাঁ] [না]

৫৫। কার কাছে যান ?

১। _____

২। _____

৩। _____

ঘ বিভাগ ।

৫৬ । সাধারণ সমস্যায় পড়লে আপনি কার কার কাছে যান ?

১ । ৬: [illegible]

২ । [illegible]

৩ । [illegible]

৫৭ । রাজনৈতিক সমস্যায় পড়লে আপনি কার কার কাছে যান ?

১ । [illegible]

২ । [illegible]

৩ । [illegible]

৫৮ । আপনাদের গ্রামের তিন ব্যক্তিদের নাম বলুন ? কি কারণে তাদেরকে প্রভাবশালী মনে করেন ?

নাম	কারণ
১ । ৬: [illegible]	[illegible]
২ । [illegible]	[illegible]
৩ । [illegible]	[illegible]

৫৯ । তাদের কাছে কখনো যান কি ? ☑ হাঁ ☐ না

(না হলে ৬১ নং প্রশ্নে চলে যান)

৬০ । সাধারণত কেন তাদের কাছে যান ?

	প্রথম ব্যক্তি	দ্বিতীয় ব্যক্তি	তৃতীয় ব্যক্তি
(ক) বিচার আচারের জন্য	☑	☑	☑
(খ) দুর্দিনে সাহায্যের জন্য	☐	☐	☐
(গ) যুক্তি পরামর্শের জন্য	☐	☐	☑
(ঘ) কাজ করার জন্য	☐	☐	☐
(ঙ) _____	☐	☐	☐

৬১ । কেন তাদের কাছে যাব না ?

	প্রথম ব্যক্তি	দ্বিতীয় ব্যক্তি	তৃতীয় ব্যক্তি
(ক) অসৎ এজন্যে	☐	☐	☐
(খ) প্রয়োজন মনে করি না	☐	☐	☐
(গ) _____	☐	☐	☐

৬২। এতক্ষণ যাদের নাম বললেন তাদের এখন কয়েকজনের নাম বলুন যারা আপনার কাছে আসেন ? তারা কেন আসেন ।

নাম	কারণ
১।	
২।	
৩।	[illegible]
৪।	[illegible]
৫।	[illegible]

৬৩। এছাড়া অন্য তিন জনের নাম বলুন যারা আপনার কাছে উপদেশ নিতে আসেন ?

নাম	কারণ
১। [illegible]	[illegible]
২। [illegible]	"
৩। [illegible]	"

৬৪। আচ্ছা এখন এমন একজন লোকের নাম বলুন যার অর্থনৈতিক অবস্থা ভাল নয় কিন্তু কৃষি/ সমবায়/পরিবার পরিকল্পনা/স্বাস্থ্য/সামাজিক বিষয়ে ভাল জ্ঞান রাখেন ?

[illegible]

৬ বিভাগ ।

কর্মসূচী সম্পর্কে ।

৬৫। বার্ড/সমবায়ের কি কি কর্মসূচী আপনার নামে চালু করেছে ?

১। [illegible]
২। [illegible]
৩।
৪।
৫।

৬৬। কর্মসূচীগুলি আপনার কেমন লাগে ?

[ভাল ✓] [মোটামুটি] [ভাল নয়] [সন্দেহজনক]

৬৭। সাধারণত অন্য পুরুষ এবং সার্ভিসের সাথে আপনি কিভাবে যোগাযোগ করেন ?

[সরাসরি ✓] [কর্মীর মাধ্যমে] [যোগাযোগ করি না] [স্থানীয় নেতার মাধ্যমে]

৬৮। কখন সমিতির ব্যবস্থাপকের সাথে আপনার যোগাযোগ ঘটে ?

☐ প্রতিদিন ☐ সপ্তাহে ☑ মাসে [২ বার]

৬৯। সাধারণত আপনি নিজে যোগাযোগ করতে যান নাকি তারা যোগাযোগ করতে আসেন ?

☑ নিজে যাই ☐ তারা আসে ☐ যাওয়া আসা

৭০। গণস্বাস্থ্য/অন্য সংস্থা থেকে কি কি বিষয়ে সাহায্য সহযোগিতা পান ?

- ☑ স্বাস্থ্য সম্পর্কে
- ☑ কৃষি সমবায়
- ☑ শিক্ষা
- ☑ পরিবার পরিকল্পনা
- ☐ নারী সংগঠন

৭১। আপনি কি তাদের সাহায্য সহযোগিতা গ্রহণ করেন ?

☑ হাঁ ☐ না

৭২। কেন গ্রহণ করেন ?

- কম পয়সায় পাই।
- অন্যান্য সুযোগ সুবিধা পাওয়ার আশায়।
- এ ছাড়া কোন উপায় নাই।
- আমাদের প্রয়োজন মনে হয় তাই।
- --

৭৩। কেন গ্রহণ করেন না ?

- তাদের কাছে ধর্ম সন্দেহ হয়।
- কর্মীদের আচরণ ভাল নয়।
- ব্যবস্থাসমূহ পছন্দ হয় না।
- প্রভাবশালীরা বাধা দেয়।
- --

৭৪। আপনি কি সমবায়ের সদস্য হয়েছেন ? কতদিন ধরে আপনি সদস্য ?

☑ হাঁ ☐ না ☐ আগে ছিলাম [৫ বছর]

(উত্তর না হলে ৭৫ নং প্রশ্নে চলে যান)

৭৫। কেন সমবায় হয়েছেন ?

ঋণ লাভের আশায় ।
ঐক্যবদ্ধ চাষাবাদের সুবিধে পাব বলে ।
মুদ্রাস্ফীতির নির্যাতন থেকে বাঁচার জন্য ।
সমবায় কর্মসূচীটি ভাল লাগে বলে ।

৭৬। কেন হন নি ? অথবা এখন কেন নেই ?

ওদের কথাবার্তা বিশেষ ভাল না ।
কাজেকাজে যেতে চাই না ।
আমার প্রয়োজন নেই ।

৭৭। আপনি কি সমবায় কমিটিতে আছেন ?

হাঁ	না	ছিলাম

৭৮। আপনার পদমর্যাদা কি ? বা কি ছিল ? _____

৭৯। কমিটিতে বর্তমানে বা ভবিষ্যতে না থাকলে আপনি কিভাবে সমবায় কার্যক্রমের সাথে জড়িত থাকবেন ?

৮০। সমবায়ের ফলে আপনার কি কি সুবিধে হয়েছে ?

ঋণ পেয়েছি ।
সেচব্যবস্থার সুবিধে পেয়েছি ।
সার এবং বীজের সুবিধা পেয়েছি ।
যান্ত্রিক চাষাবাদের সুযোগ পেয়েছি (ট্রাক্টর/বীজবপন/ফসল কাটা ও মাড়াই যন্ত্র) ।
নিজের অবস্থার উন্নতি করতে পেরেছি ।
[illegible] ।

৮১। আপনি কি এবছর ঋণ নিয়েছেন ? নিলে কি কি খাতে ?

হাঁ	না

খাত	চাষাবাদের জন্য	কুটির শিল্পের জন্য	সামাজিক অনুষ্ঠানের জন্য	অন্যান্য	মোট
পরিমান	[illegible]				১৫০০
সুদের হার	[illegible]				
বকেয়া ঋণের পরিমান					২০০ টাকা।
ঋণ পরিশোধ	X				X

[illegible]

৮২। (ঋণ পরিশোধ করতে না পারলে) কেন আপনি ঋণ পরিশোধ করতে পারলেন না ?

ঋণ পরিশোধ করতে না পারলে ? জরিমানা হয় ?

[হ্যাঁ] [না]

মহাজনের অন্যান্য সদস্যরা কি ঋণ পরিশোধের জন্য আপনাকে চাপ দেয় ?

[হ্যাঁ] [না]

৮৩। আপনার জমিতে সেচ সুবিধে আছে কি ? [হ্যাঁ] [না]

কি ধরণের সেচ ব্যবস্থা চালু আছে ?

[যান্ত্রিক] [দৈহিক]

কেন যান্ত্রিক সুবিধে নেই ?

কারা আপনাদের যান্ত্রিক সুবিধে প্রদান করেছে ?

৮৪। আধুনিক সেচ ব্যবহার সুবিধে/অসুবিধে কি কি ?

প্রয়োজনমত সেচ সুবিধে পাচ্ছেন কি ? [হ্যাঁ] [না]

৮৫। আপনি কি উন্নত সার/বীজ ব্যবহার করেন ? [হ্যাঁ] [না]

(না করলে) কেন করেন না ?

(করলে) কারা আপনাকে এব্যাপারে সহযোগীতা/পরামর্শ প্রদান করেছে ?

৮৬। উন্নত সার ও বীজ ব্যবহারের সুবিধে/অসুবিধে কি কি ?

কোন জাতের বীজ বেশী ব্যবহার করেন ?

সেটার একর প্রতি ফলন কেমন হয় ? ________৮০________মণ

৮৭। আপনি কি ট্রাক্টর ব্যবহার করেন ? [হ্যাঁ] [না]

(না হলে) কেন করেন না ?

(হাঁ হলে) কারা সরবরাহ করেছে ?

প্রয়োজনের সময় ট্রাক্টর পান কিনা ? [হ্যাঁ] [না]

ট্রাক্টর ব্যবহারের সুবিধে/অসুবিধে কি কি ?

৮৮। আপনি কি মসজিদে আলোচনা সভায় বসেন ? [হাঁ] [না]

৮৯। যেমন মসজিদে ব্যবস্থাপনা আলোচনায় অংশ গ্রহণ করেন ?

[সপ্তাহে] [মাসে] [বছরে দুবার]

৯০। আপনাদের সভার সিদ্ধান্ত কিভাবে হয় ?

একজন যা বলেন।

কয়েকজন মিলে। (Working committee)

সবাই আলাপ আলোচনা করে।

৯১। আপনি কি আলোচনায় অংশ নেন ? [হাঁ] [না]

৯২। (না হলে) কেন অংশ গ্রহণ করেন না ?

সুযোগ নেই।

প্রয়োজন বুঝিনা।

আমি না করলেও চলে।

৯৩। আপনার কোন বক্তব্য সেখানে গৃহীত হয়েছে ? [হাঁ] [না]

৯৪। আপনার এমন কোন বক্তব্য আছে কি যা খুবই গুরুত্বপূর্ণ অথচ গৃহীত হয়নি ?

[হাঁ] [না]

৯৫। বক্তব্যটি সংক্ষেপে বলেন ?

৯৬। কেন হয়নি বলতে পারেন ?

৯৭। মসজিদ নেতার সম্পর্কে আপনার ধারণা বলুন ?

তার উন্নতি করার আগ্রহ আছে।

তার যোগ্যতা আছে।

তার এসব গুন নেই।

৯৮। তিনি কত বৎসর যাবত ঐখানে আছেন ? _____ বছর।

৯৯। তার চেয়ে যোগ্য লোক আপনাদের গ্রামে আছেন কি ?

[হাঁ] [না]

১০০। তিনি কেন নেতা হননি ?

১০১। আপনার মসজিদের ভবিষ্যত কি ? [ভাল] [খারাপ] [স্থির]

১০২। মেডিকেলের/অন্য ডাক্তারের/স্বাস্থ্য/পরিবার পরিকল্পনা কর্মী কি নিয়মিত আপনাদের কাছে আসেন ?

প্রতিদিন	সপ্তাহে	দুই সপ্তাহে	মাসে	আসেননা বলিলেই চলে

১০৩। স্থানীয়ভাবে তাদের স্বাস্থ্য/পরিবার পরিকল্পনা কর্মী পাচ্ছেন কি ?

হাঁ	না

১০৪। স্থানীয় স্বাস্থ্য/পরিবার পরিকল্পনা কর্মী আপনাদের কাছে কেমন সময়ের ব্যবধানে আসেন ?

প্রতিদিন	সপ্তাহে	দুই সপ্তাহে	মাসে	আসেননা বলিলেই চলে

১০৫। হাঁ হলে কি ধরনে উপদেশ দেয় ?

বিলম্বিত বিবাহ।

জন্মনিয়ন্ত্রণ পদ্ধতি ব্যবহার।

মা ও শিশুর পরিচর্যা সংরক্ষণ।

১০৬। আপনি কি পরিবার পরিকল্পনা পদ্ধতি গ্রহণ করেছেন ?

হাঁ	না

১০৭। কোন পদ্ধতি গ্রহণ করেছেন ?

১। বড়ি
২। কনডম
৩। ফোম টেবলেট
৪। জেলী
৫। ইনজেকশন
৬। এম, আর
৭। কবিরাজী ঔষধ

অস্থায়ী | লাইগেশন / ভেসেকটমী | স্থায়ী।

১০৮। আপনি কি পরিবার পরিকল্পনা পদ্ধতি গ্রহণ করে ছেড়ে দিয়েছেন ? না ছেড়ে দেবার কথা ভাবছেন ?

হাঁ	না

১০৯। (উত্তর হাঁ হলে) কেন ছেড়ে দিলেন বা ছেড়ে দেয়ার কথা ভাবছেন ?

পদ্ধতিগুলো কার্যকরী নয়।
স্বাস্থ্যগত সমস্যা দেখা দেয়।
স্বাস্থ্যকর্মীরা নিয়মিত আসেন না।
সামাজিক ভাবমূর্তি নষ্ট হচ্ছে।

পনর

১১০। পরিবার পরিকল্পনা সম্পর্কে কি আপনার স্ত্রীর/স্বামীর কোন আপত্তি আছে ?

হাঁ [ ] না [✓]

১১১। (হাঁ হলে) আপনার স্ত্রী/স্বামীকে এ ব্যাপারে বোঝাবার চেষ্টা করেন কি ?

হাঁ [ ] না [ ]

১১২। (না হলে) বোঝাতে চেষ্টা করেন না কেন ?

১১৩। পরিবার পরিকল্পনা বলতে আপনি কতজন সন্তানকে যথেষ্ট/আদর্শ বলে মনে করেন ?

১ ২ (৩) ৪ ৫

১১৪। এ ব্যাপারে আপনার স্ত্রী/স্বামীর সংগে আপনি কি এযাবত পোষণ করেন ?

হাঁ [✓] না [ ]

১১৫। না হলে মতের পরিবর্তন কি ধরণের ?

ফোন

১১৬। কিভাবে আপনি পরিবার পরিকল্পনা এবং মধুবাগ আন্দোলনের সদস্য হলেন ?

	পরিবার পরিকল্পনা	মধুবাগ
১। নিজ থেকে সিদ্ধান্ত নিয়েছি	✓	
২। কর্মকর্তারা বাধ্য করেছে		
৩। সুযোগ সুবিধা আছে বলে		
৪। সবাই করছে বলে		

১১৭। বার্ড কর্মী এবং গণস্বাস্থ্য কর্মী সম্পর্কে আপনার ধারনা বলুন ?

	বার্ড	গণস্বাস্থ্য
কাজের লোক	✓	
চিকিৎসক		
সহযোগী		
দুর্নীতি পরায়ন		

১১৮। এমন তিনজনের নাম বলুন যারা মধুবাগ ও পরিবার পরিকল্পনা সম্পর্কে জানেন।

মধুবাগ

নাম	পেশা	সম্পর্ক	আপনি যান	তিনি আসেন
১।			✓	
২।			✓	
৩।			✓	

পরিবার পরিকল্পনা

নাম	পেশা	সম্পর্ক	আপনি যান	তিনি আসেন
১।			✓	
২।			✓	
৩।			✓	

১১৯। আপনি কতজনকে মৃতবাহার সদস্য করেছেন ? (উল্লেখযোগ্য তিনজনের নাম বলুন। তাদের সাথে সম্পর্ক ? পেশা ?

নাম	পেশা	সম্পর্ক
১। [illegible]	[illegible]	[illegible]
২। [illegible]	[illegible]	[illegible]
৩। [illegible]	[illegible]	[illegible]

১২০। আপনাকে কে মৃতবাহে উদ্বুদ্ধ করেছেন ? তার সাথে সম্পর্ক ? পেশা ?

নাম	পেশা	সম্পর্ক
১। A. H. Khan	[illegible]	X

১২১। তিনি কি একজন মৃতবাহী ? [হাঁ ✓] [না]

১২২। পরিবার পরিকল্পনা পদ্ধতি গ্রহণ করতে কতজনকে রাজী করেছেন ? ১০ জন।

১২৩। উল্লেখযোগ্য তিন জনের নাম বলুন ? তাদের পেশা এবং তাদের সাথে আপনার সম্পর্ক ?

নাম	পেশা	সম্পর্ক
১। ✓		
২।		
৩।		

১২৪। আপনাকে কে পরিবার পরিকল্পনা গ্রহণ করতে উদ্বুদ্ধ করেছে ? তার পেশা এবং তার সাথে আপনার সম্পর্ক ?

নাম	পেশা	সম্পর্ক
A. H. Khan	[illegible]	X

১২৫। এখন তিন জনের নাম বলুন যারা মৃতবাহ এবং পরিবার পরিকল্পনা বিষয়ে কোথায় যাবেন না। তাই আপনার কাছে উপদেশ নিতে আসেন ?

মৃতবাহ			পরিবার পরিকল্পনা		
নাম	পেশা	সম্পর্ক	নাম	পেশা	সম্পর্ক
১। [illegible]	[illegible]	X	১। [illegible]	[illegible]	/
২। [illegible]	[illegible]	X	২। [illegible]	[illegible]	/
৩। [illegible]	[illegible]	X	৩। [illegible]	[illegible]	/

[illegible]

পাঠার

১২৬। আপনার কোন সমস্যা হলে আপনি কি অন্যের গ্রামের কারো কাছে যান ?

[হাঁ]   [না]

১২৭। সাধারণত কাদের কাছে যান ? তিন জনের নাম বলুন/তাদের পেশা/তাদের সাথে সম্পর্ক ? কি সমস্যা নিয়ে যান ?

নাম	গ্রাম	পেশা	সম্পর্ক	সমস্যার ধরন
১।				
২।				
৩।				

১২৮। আপনার কাছে কেউ কি আসেন ? তিন জনের নাম বলুন/তাদের পেশা/সম্পর্ক/সমস্যা।

নাম	গ্রাম	পেশা	সম্পর্ক	সমস্যার ধরন
১। [illegible]	[illegible]	[illegible]	×	FP
২। [illegible]	[illegible]	[illegible]	×	[illegible]
৩।				

১২৯। আপনি কি শহরে যান ? কি কারণে যান ? কেমন সময়ের ব্যবধানে যান ?

শহরের নাম	কারণ	মাসে সপ্তাহে কদাচিত
[illegible]	CARP [illegible]	

১৩০। সাক্ষাৎ গ্রহণে কত সময় লাগল ? ২.০৫ মিনিট।

১৩১। সাক্ষাৎদাতা সম্পর্কে সাক্ষাৎ গ্রহণকারীর মোটামুটি ধারণা।

[illegible]

সাক্ষাৎ গ্রহণকারীর স্বাক্ষর

তারিখ 2.8.88

He is not happy
with his monthly salary.
It is a little for him.

APPENDIX - III

CODING INSTRUCTIONS

Item Sl.	Item Description	Q.Nos. in the Questionnaire	Item Classification	Code
1	Religion	3	Muslims	1
			Hindus	2
			Others	3
2	Marital Status	2	Not married	1
			Married	2
			Divorced	3
			Widowed	4
3	Education	4	No education	1
			Upto Primary	2
			Upto Secondary	3
			Higher Secondary and above	4
4	Sex	4	Male	1
			Female	2
5	Family Size	4	Exact number	00

Item Sl.	Item Description	Q.Nos. in the Questionnaire	Item Classification	Code
6	Farm Size	8	Exact number in decimals	000
7	Occupation	4	Day labour	1
			Housewife	2
			Fisherman	3
			Farmer	4
			Service holder and professional	5
			Businessman	6
8	Age	4	Exact number in years	00
9	Radio listening	40	Does not listen	1
			Listens	2
			No reply	9
10	Radio nearness	41	Does not arise	0
			Community	1
			Neighbour	2
			Home	3
			No reply	9

Item Sl.	Item Description	Q.Nos. in the Questionnaire	Item Classification	Code
11	Radio programme listening	44,45 24,31	Does not arise	0
			None	1
			Health & F.P.	2
			Cooperative	3
			Both	4
			No reply	9
12	TV viewing	46	Does not view	1
			Views	2
			No reply	9
13	TV nearness	4	Does not arise	0
			Community	1
			Neighbour	2
			Home	3
			No reply	9
14	TV programme viewing	50,24,31	Does not arise	0
			None	1
			Health and F.P.	2
			Cooperative	3
			Both	4
			No reply	9

Item Sl.	Item Description	Q.Nos. in the Questionnaire	Item Classification	Code
15	Newspaper reading/ listening	51,54	Does not read/ listen	1
			Reads/Listens	2
			No reply	9
16	Newspaper nearness	55	Does not arise	0
			Community	1
			Neighbour	2
			Home	3
			No reply	9
17	Newspaper content reading/listening	52,24, 31	Does not arise	0
			None	1
			Health & F.P.	2
			Cooperative	3
			Both	4
			No reply	9
18	Contact with programme centre	67	No contact	1
			Through local leader	2
			Through field worker	3
			Direct contact	4
			No reply	9

Item Sl.	Item Description	Q.Nos. in the Questionnaire	Item Classification	Code
19	Frequency of contact with centre	68	Does not arise	0
			Does not keep contact	1
			Once in two months	2
			Once in a month	3
			Twice in a month	4
			Weekly	5
			Daily	6
			No reply	9
20	FP workers' visit	102	Does not arise	0
			Does not visit	1
			Once in two months	2
			Once in a month	3
			Twice in a month	4
			Weekly	5
			Daily	6
			No reply	9
21	FP local workers' visit	104	Does not arise	0
			Does not visit	1
			Once in two months	2
			Once in a month	3

Item Sl.	Item Description	Q.Nos. in the Questionnaire	Item Classification	Code
			Twice in a month	4
			Weekly	5
			Daily	6
			No reply	9
22	Husband and wife communication on family planning	110,111, 112	Does not arise	0
			No communication	1
			Communication with divergence	2
			Communication with convergence	3
			No reply	9
23	Husband and wife communication on family size	113,114 115	Does not arise	0
			No communication	1
			Communication with divergence	2
			Communication with convergence	3
			No reply	9
24	Social network	56,58, 62,63	Number of links	00
25	Economic network	57,58, 62,63	Number of links	00

Item Sl.	Item Description	Q.Nos. in the Questionnaire	Item Classification	Code
26	Institutional network : Cooperative	118,119, 120,125	Number of links	00
27	Institutional network : Family planning	118,123, 124,125	Number of links	00
28	Openness with nearby village	126,127, 128	Does not have links	1
			Does have links	2
			No reply	9
29	Openness with the city	129	No link	1
			Once in two months	2
			Once in a month	3
			Twice in a month	4
			Weekly	5
			Daily	6
			No reply	9
30	General Awareness (Cooperative)	14,15,29 31,36	No knowledge	1
			Knows little, cannot mention the source	2
			Knows, mentions formal media as source	3

Item Sl.	Item Description	Q.Nos. in the Questionnaire	Item Classification	Code
			Knows, mentions informal media as source	4
			Knows, mentions both the sources	5
			No reply	9
31	General Awareness (Family Planning)	14,15,22, 23,24,25, 36	No knowledge	1
			Knows little, cannot mention the source	2
			Knows, mentions formal media as source	3
			Knows, mentions informal media as source	4
			Knows, mentions both the sources	5
			No reply	9
32	Institutional Awareness (Cooperative)	65	Does not arise	0
			Knows little about the programme	1
			Can explain the programme correctly	2
			No reply	9

Item Sl.	Item Description	Q.Nos. in the Questionnaire	Item Classification	Code
33	Institutional Awareness (Family Planning)	65	Does not arise	0
			Knows little about the programme	1
			Can explain the programme correctly	2
			No reply	9
34	Opinion about Cooperative	30	Dislikes	1
			Likes	2
			No reply	9
35	Opinion about Institutional Programme on Cooperative	17,66,72, 73,75,76, 97	Does not arise	0
			Dislikes	1
			Likes	2
			No reply	9
36	Opinion about Cooperative Programme Personnel	117	Does not arise	0
			Dislikes	1
			Likes	2
			No reply	9

Item Sl.	Item Description	Q.Nos. in the Questionnaire	Item Classification	Code
37	Opinion about Family Planning	22,23, 25	Dislikes	1
			Likes	2
			No reply	9
38	Opinion about Institutional Programme on Family Planning	17,66, 72,73	Does not arise	0
			Dislikes	1
			Likes	2
			No reply	9
39	Opinion about F.P. Programme Personnel	117	Does not arise	0
			Dislikes	1
			Likes	2
			No reply	9
40	Opinion about Local Leadership	55,59,60, 61,97,99	Dislikes	1
			Likes	2
			No reply	9
41	Adoption : Formal association with the Cooperative	74,77,78	Does not arise	0
			No membership	1
			Members	2
			Executive	3
			No reply	9

Item Sl.	Item Description	Q.Nos. in the Questionnaire	Item Classification	Code
42	Adoption : Degree of Participation with the Cooperative	88,89,90, 91,92,93, 94,95,96	Does not arise	0
			Does not attend meetings	1
			Not regular	2
			Regular but passive	3
			Regular and indirectly involves in the decision making	4
			Regular and directly involves in decision making	5
			No reply	9
43	Nature of Adoption (Cooperative)	116	Does not arise	0
			Authority Adoption	1
			Contingent Adoption	2
			Collective Adoption	3
			Voluntary Adoption	4
			No reply	9
44	Use of loans	81	Does not arise	0

Item Sl.	Item Description	Q.Nos. in the Questionnaire	Item Classification	Code
			Social	1
			Economic	2
			Both	3
			No reply	9
45	Use of irrigation	83	Does not arise	0
			Traditional	1
			Modern	2
			Mixed	3
			No reply	9
46	Use of seeds	86	Does not arise	0
			Local variety	1
			H.Y.V.	2
			Mixed	3
			No reply	9
47	Use of Implements	87	Does not arise	0
			Traditional	1
			Modern	2
			Mixed	3
			No reply	9

Item Sl.	Item Description	Q.Nos. in the Questionnaire	Item Classification	Code
48	Length of being a Cooperative	74	Actual period (in months)	000
49	Nature of Adoption (Family Planning)	116	Does not arise	0
			Authority adoption	1
			Contingent Adoption	2
			Collective Adoption	3
			Voluntary Adoption	4
			No reply	9
50	Degree of Adoption of Family Planning	105,106, 107,108, 109,124	Does not arise	0
			Does not use F.P devices	1
			Natural control	2
			Used but dis-continued	3
			Use regularly	4
			Sterilized	5
51	Birth of last issue	4	In months	000

Item Sl.	Item Description	Q.Nos. in the Questionnaire	Item Classification	Code
52	Advocacy : Cooperative	119, 125, 127, 128	Does not arise	0
			Does not advocate	1
			Advocates but cannot name the advocatee	2
			Advocates and can also name	3
			Others approach him/her for advice	4
			Others referred him/her to be instrumental in influencing behaviour	5
			No reply	9
53	Advocacy : Family Planning	122, 123, 125, 127, 128	Does not arise	0
			Does not advocate	1
			Advocates but cannot name the advocatee	2
			Advocates and can also name	3
			Others approach him/her for advice	4
			Others referred him/her to be instrumental in influencing F.P. behaviour	5
			No reply	9

APPENDIX - IV

LIST OF FIELD INVESTIGATORS

Number	Name	Address	Educational Qualification
1	Mrs. Syeda Shamsi Ara Meelee	Rokeya Hall Dhaka University	M.A. in Mass Communication & Journalism.
2	Mrs. Nargis Ara Mini	Rokeya Hall Dhaka University	M.A. in Mass Communication & Journalism.
3	Miss. Gitiara Nasreen	Shamsunnahar Hall Dhaka University	M.A. in Mass Communication & Journalism.
4	Mrs. Christina Rozario	Rokeya Hall Dhaka University	B.A.(Hons.) in Mass Communication & Journalism.
5	Mr. Ali Riaz	23, Siddeshswari Dhaka	M.A. in Mass Communication & Journalism.
6	Mr. Abu Alam Md. Shahid Khan	H.M.Mohsin Hall Dhaka University	M.A. in Mass Communication & Journalism.
7	Mr. Abdur Rahman Khan	139,New Paltan Lane, Azimpur, Dhaka	M.A. in Mass Communication & Journalism.
8	Mr. A.K.M. Borhanuddin	Surjasen Hall Dhaka University	M.A. in Mass Communication & Journalism.
9	Mr. Kaiser Habib	H.M.Mohsin Hall Dhaka University	M.A. in Mass Communication & Journalism.
10	Mr. Nayeemul Islam Khan	226, Dilu Road, New Eskaton, Dhaka.	M.A. in Mass Communication & Journalism.

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