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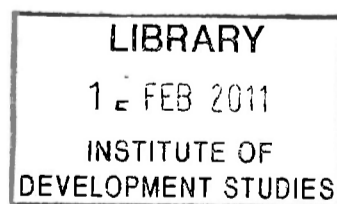
ECONOMIC WEALTH, SOCIAL COHESION, AND HEALTH AS FACTORS IN
ACCELERATING RURAL DEVELOPMENT

By

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ABSTRACT

The paper reports on a sociological cross-community study of rural development in South Imenti Division, Meru District, Kenya. Tests are made which indicate that cohesive (Community Development) and medical factors should be given increased prominence in both economic and social-welfare development programs; but final resolution must await further analysis. Social, economic, medical, and other aspects of the South Imenti environment are described, and community and individual statistics presented.

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This research was carried out under a United States NIGMS research grant and while the author was a Research Associate at the Institute for Development Studies, University of Nairobi, and a doctoral candidate at Stanford University, California, USA. The list of people to whom I am highly indebted, especially in South Imenti, would take several pages to write.

I. Introduction

Communities in mountainous areas are almost always different each from its neighbor, and South Imenti, Meru, is in a mountainous area. This was the starting point for a research project which aimed to test the relative strength of the factors of community wealth, cohesion, and health in accelerating development. I knew I would find enough differences in these factors to achieve the tests I needed.

A wide range of innovations introduced from outside the district, and a wide range of community and individual variables pertaining directly and indirectly to wealth, cohesion, and health were studied. It remains to achieve enough order out of these data to prove or disprove the main contention, that attention to cohesive and/or health factors is necessary if economic as well as social welfare development goals are to be reached.

This paper is a collection and condensation of several. It is a test run for a dissertation rather than an entity in itself. Some readers will be interested in the description of the area in Part IV, but will find the quasi-scientific Parts II and III incomprehensible or boring. Some will want to skim the area description and dwell on the other parts. It can only be said that the final dissertation will be more coherent, unified, and decisive than this early attempt.

II. Theoretical Framework

A. Micro-level Change in Human Behavior

In the study of change in human behavior there are two usual levels of analysis. The macro-level assumes a society acting, and being acted on, as an organism in itself. Emile Durkheim traced a theory of increasing social differentiation on the societal level in his Division of Labor in Society.

Ester Boserup outlined the choices open to a society when overpopulation threatens a traditional method of cultivation and land tenure in The Conditions of Agricultural Growth.

An equally absorbing set of questions comes from the study of the micro-level of human behavioral change. This level questions the assumption of a unitary societal organism. Do external or internal influences hit all members of a society equally, and do they produce equal reactions? If not, how uniform a reaction will ultimately be produced, and how long a period will it take to reach this maximum uniformity? Can it be predicted what proportion of a society an influence will effect, and which subgroups of the society will be most effected?

A great deal of thinking and research has been put into these micro-level questions with respect to one type of influence at a time. The I.D.S. staff have produced many papers on agricultural influences (and more specifically, agricultural extension influences). Madison Avenue and its offshoots have worked long on the influence of mass media on cash expenditure, especially in the developed countries. Educationalists have theorized the existence of varying reactions to a uniform experience of being taught, and in some countries have created sets of tests to differentiate the groups and modified their teaching methods accordingly.

Adherents of the diffusion-of-innovations school of thought have tried to explain the differing individual or sub-group reactions to everything from new cooking lessons to new factory management complexes. But very few people as yet have interested themselves in the study of the environmental conditions acting on the influence-reaction sequence, or in the study of the reaction regardless of type of influence (innovation). These two concerns are the major foci of this study.

A number of previous studies have worked towards this problem area, which Rogers and Shoemaker have recently dubbed "system effects" of social structure on diffusion (12: page 29). The earliest study seems to be one of Wisconsin townships by Anne van den Ban (16), in the late 1950's. He found that even when he controlled for farm size, net worth, education, and 4-H (4-K) membership, differences in individuals' innovation acceptance rates were significantly related to township. Soon after Santi Bose (2) did a similar calculation for Bengali (Indian) villages and found that neighborhood had a significant effect on agricultural acceptance rates beyond the effects of formal organization membership, literacy, tenancy, and caste. Syed Qadir (11) found significant differences by neighborhood for both agricultural and health innovations with controls for media exposure and education; and with similar controls, Anant Saxena (15) in India and Burl Davis (6) in Nigeria obtained significant differences in individual acceptance rates across villages for agricultural innovations.

But all these studies confined themselves to identifying a difference between villages, without going on to investigate why it exists. At most the difference was attributed to "modern norms" or a "pro-modern attitude". To my knowledge,

only one study has gone beyond this: Coughenour (5) found that in Kentucky communities in which most farmers had accepted many of the innovations studied the median levels of education, media exposure, and ratio of media exposure of opinion leaders to followers were higher.

B. Working Theory

The very basic theory from which the present study begins is as follows:

1. An individual lives within a set of societal (environmental) conditions, which conditions define the limits of his actions.
2. The precise nature of his actions is defined by a set of rules which pertain to the unique situation.
3. The conditions continuously effect the applications of the rules.

From the great variety of possible conditions this study abstracts wealth, social cohesion, and health for consideration. The particular rules abstracted are the economic, prestige, and medical advantages of innovations as perceived by the individual. It is theorized that the effects of the conditions on the rules should be perceivable in the results of a multitude of change decisions made by the individuals subjected to these rules and conditions. For instance, the individuals living in an area high in wealth should have high rates of adoption not only for economic-related innovations but for health- and prestige-related ones.

III. Hypotheses and Methodology

A. Hypotheses

The hypotheses to be tested in this study are, that regardless of the particular rule in effect,

1. the condition of social cohesion has effects on micro-changes differentiable from those of the condition of wealth,
2. the condition of health has effects on micro-changes differentiable from those of the condition of wealth,
3. the condition of social cohesion has effects on micro-changes greater than those of the condition of health, and
4. the condition of wealth has effects on micro-changes greater than those of the condition of social cohesion.

B. Rules

"The greater the perceived relative advantage of an innovation, the more rapid its rate of adoption." "The degree of relative advantage may be measured in economic terms, but often social prestige factors, convenience, and satisfaction are also important components." (Rogers and Shoemaker, 12: page 22).

The advantages under the hypotheses are taken as economic, prestige, and health.

1. Economic: the acquisition of (a) survival goods (sufficient food, clothing, and shelter to cope with the environment) and (b) means for attainment of other goals, including those below, through trade with other persons and groups. The first category overlaps with the health advantage in extreme cases

of illness. The second overlaps with both health and prestige advantages, as adoption of innovations with either of these advantages frequently involves purchase or trade of goods and services.

2. Prestige: increasing centrality in one's social system and thus one's influence over others. In addition to the above overlaps, there is a potential overlap with health, as apparent health of self and family usually increases respect from neighbors.

3. Health: maintaining or increasing bodily comfort, efficiency, and chances of survival. This overlaps again with the economic advantage, to the extent that it is perceived as increasing resources (own and family labor) to gain economic ends.

The question of overlaps as perceived in the Imenti culture was approached in two ways. Unfortunately, strenuous attempts to find appropriate Meru vocabulary failed and the approaches described below fell with them. Another possible approach would involve analysis of the stated reasons for adoption of different innovations, but time constraints forbid such an analysis for this paper.

Direct questions on the concepts were included in the questionnaire. It was found that when people were asked directly whether a man of "poor health" (wonje mwirine) but much land and cattle was "rich" (utonga), 91% said no. 72% said a "healthy" man with no cattle and little land was "rich". 81% said having "wealth" could bring you mwago ("attracting-favorable-attention-by-others").

Each person interviewed was also asked to rank the innovations under review on a four-point scale on the basis of

their potential contribution to a person's wealth or prestige in that village. Due to difficulty in persuading the respondents that the question was meant seriously¹, the results are rather questionable, but they may be taken to indicate that the search for KiMeru words for "pure" concepts was a total failure. It is possible that these concepts are not differentiated in KiMeru, but further research with an expert interpreter would be required to be sure of this.

Table One: Median Values of Selected Innovations for Utonga and Mwago

Innovation	Mwago	Utonga	Innovation	Mwago	Utonga
Thermos	4	2	Water boiling	4	4
Plant in rows	4	4	Shop medicine	3	3
Watch	4	2	Cattle-shed	4	4
Nylon shirt	3	2	Handbag	4	2
Umbrella	4	2	Leather shoes	4	3
Nylon basket	4	2	Hospital/disp.	4	4
Jacket/coat	4	2	Latrine	4	4
Go to FTC	4	4	Ready-made dress	2	2
Window	4	3	Perfume/pomade	3	1
Crop dawa	4	4	Fertilizer	4	4

1= no connection; 2= little; 3= middling; 4= large

C. Conditions

"The social structure acts to impede or facilitate the rate of diffusion and adoption of new ideas through what are called "system effects". ... System effects are the influences of the system's social structure on the behavior of the individual members of the social system." (Rogers and Shoemaker, 12: page 29). The idea of system effects, or conditions, is here expanded to include the total system environ-

I. It was seriously answered to the Mzungu pretester but denounced as a child's game when presented by the Meru school-leaver interviewers.

ment. Since it is hypothesized that all conditions of a system may have an effect on individual behavior, and not merely social structure as narrowly conceived, "system effects", or conditions, are taken to include the degree of wealth the community has attained, the degree of health it enjoys, and the degree of social cohesion existing.

1. Wealth: possessions valued for their ability to help fulfil survival, social, religious, or other goals. From this definition, it should appear that it is a very difficult concept to quantify in a society changing (among other things) from a subsistence to a market economy. Not many farmers wish or can afford to keep their wealth in such an unusable form as cash. Houses, cows, schoolchildren, and land are wealth but their fit to the definition of wealth varies from time to time and place to place. Markets are a form of community wealth, but to what extent can the wealth of a market drawing on twenty square miles be attributed to the one or two small villages which nominally contain it?

The problem of an empirical measure of community wealth is thus a difficult one. In the ideal situation (unconstrained by time) Guttman scaling² or factor analysis would be appropriate, and it will be done later. For this paper a much quicker, and more dubious, procedure was followed. ~~Twenty-five~~ possible indicators of wealth were collected from the questionnaires and community check-list interviews with local leaders, and each village was scored above or below the median, or some significant point, for each. Then these were simply totalled and villages with more "high" scores than "low" were called rich villages, and vice versa poor. (See Table Two, page 10-11).

2. Social Cohesion: the extent of social interaction and cooperation within a locality. This condition

2. As explained in a paper by Dr. Roling (13).

Table Three: Cohesion

Village Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	median
House (roof, walls, paint)	H	L	L	L	H	L	L	H	L	H	H	L	H	L	L	L	L	H	L	
Clothing of Respondent intact/good	H	H	H	H	L	H	H	H	L	L	L	L	L	L	L	L	L	H	H	
Child at boarding school/college	L	L	L	H	H	L	L	H	L	H	L	L	H	H	H	L	H	L	L	3
Few landless sons	H	H	H	L	L	H	H	L	H	H	L	H	L	L	H	H	H	H	L	8
Ever employed	H	H	H	H	H	L	L	L	L	L	L	H	L	L	H	H	L	L	H	21
Skilled/white-collar job ever held	H	L	L	L	H	H	H	H	L	H	L	H	L	L	L	L	L	H	L	26%
Cash crops sold + Food crops sold	H	H	L	H	H	H	L	H	L	H	L	L	L	H	H	L	L	L	L	103%
Over two crops sold	L	L	H	L	L	H	L	H	L	H	H	H	L	L	H	H	H	L	L	19
Few had to buy maize	H	L	H	L	L	L	H	L	L	L	H	L	L	H	H	L	H	L	L	24
Have other income source	H	H	L	H	H	L	L	H	L	L	H	L	H	H	L	L	L	H	H	14
Have good-paying income source	H	L	L	H	H	H	H	L	L	H	L	H	L	L	L	L	H	H	L	8
Acreage: four/more acres	L	L	H	L	H	L	X	H	X	L	L	H	L	H	L	H	H	L	L	20
Cows: two or more local breed	H	H	L	L	H	L	L	L	L	H	H	L	L	H	H	L	L	H	H	13
Cows: one or more grade	H	H	L	L	H	L	L	H	L	H	L	L	H	H	H	L	L	L	H	7
GPT payers + repliers	H	L	H	H	L	H	H	L	L	L	L	L	L	H	H	L	H	L	L	62%
Payers of more than 40/= GPT + rep	H	H	L	L	H	H	L	H	L	L	H	L	L	L	L	H	L	L	L	6%
Few believe locality poor	L	H	L	L	H	L	H	H	L	H	H	L	L	L	H	L	L	H	H	15
Whole village in 1/2 mile of road	H	H	L	L	H	H	L	H	H	H	H	L	H	H	H	L	L	L	L	
All-weather road passes through	H	H	H	L	H	L	L	H	L	H	L	H	L	H	L	L	L	H	L	
Cattle dip within 1/2 mile	L	L	H	H	H	L	H	L	H	L	L	L	H	H	H	L	L	L	L	1
More than four stores in village	H	H	L	L	H	L	L	H	L	H	L	L	L	H	H	L	L	H	L	4

X: no data

Village Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	median
More than 19 stores within 1 mile	H	L	L	H	H	L	L	L	L	H	L	H	L	H	L	L	L	L	H	19
Excavations (rock, sand, clay)	L	H	H	H	H	L	L	H	L	H	L	H	L	L	L	L	H	H	L	1
More than two church buildings	H	L	L	L	L	L	L	H	L	H	L	L	L	L	L	L	H	H	L	2
Water schemes	L	L	L	L	H	L	L	L	L	H	L	L	L	L	L	L	H	H	H	1
Total H = High scores	18	13	10	10	19	10	7	18	3	16	8	9	10	12	13	7	9	15	8	
Total L = Low scores	7	12	15	15	6	15	17	7	21	9	17	16	15	13	12	18	16	10	17	
Composite score	H	H	L	L	H	L	L	H	L	H	L	L	L	L	L	H	L	L	H	L

Table Three: Cohesion

Village Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	median
Farm outside village rarely	H	L	H	H	H	H	L	L	H	H	L	H	H	L	L	L	H	H		5
Own lands outside village	L	L	H	H	L	L	L	L	H	H	L	H	H	L	L	L	H	L		8
At least 3 adults (26-45) in 1 home	L	L	L	L	L	L	H	L	H	L	L	L	L	L	L	L	H	H		3
Native-born	H	L	H	L	L	H	H	H	H	H	L	H	H	H	H	L	L	H		18
Many gone 3/more years from district	H	L	H	H	H	H	H	H	H	L	L	L	L	L	L	L	H	H		9
Prefer Meru rural to towns/city	L	H	L	H	L	L	L	L	H	L	H	L	H	H	L	L	L	H		25
Kin visits inside village + outside	L	L	H	L	L	L	L	L	H	H	H	H	H	H	L	L	L	X		90%
Nonkin visits as above	L	L	H	L	L	L	L	L	H	H	L	H	H	H	L	L	L	X		223%
Few with no kin visitors	H	H	L	L	L	H	H	L	L	H	L	L	L	L	L	L	H	H		8
Few with no nonkin visitors	H	L	L	L	L	H	H	L	L	L	L	L	L	L	L	L	H	H		16
Church membership	L	L	L	L	L	L	H	L	H	H	L	H	H	L	L	L	L	L		23

Village Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	median
Women's club membership	H	H	L	L	H	L	H	H	I	L	H	L	H	L	L	L	H	H	H	7
Women's/sports club membership	H	L	L	L	H	L	H	H	H	H	H	L	H	L	L	H	H	H	H	9
Contribute to two/more self-help	H	L	H	H	L	H	L	H	L	H	L	L	L	H	H	L	L	H	H	20
Contribute to three/more self-hp.	L	L	H	H	L	H	L	H	L	H	L	H	L	H	H	L	L	H	H	14
Leadership in local groups	H	H	H	H	H	H	H	H	L	H	L	H	L	L	H	H	H	L	L	9
Few think village less cooperative	H	L	L	L	H	L	L	H	L	H	H	H	L	L	L	L	H	H	H	12
Think people here care for others	H	L	H	L	H	H	L	H	L	H	L	L	L	L	L	L	L	L	L	16
Think people here drink a lot	L	H	L	H	H	L	H	H	H	H	H	H	H	H	L	H	L	L	L	8
Few think bad magicians here	H	H	L	H	L	L	L	H	L	H	L	H	H	L	L	L	L	L	L	13
Respondent cooperative (interview.)	L	L	L	H	H	L	H	H	H	H	H	L	H	L	L	H	L	L	L	26
Clan meetings continue	L	L	H	L	L	L	L	L	L	H	H	L	L	L	L	L	L	L	L	
Centrality index:Agri. advisors	L	H	H	H	L	H	H	H	L	H	L	L	L	H	H	L	L	L	L	
Centrality index:Health advisors	L	H	L	H	L	H	L	H	L	H	L	L	H	H	H	H	L	L	L	
Centrality index:Shop advisors	L	L	L	H	L	H	H	H	L	L	L	L	H	H	L	H	L	L	L	
Centrality index:Dispute advisors	L	L	H	H	L	H	H	H	H	H	L	H	H	L	H	L	L	L	L	
Centrality index:First users	L	L	H	L	H	L	L	H	L	L	H	L	L	H	H	H	L	L	L	
Centrality index:Combined	L	L	H	H	L	H	H	H	L	H	L	L	H	H	H	L	L	L	L	
Nursery school in village	H	L	H	H	H	H	L	L	L	H	H	L	H	L	H	H	H	H	H	1
Total H = High scores	13	9	15	16	14	16	17	19	10	25	16	10	18	15	17	9	10	18	17	
Total L = Low scores	16	20	14	13	15	13	12	10	19	4	13	19	11	14	12	20	19	11	8	
Composite score	L	L	H	H	L	H	H	H	L	H	H	L	H	H	H	L	L	L	H	

parallels wealth in its difficulty of quantification. Forms of social organization have been changing (cf. Area Description: Social, below), and it is difficult to say whether the new forms of sports club or church or women's group show as much cohesion as the traditional youths' houses and elders's groups, or as the simple frequency of interaction among neighbors or the degree of reliance on the same opinion leaders for information (Centrality Index). Thus the same procedure was followed as for wealth, using twenty-nine possible indicators of cohesion (see Table Three, pages 11-12).

3. Health: freedom from disease. By some definitions of disease, e.g. bodily disequilibrium, no one is ever in a state of health. The local medical records were not in a state to be useful, and the divisional and district officials had only vague ideas about the variations in health within the division (e.g., malaria lies below and pneumonia above). Questions were included in the questionnaire to ascertain the amount of family illness in the past six months. Both quantity and extremity of the illnesses thus recorded is hard to gauge, because (a) each respondent decided for himself whether to include minor ailments and normal complaints or only special major ones, and (b) without a good taxonomy of local disease names and/or a medical report on the patient seriousness of the illnesses was hard to judge (e.g., a headache may be incapacitating or mild). As a check, answers to questions on treatment sought for the illnesses, last hospital use, and opinion of village health as compared with other known villages were included (see Table Four, next page).

D. Methodology

Fieldwork was carried out in four phases. First, contact was made with formal leaders all over the division, and after preliminary mapping and familiarization a community

Table Four: Health

Village Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	median
0-2 illnesses in 6 mos. (family)	H	L	H	L	H	H	L	H	L	H	H	L	H	H	H	L	L	H		24
^{Few} Sought hospital + all other treatment	L	L	H	L	L	H	H	H	H	L	H	L	H	H	H	L	H	L		70%
Never to hospital	L	L	H	L	L	H	L	H	L	H	L	H	L	H	H	L	H	L		7
Think village more healthy	L	L	H	L	L	H	H	L	H	L	L	H	H	H	L	H	L	H		15
Composite Index §	L	L	H	L	L	H	H	H	L	H	L	H	L	H	H	L	H	L		

§ Ties were decided by consideration of the amount of deviation from the medians.

Table Five: Multiple Classification of Villages

	Wealth Low		Wealth High	
	Health Low	Health High	Health Low	Health High
Cohesion Low	9 17	12 16	1 2	5
Cohesion High	4 13 11 19	3 7 6 14		8 15 10 18

checklist was administered to subchiefs in each sublocation. Each institution, economic or social activity, and public service was located on a map and used to score villages (of which there are about five per sublocation) on intuitive social and economic activity scales. From these, twelve villages were picked to represent the extremes in activity of both types. Frequent errors by the subchiefs, and the intuitiveness of the scales, prevented this identification from being very useful. Only five of the twelve original villages remain in the same category now.

Secondly, contact was made with the subheadmen and unofficial village leaders of each village chosen, and the checklist readministered. The maps were corrected and lists of all landed farmers acquired from the subheadmen, on the basis of which it was decided to expand or contract the study units selected to simplify sampling. Test questions intended for use in the final questionnaire were administered by the researcher and her interpreter to five or six people per village found farming or working at home on back paths. As the third phase began, seven more villages were added on the basis of full representation of zones and sublocations and a second settlement scheme, and the process—except for question testing—was repeated.

Thirdly, the questionnaire was written and translated into Kimeru by two Meru students at the University of Nairobi. Four Form IV leavers from the division or nearby were chosen and trained with the questionnaire and then sent to the trial village. After trial the questionnaire was further revised and interviews were held over the next two and a half months. One interviewer left after a month and had to be replaced. Each pair of interviewers worked in one village for five to eight days. A sample of thirty farmers (thirty-two in the

trial village) was taken from the subheadman's lists, using one in n names. There were several substitutions per village as our definition of landed farmers was alternatively misheard or misunderstood in many villages. Even so some village samples still contain more aged or more youth than others, because of subheadmen's interpretations of "family head" or old men's insistence on being interviewed instead of their middle-aged sons. As number of men working off the farm and opinions of whether women should be allowed to fill out questionnaires varied from village to village, the proportion of female respondents varied also, being on average 20%.

Only three cases occurred of interviewers being bluntly refused, although certainly other people must have arranged not to be in when they saw the interviewer coming.

Fourthly, when the interviews were over, the questionnaires were scrutinized and data extracted on markets and hospitals visited, friends visited, opinion leaders, and first users of the selected innovations. An attempt was made to identify all unfamiliar place-names. The researcher's assistant read through the list of names of visitors for his own village and failed to match more than a few names³, so we reluctantly abandoned the visitation data. Each opinion leader or first user of an innovation who was named by eight or more people (as agricultural advisor, health advisor, shopping advisor, dispute advisor, first user) was interviewed as to his work and/or with a shortened form of the questionnaire by the author. Finally government officials in Meru Municipality were contacted for comments and statistics on various aspects of development.

3. Each Meru person has four to eight names of which he/she and his/her acquaintances use only two at a time. Often an acquaintance does not know that Mugambi Mbogori is also Mwitiri Mugambi and Genesis Mbogori.

IV. Area Description

A. South Imenti: General

The study was carried out in eighteen villages of South Imenti Division and one village of North Imenti Division in Meru District, Kenya. South Imenti lies ten miles to the south of Meru Municipality, the district administrative headquarters and a town of sixty years' standing. It is bordered by the Mariara and Thingithu Rivers to the north, the Mount Kenya Forest to the west, the Little Mara and Mutonga Rivers to the south, and an arbitrary cut-off point in the eastern plain. West-east it drops from an altitude of 6000'-7000' at the forest down to 3000' on the plain. The descent is marked by ravines and slopes of varying steepness; in most places the major rivers are accessible only by a long climb up and down steep banks. From west to east the natural vegetation changes from moist montane forest through moist and dry intermediate forest (about 4000'-5500') to savanna woodland. The soil types correspond closely, with strong brown loams giving way to dark red friable clays at about 5500' and red friable clays below about 4000' (1:pages 49, 69).

Minor rivers, abundant rainfall⁴, and now a growing system of furrows and pipelines make water a relatively minor problem above 4500', except in Igoji Location where the slopes are steeper and the furrow system retarded. But

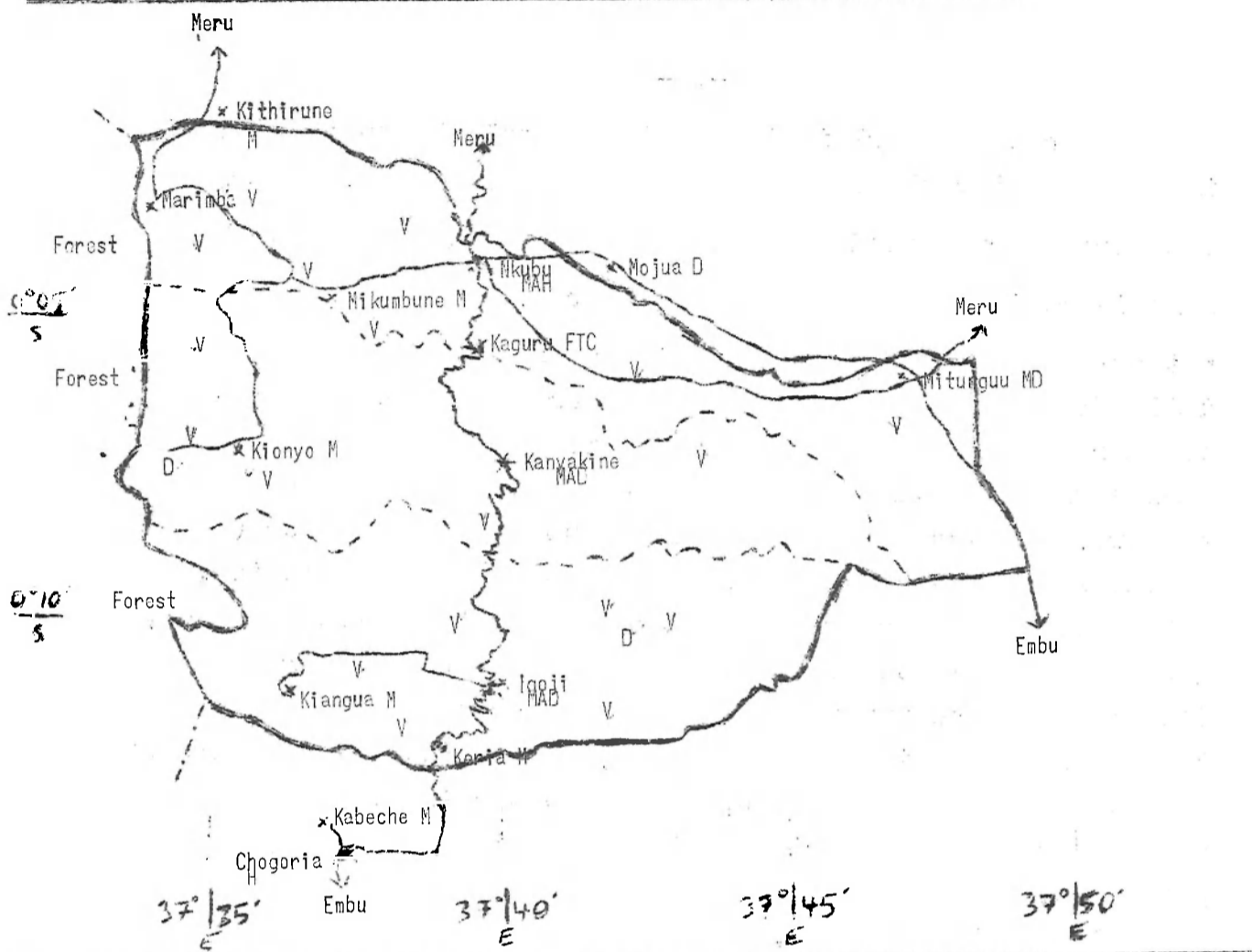
4. Bernard (1:page 36) reports that Nkubu, at 5000', has received an average of 64.13" (1630 mm) annual rainfall in the years 1945-65, with a minimum of 39.71" (1010 mm) and a maximum of 124.63" (3165 mm). Kanyakine, at 4450', received a mean of 61.96" (1575 mm) from 1951 to 1965, ranging from 32.39" (825 mm) to 97.27" (2470 mm). Wallace (17:appendix 5b) reports a 2300 mm (74") annual average for Marimba, at 7000'. From the East African Community Meteorological
(continued next page)

below this altitude it is, as elsewhere in Kenya, a scarce resource. One lowlying area, the only settlement scheme in South Imenti, has coped with a wide system of water furrows, but other such efforts are on too small a scale to afford relief to more than a few farmers.

Two major rivers, the Iraru and the Kitheno, are the main boundaries dividing the three locations (see map next page): Nkuene to the north, Abogeta central, and Igoji to the south. The administrative center for the division is at Nkubu, the largest market town, in Nkuene. An almost equally large market town exists at Igoji, the administrative center for that location. Abogeta only recently divided from Nkuene and its Chief's Camp, and the Area Council Hall, are in Kanyakine, a market town which draws on a limited population and has few facilities.

Density varies greatly between the locations, and even more between sublocations. Abogeta has only 0.65 persons to the acre, Igoji 0.88, and Nkuene 1.07. The local ICA figures on acreage and population per sublocation for Nkuene and Igoji (Abogeta acreage was not available), the sublocations approximately above 5000' had an average density of 1.96 persons per acre in Nkuene and only 0.77 in Igoji, while those approximately below 5000' had average densities of 0.50 in Nkuene and 0.97 in Igoji. From observation I would say upper Abogeta approximates upper Igoji and lower Abogeta lower Nkuene. Thus densities in South Imenti vary from ones that would be considered high in Central Province to ones quite low for a non-pastoral area.

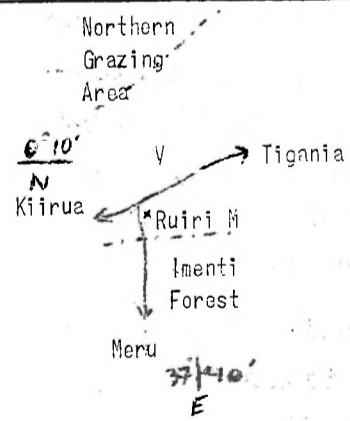
(4.) records I calculated a 1875 mm (74") annual average for Chogoria, at 5000', between 1951 and 1971, and a 1400 mm (55") average for Mitunguu, at 3350', between 1956 and 1971. I find these figures rather doubtful, however, and the EAC figures for Marimba are far different from Bernard's or what would seem right: I hope to check them in Meru soon.



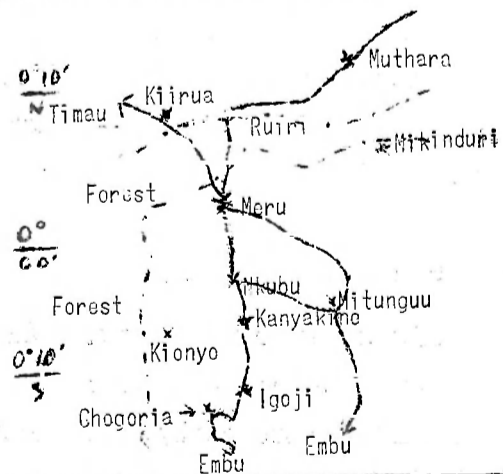
SOUTH IMENTI

- - -	Divisional Border	M	Market
- - - - -	Locational Border	A	Administrative Center
—	Major Road	H	Hospital
V	Stddy Village	D	Dispensary/Health Center

KEY TO MAPS



Ruiru One Inset



Central Meru Inset

The road network in the division would be quite good if it were not for the incessant damage by the rains. A trunk road from Meru Municipality to Embu passes through the three administrative centers plus one other large market, but it is not murramed, and during the rainy season is blocked almost daily for several hours by a mired bus or truck. An all-weather tea road is being extended to upper Igoji and already passes through much of upper Abogeta and Nkuene on its way to Meru. A murram track connects Nkubu with the lower (murramed) Embu-Meru road and the lowest part of the location. Other areas are served by Emergency or Harambee feeder roads, most in a bad state of repair but passable to a determined Land Rover. The upper Embu-Meru road through Nkubu is due to be tarmacked within a few years, and the tarmac has already extended from Meru to Nkubu, but the South Imenti stretch presents great engineering problems and is indefinitely postponed.

Almost all Meru (95.6%) live in Meru District (8:page 71). The Imenti are the largest subtribe, populating most of North Imenti Division and Nkuene and Abogeta Locations in South Imenti. Igoji Location is divided between the Igoji and the Mitini, an Igoji sub-unit distinguished for its pro-English ways by the other Igoji, who tend the other way.

South Imenti is surrounded by Meru people— Imenti to the north, Mwimbi to the south, and Tharaka to the east. One Briton owned land there for less than two decades, and a few dozen European teachers and missionaries and two Asian families—shopkeepers and teacher—work there. Out of the 572 people interviewed by questionnaire only six were non-Meru, Eleven more were non-local Meru (i.e., not Imenti, Igoji, or Mitini).

Media contact is low. 21% of questionnaire respondents said they listen to the radio six or seven times a week, 19% weekly or monthly, 16% more rarely, and 43% never. Only

2% claimed to see a newspaper six or seven times a week, and 73% said they never read a paper or journal, or have one read to them. 27%44% of respondents had reached Std. IV.

From the above it can be seen that external innovations must come from a limited number of sources. Such sources are short trips outside (usually to Nairobi), the rare individuals who worked outside for several years and returned when the Emergency began (most of these are now prominent citizens), and the extension services, administrators, hospitals, and schools.

B. South Imenti: Economic

South Imenti is divided into three agricultural zones.

1. From 5500' to 6000' altitude and above lies the tea zone. At the lower part of this zone coffee and tea are grown in conjunction, but past deprivations of CBD disease have caused many people (especially in Abogeta) to uproot their coffee and turn exclusively to tea. Pyrethrum can be grown above 6000', but until March 1972, when a government campaign came to fruition, only a handful of farmers grew it. Grade cattle are very popular and most people lacking them are restrained only by the lack of sellers and high prices. In this zone 53% of the people interviewed (180) owned at least one grade cow (or grade-AI mixture), while 68% owned one or more local cows. Two dairies collect milk from Abogeta and Nkuene Locations to sell at the major markets and institutions and KCC in Meru Municipality. Demarcation took place only recently in Igoji and no one as yet has a title deed on which to borrow money for a grade cow; thus there are comparatively few grade cattle and no dairy there yet. A large number of farmers especially in Abogeta and Nkuene have also turned to English potatoes and cabbages for cash and

subsistence needs.

2. The coffee zone, between about 4000' and 5500-6000', also contains a wide variety of traditional food crops: maize (very little hybrid), mung'au and other local beans, bananas, yams, sweet potatoes, arrowroots (cocoyams), and sugarcanes. There is an area around 4000' where coffee and cotton can be grown together, and this has been treated as part of the cotton zone. In Igoji and Abogeta the growth and partial home processing of snuff tobacco for local and NFD sale very nearly competes with coffee as the main cash earner. This zone was the original settlement area, where the homesteads from which people commuted to herd and farm special crops above and below were built, and it is much more crowded than the other zones. The median reported acreage for families of villages in the tea zone was 6 to 8, in the pure coffee zone 4 to 5, and in the cotton zone 9 to 12. 29% of the people interviewed in coffee-zone villages (182) had a grade cow and 66% a local one. Much time is spent by the older men in trying to find grazing on roadsides or in pruning high branches off trees to feed their cattle. Cattle retain their traditional value, such that at least the older middle-aged and old people would prefer several emaciated local cattle to one well-fed local or grade cow. Possibly because there is seldom enough grazing for cattle, dairying is rare.

3. The "cotton" zone, from 3300' to 4000', would be better termed the "food crop" zone, as few people as yet (19%) are growing cotton, which is the only genuine cash crop possibility yet introduced. Farmers grow large acreages of food crops and sell as much as they can to pay for school fees, clothes, etc. They have a good market in Tharaka, which often suffers from drought, and in the upper zones, which cannot properly produce such traditionally liked foods

as finger millet, millet, sorghum, and pigeon peas. But they are generally poorer in cash terms than the upper zones, and suffer more drastically in dry years from crop failures. This scarcity of cash is one of the major factors inhibiting the expansion of the cattle dip program into this area, and thus inhibiting the keeping of grade cattle, and to some extent local cattle as well. In the sample of 180, 2% had a grade cow and 38% a local one.

At present there are seventy-one agricultural staff (excluding animal husbandry) in the division— fifty-eight Junior Agricultural Assistants (JAA's) (including twenty in tea), twelve Agricultural Assistants (AA's) (including six in tea), and one Assistant Agricultural Officer. The distribution of JAA's is very uneven except in Igoji. In Abogeta the tea zone has eight non-tea JAA's, the coffee zone four, and the cotton zone one; in Nkuene the settlement scheme in the cotton zone has three non-tea JAA's, the rest of the zone one, the coffee zone four, and the tea zone six. Even the JAA's with smaller assignments complained about transportation problems across the rough terrain, and the AA's find it extremely difficult to get to their JAA's territories to advise them on the spot. Most JAA's interviewed said that they could only cover two or three farms intensively or ten neighboring ones very briefly in a day. But demonstrations are held several times monthly in several parts of each sublocation during the appropriate seasons. The tea extension staff are in a much better position: their maximum coverage is two hundred farmers per agent, and each tea farmer is visited at least once a month. It is perhaps some indication of the need for increased general agricultural staffing that several tea JAA's who had only had one month's training in general agriculture said they were often called on by their clients to give general agricultural advice when they visited about the tea. And yet the tea zone has the highest density of general JAA's!

South Imenti also has a certain amount of non-agricultural activity. The Government employs a small number of clerks, extension agents, and laborers, and the division contains a tea factory, thirty-two coffee factories, and two dairies. In a survey of the markets (any group of three or more shops) I found 188 general shops, 122 tailor concerns (some with two or three tailors), 49 commercial-beer bars and 41 local-beer bars, 46 hotels (tea rooms with/without full meals), 26 butchers, 19 sellers of cooked meat, 19 bicycle repair and 5 auto repair concerns, 11 shoe makers and 5 more shoe repairers, 10 hides and skins dealers, 8 carpenters, 7 dry cleaners, 6 posho mills, 6 watch repairers, 4 tinsmiths, a bakery, and various specialities such as hardware, fancy clothing, a bookshop, etc. In addition, a large number of carpenters, masons, sawyers, stonecutters, and barbers work outside the markets. None of these, however, employs more than five people full-time.

Despite all this activity, the division is basically agricultural, and there are probably no more than a dozen Meru men or women who do not at least take a hand in agriculture in the busy season.

Every farm is expected to produce subsistence in maize or millet, beans, and one or two vegetables, as well as cash crops or produce for sale. The extent to which this goal is realized varies greatly across the zones. In interviews with eleven farmers, most chosen for average acreage in their villages, payment of GPT, and lack of an unusually well-paying occupation, the average net income for 1971 was found to be 2190/=; but it was 3390/= for the four farmers in the tea zone, 2055/= for three in the pure-coffee zone, and 1090/= below. The cash payments made during the year varied enormously according to individual. One man was spending almost 1500/= on Harambee secondary school training for two children; one had just bought 1450/= worth of metal roofing; one had improved his house and spent a great deal

on special foods such as meat (which at 4/= the kilo rapidly mounts up); and one young entrepreneur spent almost nothing except on his fields. Two of the cotton zone farmers operated at a loss, using money saved from better years (1971 was a drought year), and two managed to save a very small amount. One coffee zone farmer spent almost 2000/= more than he gained, and two saved small to moderate amounts. All four of the tea zone farmers saved middling to high amounts, ranging from 900/= to two totals of 3550/=. Clothing, produce, and meat were the most onerous expenses. The tea and cotton zone farmers had to buy the most surplus food; the tea zone cannot grow most of the favored Meru foods and the cotton zone was under drought. In sum, it seems safe to say that the tea zone farmers are considerably better off than those below, and that in a good year cotton zone farmers — even if they don't grow cotton—might save as much as the coffee zone.

Table Six: Reported Income and Expenses of Eleven Farmers

(In Ksh)	Tea Zone Average	Coffee Zone Average	Cotton Zone Average	Total Average
Net income	3390	2055	1090	2190 (11)§
Meat	330	335	245	310 (7)
Cooking Oil	40			40 (2)
Soap, Salt, etc.	90	50	40	75 (5)
Local Produce	250	160	230	180 (10)
Pots & Plates	55		25	45 (3)
Clothing	250	390	320	315 (11)
School Fees	125	535*	80	220*(11)
Church	10	20	20	15 (11)
Harambee	70	25	80	60 (11)
Taxes	75	75	75	75 (11)
House Improvements	0	390	380	240+(11)
Doctor Bills			175	175 (1)

§ () indicates number for which item was recorded
 * includes one man paying secondary school fees; without him the figures are 55shs for the coffee zone and 95shs total.
 + or, for the three farmers who paid anything, 875shs.

C. South Imenti: Social

South Imenti is in a state of structural change. There is probably less cohesion within the society now than there was twenty years ago or will be twenty years hence. Since the Emergency in some places and since Independence or demarcation in others, clan meetings have ceased in all but five of the villages, and they only persist in two of those because the clan land coincided with the village at demarcation. In seven of the villages the elders take a secondary place to the subheadman (village administrative representative) or subchief in dispute settlement, and in only two do the latter take second place. In the last ten years old women even in the most of the more conservative areas have renounced their traditional naming ceremonies (a ranking and grouping device) and turned to the churches, of which there are usually at least three sects to a village. The young men have turned from their "dancing"—idle wandering with village age mates (once warriors) for about a decade or until ready to marry—to the district-wide secondary schools, job-seeking in Nairobi or Meru, or working on the land with their fathers or on their own plots. Men of all ages have neglected the old men's status-seeking system to work on their cash crops so as to pay for new status symbols—permanent houses, white-collar jobs for the children, store-bought items. My enquiries about the elders' judgment councils often brought the response that they were too busy farming nowadays, or that people wouldn't be willing to pay them a goat for judging anymore.

New social forms have emerged in compensation:

1. The main political arena is the coffee cooperative meeting (14:pages 83-99), which brings together several sublocations or a location as a unit in competition with

other units in the district. The purely tea or cotton areas have no such uniting force, though some sublocations group around a farmers' association.

2. The primary schools bring together each village, or group of villages, in a very real way. These are the beginning points of the attempt to secure a better position for the children, and a school is seldom found which is not built as well as the area can afford. Constant meetings are necessary to repair and upgrade classrooms and teachers' houses and decide on expansions, and the school committees always contain the most respected people in the village, if they have any claim at all to understanding literacy or organization. Only four of the nineteen villages studied did not have their own primary schools, and one had two. Nursery schools and their respective committees extend the activities for thirteen of the villages. Secondary schools are usually a more elite matter, involving non-leaders only through occasional meetings and contributions; they do not seem immediately to involve most farmers in the way primary schools and coffee matters do.

3. Churches are a unitary force across village boundaries and a somewhat divisive one within, although the younger generation seems to care less about sect differences than their parents. There are an average of two church buildings and three church sects to a village, with six sects in all South Imenti. 22% (123) of the people interviewed had no church, 21% (120) were Presbyterian, 34% (191) were Catholic, 11% (63) Methodist, 6% (36) Pentecostal (Full Gospel Fellowship) and 6% (34) Independent Pentecostal, and one Arathi, member of a small Kikuyu sect transferred to Meru. The first three are more established, and run women' and youth clubs which unite especially the women in home economics and other competition against other sects' clubs. The latter three are less than a decade old, in the area, meet more

frequently, and usually draw all their members together in a kind of pioneer spirit. I was told locally that ten years ago divisions between sects were significant and bitter, but now, although a person's friends are more likely to be co-worshippers, religious differences do not preclude co-operation against other co-worshippers by people of separate sects.

4. Harambee construction projects - of cattle dips, water furrows and pipelines, schools, and health centres - bring several villages or several sublocations together in co-operation, but except in the case of schools, this is usually ephemeral. Often a group finishing one project will go on to another, but this is a reflection of the unity already existing within that area and strengthened by a strong local leader, church, or extension agent.

5. Sublocation meetings are held several times a month in some places, and not even once a month in others. They usually serve as a forum for administrative and self-help pronouncements and collections, and are variously attended depending on local anticipation of being asked to pay for or support disliked taxes or projects. They often bring the self-help alignments and conflicts into the open.

6. Besides the church clubs there exist a few non-sect women's and sports clubs. The nineteen villages contain seven home-economics clubs (sect and non-sect) and four women's aid clubs which primarily assist poor or sick village-mates. Of two sports clubs, one is seldom activated and the other has turned into a men's home economics club, and is growing vegetables for sale. Clubs usually cover one or two villages only, but home economics club members are drawn together further by sporadic locational or inter-club competitions.

Other older forms continue strong in modified forms. In some areas the men's drinking sessions have

been transferred to the nearest bar and expanded to include younger middle aged, although many men have dropped out to concentrate on their farms, and no one would admit to me that the sessions involved a regular group meeting often. The traditional co-operation in fieldwork often continues, in Igoji often in the old form of invitations to neighbours and repayment with beer, and in many places in formally registered or informal shamba associations. But in many parts of Nkuene and Abogeta they have found that beer repayments now bring in only the free-loaders, and it is better to pay piecework rates in cash to a few helpers instead. Women get together over their goods in the markets, and on the roads going to and from market, as they used to do more often in each others' fields.

Friendships are still primarily within the village. In interview 540 people were asked to name the four friends and four relatives they visited most with. The number named from within the village ^{were} 55.3% of the total on average ranging from 39% for a tea area settled ten years ago by people from nearby to 73% for a mountainous area difficult to move about in. The number named from the most popular village outside was 8.4% on average, and from the second most popular 5.9%. The greatest overlap was 17% of Bothuguchi visitors named as Nkuene Village members, where a corridor of Bothuguchi juts away from the main village to abut the boundary of Nkuene. As it happens, these are both study villages. Other study-village overlaps more than 10% were Kithiro Bontwi people nominated in 14% of Kanjugi choices (but with only one nomination the other way) and Bothuguchi people nominated 11% of the time by Nkuene Village.

D. South Imenti: Medical⁵

South Imenti is served by two hospitals, a cottage hospital (health center), a dispensary currently being upgraded to a health center, and four regular dispensaries. In addition, some people go to two dispensaries less than five miles north of Nkuene, one Harambee health center receives a twice-monthly visit by a nurse, and two private doctors have visited Nkubu for clinics three times a week for the last eight months.

The division contains two completed and three semi-complete Harambee health centers, none with a prospect of being staffed in the foreseeable future. One of the hospitals is mission-run and one joint-mission-Government, the latter being located four miles south of the division. 58% of the 412 people who named the hospital they had most recently visited named the Nkubu Consolata Mission Hospital, which, although it must charge higher fees, has a good and long-established reputation. Very few people go to the District Hospital at Meru (named by 12%); and the Chogoria PCEA/Government Hospital (named by 22%) has only recently been improved and draws mainly from the sublocations on the southern fringe of the division. The traditional medicine men are dying and not being replaced as their fees and perhaps results compare unfavorably with those of the hospitals and dispensaries.

The 1971 Annual Reports for Nkubu and Chogoria Hospitals suggest that South Imenti is a relatively healthier place than others parts of Kenya. Using number of admissions to try to standardize for hospital service area, it is apparent that although the area has higher rates for tuberculosis, incidence of most infectious and notifiable diseases is lower, as is the rate of deaths per hospital admission (see Table Seven, next page).

5. I have plans to upgrade the data in this section during a final visit to Meru.

Table Seven: Annual Reports for Nkubu and Chogoria Hospitals, 1971, and for all Kenya, 1965[§], Standardized by Total Admissions

	Nkubu	Chogoria	Kenya
Admissions	7411	6495	165,636
Per Admission:			
Deaths	4.71%	4.65%	6.57%
Tuberculosis	5.07%	1.72%	3.95%
Pulmonary TB	4.68%		3.14%
Measles	3.09%		2.77%
Whooping Cough	0.50%		1.32%
Typhoid Fever	0.27%		0.18%
Leprosy	0.01%	0.62%*	0.26%
Brucellosis	0.03%		0.03%
Polio	0.01%		0.30%
Hepatitis	0.13%		0.40%
Tetanus	0.07%		0.55%
Kala-azar	0.05%		0.18%

§ The 1965 Report was published in 1969 and seems to be the latest available.

* Chogoria Hospital runs a leprosy center for the whole district.

Self-reported family illness should not be relied on heavily, since people often misunderstand, disagree with, or forget the diagnosis that was given them in the hospital or dispensary, assuming they went there at all. Of almost eight hundred cases of illness reported by questionnaire respondents, 13% were reported as malaria, 8% pneumonia, 19% various coughs and colds, 19% various types of stomach ailment, 3.5% tuberculosis and chest pains, and 3.5% each measles, whooping cough, backaches, and headaches. (Tuberculosis is traditionally regarded as a great stigma and even now few will admit to having it.) Tuberculosis and pneumonia

in the upper areas and malaria in the lower areas were regarded as the greatest risks by all health extension staff and medical personnel interviewed on the subject.

There are eight Health Assistants (HA's) and one Divisional Health Assistant in the division. They are charged with meat and shop inspection, latrine inspection, house and shed siting, water furrow surveillance, and public education in nutrition, child care, personal cleanliness, immunizations, and other health matters. But most HA's have to spend so much time walking between the markets where they regularly inspect commercially butchered meat that they have little time for the rest of their duties. In the whole sample only 14% (77) had had a visit from the HA within the year, and 34% (101) within two years. 35% (183 out of 520 respondents) remembered having heard the HA at a meeting within the year. The HA's in interviews maintained that when they do have time--about two to three afternoons a week--they manage to visit about ten homes at a time. I have not been able to resolve this discrepancy. Except possibly for one Igoji HA away on study leave, HA's presently stationed in lower Abogeta and Igoji frequently prosecute recalcitrants in court, while those in upper Abogeta and Nkuene do not. They who do not prosecute told me that there are large areas of their territory to which they almost never go without a subchief as escort, because otherwise they would be misdirected, abused, ignored, or even attacked.

E. Ruiri (North Imenti)

Ruiri One and Ruiri Two are villages in a smallholder settlement scheme created in the late 1950's to relieve Imenti land pressure south of the Imenti Forest. Ruiri One was included in the study as an afterthought, because a counterpart to the one South Imenti settlement scheme was desirable and because it was learned some of the settlers came from the study

division. All of the interviewees were Inenti, and half were natives of the village or had moved there over thirty years before. The following description usually glosses over factors that are identical with those in South Inenti already described.

Ruiri One lies between 4700' and 4900' on the western border of Tigania Division and nine miles north on the main murrum road from Meru Municipality to Meru Game Park. To the north is an artificial line dividing it from the Northern Grazing Area, the district's pasture reserve, and there the village fields blend rapidly into ^{nearly} impenetrable thornbush. To the south is a narrow band of forest separating it from the central Meru area. To the west are Ruiri Two and further settlement scheme villages. Locational headquarters is ten miles west at Kiirua, and little transport goes there except via Meru.

The village lies on a very gently sloping plain. It has access to no large rivers and lies in the rain shadow of Mount Kenya: Uringu, five miles east and 300' lower, recorded an average of 38.70" from 1950-65, varying from 22.30" to 75.20" (1:page 36). Soils are dark red friable clays and natural vegetation is dry intermediate forest. One large furrow comes from the Kiirua area. Water for personal needs is probably usually adequate but the crops must suffer frequently.

Ruiri is in a mixed cotton-coffee zone. Coffee was only introduced recently (1963) and is not widespread, and cotton is only grown irregularly (none in the sample sold any in 1971). Some snuff tobacco and miraa (a narcotic widely grown in the next village over in Tigania) is grown but only 60% (18) of the farmers interviewed reported a cash crop (all coffee), less than any village studied in South Inenti.

However, a great many food crops are sold, probably in Meru Municipality. The median farm size in the sample was 9 to 12 acres. Six JAA's and one AA work in the sublocation. The nearest dip is at Ntutua several miles away; 7% (2) own a grade cow and 53% (16) a local one. Individuals sell their milk privately if at all.

Buses to Meru Municipality are frequent and a large number of men work there and return home at night. Ruiri Market itself is only of medium size but specialized. Meru is the nearest larger market.

Ruiri farmers rely primarily on Meru District Hospital, named by fifteen as the site of their most recent visit, but nine farmers (30%) denied ever having been to a hospital at all. 14 out of 26 named the Ruiri Mission Dispensary in Ruiri Two (one and a half miles away) as their last visit to a health center or dispensary, and nine named Mcoroiboro, four miles west. A health assistant lives in the village and seems to be extremely popular: 26 of the 30 farmers named him as their most favored source of health information.

Ruiri One has three church buildings, a nursery school, a primary school, and a coffee society office on the border, but no clubs or clan meetings. 55% of visitors named were from within the village, or from Ruiri Two, which is often not distinguished from it. The social situation mirrors South Imenti fairly well, except that, as a settlement scheme, it contains fewer relatives or clansmen than most other villages in the study.

V. Results and Discussion

Near the beginning of this paper four hypotheses for testing were listed. A truly appropriate test of these hypotheses is not yet possible, as it was impossible to work out the necessary indices of conditions and checks on deviant responses

to adoption questions due to the limited time and computer facilities available. This section should not be taken as more than a trial run of the testing process.

Two measures of acceptance of the selected innovations were included in the questionnaire. One was the simple question, "have you ever used X?"; the other, "what year did you start to use X?". More people probably claimed to use X than did, if it seemed a good thing or something an educated person would approve of. On the other hand, many people who did use X refused to try to guess what year they'd started. The two indices of adoption are thus in need of cross-checking and refinement. An index based on the first question is used here because it seems likely to be more accurate than the second. The method of indexing used is the same as with the condition indices, and the village results will be found in Table Eight, next page.

If we take the village classification in Table Five (page 14) and compute adoption indices for each cell based on Table Eight, we arrive at the tables found on page 37. The hypotheses on page six are partially supported by these results, weak as the components are. Under a constant condition of "wealth", (low), adoption is higher under conditions of high "cohesion" than low—supporting hypothesis 1—but slightly lower when "health" is poor. In the same circumstances adoption is overall slightly lower in more "healthy" areas—supporting hypothesis 2, if in an unexpected direction. Under a low "cohesion" condition, "wealthy" villages in poor "health" adopt more than "healthy" villages with low "wealth"—supporting hypothesis 3. And under a low "health" condition, highly "cohesive" villages with low "wealth" adopt a little less than "wealthy" villages with low "cohesion"—supporting hypothesis 4.

Table Nine: Adoption by Condition Indices, According to Intuitive Innovation Type

	Wealth Low		Wealth High	
	Health Low	Health High	Health Low	Health High
Agricultural				
Cohesion Low	L	L	H	
Cohesion High	H	L		M
Medical				
Cohesion Low	H	L	H	
Cohesion High	H	H		M
Status				
Cohesion Low	H	L	H	
Cohesion High	L	M		M
Total				
Cohesion Low	H	L	H	
Cohesion High	M	H		M

The primary purpose of this study, however, has been to try to find proof that cohesive factors—ones best affected by community organizers like the Community Development Department in Kenya whose extension staff are so few on the ground—have such an important part to play in development that they should be stressed almost as much as the economic factors of extension education, marketing, etc. This purpose cannot be fulfilled through this paper, although there are indications above that it will be in the full analysis, until which the reader should reserve judgment.

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