THE DESIGN OF RURAL DEVELOPMENT:
PROPOSALS FOR THE EVOLUTION OF A
SOCIAL CONTRACT SUITED TO
CONDITIONS IN SOUTHERN AFRICA
PART I

Norman Reynolds

Saldu Working Paper No. 40

Cape Town
August 1981
"The physiognomy of a government may best be judged in its colonies, for there its features are magnified and rendered more conspicuous. When I wish to study the merits and faults of the administration of Louis XIV, I must go to Canada; its deformity is there seen as through a microscope".

de Tocqueville

"The spirit of a commercial people will be, we are persuaded, essentially mean and slavish, wherever public spirit is not cultivated by an extensive participation of the people in the business of government in detail".

John Stuart Mill

We are grateful to Paul Andrew of the Urban Problems Research Unit for drawings and maps reproduced in this Working Paper.
# TABLE OF CONTENTS

## PART I

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>OUTLINE OF PROPOSALS</strong></td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>THE ELEMENTS OF DESIGN</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Poverty</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Land Hunger</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Communal Land Systems</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>The Small Farm Sector</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Basic Needs Approach</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Basic Needs and Economic Planning</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Footnotes to Chapter 2</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>THE UNDERWRITING OF SECURITY AND THE FURTHERANCE OF A SOCIAL CONTRACT IN THE COUNTRYSIDE: THE ROLE AND POTENTIAL OF AN EMPLOYMENT GUARANTEE SCHEME</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Aim</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Method</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Implications of an Employment Guarantee Scheme</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Control of the Assets</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>The Cost of an EGS</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Benefits of an EGS</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Footnotes to Chapter 3</td>
<td>25</td>
</tr>
<tr>
<td>4</td>
<td>THE COMMUNITY LAND COMPANY (CLC)</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>The Constitution and Working of the Community Land Company (CLC). Physical Definition of a CLC</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Membership</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Shareholding</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Grazing Land</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Taxation</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>The Objective Governance of Livestock Management</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>Communal Forestry</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Irrigation</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Arable Land</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>The Financing of the CLC</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>Footnotes to Chapter 4</td>
<td>44</td>
</tr>
<tr>
<td>5</td>
<td>THE COMMUNITY SERVICE ORGANISATION (CSO)</td>
<td>45</td>
</tr>
<tr>
<td>6</td>
<td>AGRICULTURAL LAND SETTLEMENT</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>Footnotes to Chapter 6</td>
<td>56</td>
</tr>
</tbody>
</table>
Table of Contents continued

CHAPTER 7 AGRICULTURAL CREDIT: THE ROLE OF THE CREDIT UNION 57

Introduction 57
The Proposal: a national banking system built upon the Credit Union 60
The Credit Union League 69
Conclusion 70
Footnotes to Chapter 7 71

CHAPTER 8 AGRICULTURAL RESEARCH AND EXTENSION 72

The Organisation of Agricultural Research and Extension 82
The Organisation of the Extension System 84
What is an Optimum Level of Investment in Agricultural Research and Extension? 92
Footnotes to Chapter 8 96

TABLES

CHAPTER 1 I Black Poverty in South Africa: 1980 7
II Growth of Urban Population 7

CHAPTER 2 I Additional Expenditure from Wage Income of Public Works 24

FIGURES

CHAPTER 4 1 Marginal Cost and Marginal Revenue 31
2 Marginal Cost and Marginal Revenue 31

CHAPTER 5 1 Initial Rural Organisation 46
2 Rural Organisation after Community Development 46
3 Rural Organisation Proposed: Autonomous Communities 47

CHAPTER 8 1 The Classic Extension Model 77
2 With Attempts to Improve Communication 77
3 With Multi-disciplinary Research into Farmer Systems 77
4 Organisation Chart: Agricultural Research and Extension 85
5 The Proposed Agricultural Extension Model 94
# Table of Contents continued

**PART II**

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>THE UTILITY OF A COMBINED PERIODIC SERVICE AND</td>
<td></td>
</tr>
<tr>
<td></td>
<td>REGULATED MARKET SYSTEM IN THE DEVELOPMENT OF</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ECONOMIC HINTERLANDS: THE CASE OF ZIMBABWE'S TRIBAL TRUST LANDS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Proposal</td>
<td>99</td>
</tr>
<tr>
<td></td>
<td>The Regulated Market Society</td>
<td>99</td>
</tr>
<tr>
<td></td>
<td>Footnotes to Chapter 9</td>
<td>120</td>
</tr>
<tr>
<td>10</td>
<td>CO-OBJECTIVE DAIRYING AND THE DEVELOPMENT OF THE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SMALL MIXED FARM SECTOR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Footnotes to Chapter 10</td>
<td>127</td>
</tr>
<tr>
<td>11</td>
<td>AN APPROACH TO A COMMUNITY LED, STATE SUPPORTED SCHOOL SYSTEM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Voucher System</td>
<td>144</td>
</tr>
<tr>
<td></td>
<td>Objections to the Voucher System</td>
<td>145</td>
</tr>
<tr>
<td></td>
<td>A Cross-Over Tax</td>
<td>146</td>
</tr>
<tr>
<td></td>
<td>The Financial Benefits of a Voucher Plus Tax System</td>
<td>146</td>
</tr>
<tr>
<td></td>
<td>Brief Notes on the System</td>
<td>147</td>
</tr>
<tr>
<td></td>
<td>Education and Rural Development</td>
<td>147</td>
</tr>
<tr>
<td></td>
<td>Footnotes to Chapter 11</td>
<td>151</td>
</tr>
<tr>
<td>12</td>
<td>HEALTH: PREVENTION IS STILL REVOLUTIONARY</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Footnotes to Chapter 12</td>
<td>152</td>
</tr>
<tr>
<td>13</td>
<td>RURAL ELECTRIFICATION</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Footnotes to Chapter 13</td>
<td>157</td>
</tr>
<tr>
<td>14</td>
<td>RIGHTS, PUBLIC INTEREST LAW AND THE FURTHERANCE OF</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DEMOCRATIC INSTITUTIONS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Footnotes to Chapter 14</td>
<td>158</td>
</tr>
<tr>
<td>15</td>
<td>MANPOWER AND THE USE OF SOCIETY'S RESOURCES</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Staffing Rural Institutions</td>
<td>159</td>
</tr>
<tr>
<td></td>
<td>Short-term Consultancy</td>
<td>160</td>
</tr>
<tr>
<td></td>
<td>Opening the way to public and private sector financial, technical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and managerial support for development programmes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Footnotes to Chapter 15</td>
<td>166</td>
</tr>
<tr>
<td>16</td>
<td>IMPLEMENTATION: THE ART OF GOVERNMENT SURVIVAL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A Mixed Planning Model</td>
<td>167</td>
</tr>
<tr>
<td></td>
<td>Administration</td>
<td>168</td>
</tr>
<tr>
<td></td>
<td>Implementation</td>
<td>170</td>
</tr>
<tr>
<td></td>
<td>Conclusion</td>
<td>171</td>
</tr>
<tr>
<td></td>
<td>Footnotes to Chapter 16</td>
<td>175</td>
</tr>
</tbody>
</table>
Table of Contents continued

TABLES

CHAPTER 9  1 Existing and Presently Proposed Hierarchy of Service Centres in Zimbabwe  110
2 Revised Hierarchy of Service Centres in Zimbabwe  112
3 Costs of Whitsun Proposal and of the Proposed Alternate for Urban Places in the TTLs  112
4 Illustrative Table Comparing Efficiencies in Crop Marketing  121

CHAPTER 16  1 Implementation: likely sequence  180

FIGURES

CHAPTER 9  I New Periodic Market  116
II Developing Periodic Market  116
III Regulated Market Society  116

CHAPTER 10  I Diagram Illustrating the Functions of and Relations Between the Central Union (or Agency) and Village Co-operatives  134
II Village Co-Op Society  136

CHAPTER 11  I Proposed Education System  148

CHAPTER 12  I Health System  156

CHAPTER 14  I The Administration of Rights and of the Public Interest  164

CHAPTER 16  I Planning, A Mixed System Viewed as a Continuum  176

MAPS

CHAPTER 9  I Rural Service Centres: An Example as Proposed in the Whitsun Report  114
II Altered Proposal Showing Periodic Sub-System Based Upon Chinyika  115
CHAPTER I

INTRODUCTION

In the sections that follow, programmes and institutions are proposed which together are seen as providing a framework for rural development. Each section can be considered on its own or evaluated as part of the whole. Each proposal is written in a factual, politically neutral manner. The overall intention is imbued, however, with certain values which must be explained.

The historical neglect of the countryside and the enormous stresses imposed upon rural institutions and society in Southern Africa by economic and social measures which have discriminated against blacks have now to be redressed. The importance of the land tenure and agrarian system chosen are reinforced by current problems that arise in large measure from the tangle of poverty, unemployment, growing social stratification and population issues.

To provide a measure of progress the agrarian system must ensure immediate improvements in human welfare and security. In the long run it must raise the organisational and political capacities of the countryside. It must also be capable of handling changing pressures on the land and complex allocation decisions without placing inordinate demands upon external, usually governmental, management of daily affairs.

The key elements of the proposals are strong communal institutions enjoying the control of local resources and direct national budgetary support. Local initiative is encouraged, but is bounded by limits imposed by individual rights and by the public interest. Service institutions that allow member and group control over the local government structure are proposed to check the self-serving instincts of departmental hierarchies in favour of local initiative and innovation. Overall, the design seeks a balance of forces between the individual within communal organisations and between communities at the periphery of society and government at the centre.

The operation of the whole is intended to realise many of the moral and political concerns of the 'Basic Needs Approach'. Equality, mass participation, debureaucratization, redistributive measures, freedom, human rights and self-reliance are usually held to be central to an application of the basic needs approach. In short, it is a highly decentralized model, providing a variety of modes for
individual and community participation, within a workable philosophy of governmental functions redefined from the field upwards. Development is seen as a process in which individuals, groups and territorially organised communities increasingly mobilise their human and physical resources to realise common social, economic and political benefits at local and intermediate levels.

The concept of social change used has two parts. First, many of the elements in the proposals underwrite individual and group security; security which can be bent towards the achievement of greater equity and productive efficiency. Secondly, it is seen as being capable of unifying broad political spectrums and of providing government and political structures with the material for planning: ideas, values and broad pictures of content. It proceeds from the premise that all previous experience of change has to be rethought in terms of a new, that is, the present reality. The reality is best first exposed and later the nature of organisations and of power altered to fit that reality by the extension of democracy. Hence, the delegation of power and modes of direct participation should be the management aims of a development programme.

As President Nyerere has recently stressed, 'the fight against poverty is not just a question of investment and technology. It is essentially that of a social order, therefore it is a highly political subject'. He called for effective land reform that 'places land in the hands of rural families for their use to meet their needs first' and for 'the supporting services, infrastructure and knowledge'. Government, he argued, could not achieve rural development by itself. It can only 'facilitate it and make it possible. It can organise help and can guide: it cannot do. For rural development is the people's development of themselves, their lives and environment. And the people cannot do if they have no power ... Freedom is essential to development and not just a product of it'.

Outline of Proposals

1. An Employment Guarantee Scheme (EGS)

This is a public works programme that responds to individual demands for work in the countryside within programme rules. The evolution of a social contract format in the EGS is seen as furthering the significant potentials of income redistribution, of capital creation and of technical innovation inherent in public works schemes. The EGS offers a degree of individual control over additional work opportunities in the countryside. In that sense, it represents
an extra source of economic security and of income within a programme that underwrites the acceptance and the implementation of change, particularly the emergence of strong communal and co-operative organisations. The operation of a widely dispersed programme will necessitate technical and managerial innovations jointly by government departments and communities. Rapid report-back, monitoring and evaluation procedures are possible and would provide a wealth of immediately useful planning data. The EGS is capable of playing a central role in the mobilisation of resources and in the design and utilisation of capital assets in the countryside.

2. **The Community Land Company** *(CLC)*

The CLC represents an extension of traditional reciprocal work and tribal land-holding patterns into a company form in which members hold equal shares. The company concept changes the traditional right of access to land for arable and grazing purposes into an equal share in an asset, the communal land. Traditional rights are today being unequally exercised. The company would re-establish basic equality in terms of ownership, of dividends and of rights to participate while allowing a variety of procedures to be used by members to determine the use of land and scale of farming. The concept is particularly well suited to the management of the common resources; grazing land, forests and irrigation since it brings private costs into alignment with social costs. It also serves as a basis for joint investment and for co-operative forms of service provision.

3. **The Community Service Organisation** *(CSO)*

The CSO represents a reformulation of local government in a strong service mould. Control is shared between government and member community organisations *(the CLOs)*. Budgetary, voting and other devices give communities a predominant say in the CSO. The predominance of local interests is constrained by government operation of residual sanction powers over communal use of public funds according to objective criteria on equity, efficiency, ecological and technical grounds. The project investment analysis format is seen as central to the exercise of the sanction powers by government. In addition, such analysis should enhance local understanding of choices, priorities, scale and sequence, thereby creating a vital educational forum for members of CLOs, local government officers and technical groups.
The intention behind the CLC and the CSO is to reinstate communal boundaries and to effect mutual policing of these boundaries by members and government. Relative powers and the procedures that follow are designed to instal effective gatekeepers over community affairs so that a redefinition together with a separation of government's service and regulatory roles are effected. The ultimate aim is the realisation of legitimate local leadership and group roles under an amalgamation of regional and political interests within a 'reconciliation' ruling party at the centre.

4. Agricultural Land Settlement

An extension of the benefits of CLC organisation to ease the difficulties of mounting a large-scale resettlement programme on formerly 'white' land.

5. Credit: The Role of Credit Unions

Credit Unions are member-controlled savings and loans societies. They are capable of serving the small and the poor in ways and at costs beyond the reach of conventional banking institutions. They are capable of local adaptation, they further members' education in thrift and money management and they encourage group functioning. Moreover, once established, they can become the retail or field end of regular banking institutions, thereby completing a national banking system.

6. Agricultural Research and Extension

A dual system of farmer control, collegial professional relations and government management is proposed aimed at rectifying the denial by scientists of indigenous knowledge. It is seen as the only way in which peasant farmers, through group action, can be led into prominence as financiers of research efforts.

7. Periodic Markets and Regulated Market Societies

The co-ordinated delivery of services is proposed as a means of 'calling forth' periodic markets in the countryside as the first organic step towards breaking the dependence on urban centres by the promotion of local market development and regional specialisation. Regulated Market Societies offer economic efficiencies upon which to build co-operative endeavours whilst providing a point at which to raise local resources.
8. **Dairying as an Instrument of Rural Development**

The family cow, within a co-operative dairy system, is able, in many areas, to act as the linchpin around which to build an intensive small-scale mixed farm sector.

9. **Education**

Parent responsibility, community action, and professional conduct are often eroded in Government-financed and managed school systems. A reworked voucher plan does provide the means to achieve a community-led, state-supported school system which promises far higher levels of human investment and responsiveness than can the State alone.

10. **Health**

The individual has to be made responsible for his health. This can only be realised in society in conjunction with neighbours or fellow workers. The elitist, authoritarian nature of the medical profession has to be reformed by its reformulation as a service governed by 'health communities' which control health budgets.

11. **Rural Electrification**

Rural electrification can be so designed as to provide an equitable local tax within community organisations.

12. **Human Rights and the Public Interest**

Human rights and citizen self-government are key goals to be realised in the process of development. Natural rights have to be enunciated in a Bill of Rights against which all law and policy can be tested. Economic courts are recommended to assist in the development of law and in the definition of individual, group, institution and public rights.

13. **Manpower and the Use of Society's Resources**

A bridge is required to be provided in order to enable rural communities to draw upon the managerial and technical wealth held in the modern sectors. Proposals are put forward to achieve this and to provide career avenues for young people in rural work.

CHAPTER 2

THE ELEMENTS OF DESIGN

"For I am all the subjects that you have,
Which first was mine own King: and here you sty me
In this hard rock, whiles you do keep from me
The rest o' the island."

Caliban. The Tempest.

The elements that one would like to include in the design of rural development are easy to list. Far more complex is the choice of planning philosophy, of legal and of administrative systems that would fuse the elements into a working whole.

The countryside of southern Africa can be described in a few word pictures, pictures which provide clues to the desired design elements.

Poverty

There is an astonishing concentration of poverty in the countryside. This is so not only in the 'tribal' areas but also on white farms. Official figures estimate the number of people in 'absolute poverty' around the world at 657 million in 1962 and at 700 million in 1972. 85% of the poor live in the countryside. 1

In South Africa a staggering 93.7% of poverty is contained in the homelands and on white farms. One says 'contained' for the panoply of racial legislation has prevented the natural movement of people to where employment, services and a settled family life is possible - the towns. This is borne out by the following figures which show how government policies since the 1960s have stifled the normal process of movement to urban areas in the process of economic development. (See Table I)

In fact, the threat which rural poverty poses to orderly urban growth endangers the normal economic chances of government removing influx control.

In Chapter 4 an employment guarantee scheme (EGS) for the countryside is proposed. Such a scheme has demonstrated its value in India and holds great promise for countries like Zimbabwe. It alone, however, cannot relieve the
## TABLE I:

**Black Poverty in South Africa: 1980**

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of Blacks</th>
<th>No. of Families (5.5 persons to a family)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>5,320,418</td>
<td>967,349</td>
</tr>
<tr>
<td>White farm areas</td>
<td>4,323,545</td>
<td>786,099</td>
</tr>
<tr>
<td>Homelands</td>
<td>11,338,308</td>
<td>2,061,511</td>
</tr>
<tr>
<td>Total</td>
<td>20,982,271</td>
<td>3,814,959</td>
</tr>
</tbody>
</table>

b. Taking Poverty Datum Line at R200 p.m. per family

- 25% of urban families average shortfall R50 p.m. = R229.1m (8.5% of GDP)
- 50% of rural families average shortfall R80 p.m. = R31.4m (13.6% of GDP)
- 75% of homeland families average shortfall R120 p.m. = R185.5m (80.1% of GDP)


## TABLE II:

**Growth of Urban Population**

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual 1960</th>
<th>1970</th>
<th>1980</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>46.7</td>
<td>47.8</td>
<td>47.3</td>
</tr>
<tr>
<td>Predicted 2</td>
<td>49.6</td>
<td>55.3</td>
<td>56.7</td>
</tr>
</tbody>
</table>


pressure on South Africa's towns for the problem there is not poverty alone, but structural arising out of the neglect of the rights and economic value of the majority of the population.

The money cost, Table 1, of redressing rural poverty in South Africa, R2.7 billion per year is roughly 30% of central government revenues. The comparable figure, using the EGS, for India is 11%-13% of her capital budget. In other words, India can afford to tackle poverty in the countryside by fairly direct measures (public works), but South Africa cannot, despite her greater wealth. If the poverty datum line is reduced to R150 p.m. it would still mean a figure equal to about 16% of central revenues: too high a figure. Clearly, South Africa has to develop a set of programmes, urban and rural, including a proper education system, before she can contemplate handling her major social and economic problem. In subsequent chapters, a number of proposals are put forth which together offer an organic, flexible, individual and community managed rather than purely racially composed solution: albeit a first approximation.

Ample evidence exists to show that disparities within the countryside have to be accorded a place in policy formulation. In Zimbabwe, roughly half the families in the Tribal Trust Lands (TTLs) do not own cattle and 20% have no rights to land at all. It is thought that some 25% of families in the TTLs survive by adopting a migratory two-legged stance, husband in town, wife and children in the countryside. If urban incomes, house tenure and pension payments could be improved, that number of families might forsake the countryside. While useful, it would not itself solve the land question for Zimbabwe does not have sufficient land for all present rural families. Further, population growth threatens any possible improvement in the arithmetic of man:land.

Land Hunger

Past attempts and present proposals to define 'economic holdings' as the basis for the establishment of a yeoman peasantry on the land have failed to be implemented or are today simply impractical. It would take the removal of roughly half the families from tribal areas to achieve the minimal economic holdings recently advocated for KwaZulu and for Zimbabwe's Victoria Province. In any case, the concept of an economic holding is problematic and cannot include altered factors over time.
Growing pressure on the land has helped to unleash dangerous processes. Land not suited to cultivation is brought under the plough in order to establish ownership claims. In the process it denies society the benefits, often communally managed, of access to the protective and complementary factors that flow from grazing lands and forests, and from conserved uplands. In these areas, traditional institutions have all but lost the ability to order land use in terms of land capability and towards the maintenance of ecological systems. Already too many members have been sidelined - they do not participate in cattle grazing or in arable farming.

Population growth itself poses a threat beyond the management and financial capacity of rural communities. Yeoman farming on freehold farms does not hold the answer.

Communal Land Systems

Communal systems of land holding offer an inherent means to order societal interests. In the strong models, the collectives and communes, group decisions are made on the uses to which extensive tracts of land are put. The results have been impressive in many ways. Few members, if any, get left behind so that the more blatant aspects of poverty are eliminated. Social consumption, particularly of education, health and housing forms a larger share of total consumption than is common in less organised societies. Related aspects of production are better catered for; for instance, greater manure and compost use, often with the aid of methane digesters. And there is a notable degree of local innovation and adaptation of systems and of science.

China's great socialist experiment has had the most influence on third world thinking. Two aspects of that experiment stand out. China's climate, topography, fixed land base, farm technology, administrative and social traditions are all well suited to the system of intensive agriculture built up over the centuries and further developed since the Revolution. Chinese peasants have swelled total agricultural production by increasing already high labour participation rates and number of days worked per year while accepting declining productivity per man day. Increasing man-land ratios, restricted private plots and controls over rural-urban migration have meant that extra work under collective conditions was the only way to safeguard existing living conditions, let alone attain higher incomes.
The presence of a large party cadre, forged and disciplined by years of national trauma prior to the revolution, was a factor in persuading reluctant families to join neighbouring communes. Yet individualism was later resurrected in the form of individual plots, material incentives and the series of steps undertaken to decentralise the work point system down the three-tier hierarchy of commune, brigade and team; i.e. towards family units. The base incentive now applies to individual effort.

The manner in which individual incentives on the Chinese commune are fitted into a larger system of collective and sector incentives remains problematic. As a recent report states, 'In a system of collectivized agriculture it is very difficult to devise a system of incentives that would induce individuals and collective units to organize their efforts in a way that would maximize output and economize on scarce resources... (and) to establish an appropriate system of remuneration for individual workers within a collective unit and to work out a system of marketing, prices and taxation that would induce collective units to undertake the socially necessary effort'.

With what success China manages to manipulate the variety of rewards and sanctions involved will be of interest. Until her labour force peaks in the next decade or two, and until labour can move off the land to industrial jobs, China will be walking a tight-rope to maintain the economic and welfare benefits achieved in the countryside. Thereafter, as returns to labour increase in the countryside, it is likely that the organisation of the communes will shift to provide greater personal freedom.

Nonetheless, the caveat that China's experience will be hard to emulate must be introduced. The history and the setting of her communes cannot easily be replicated. Neither are the social and psychological mechanics of modern China fully understood.

In contrast to China, even China of a century ago, Africa is still an extensive user of resources with little of the social, administrative, market or physical infrastructure associated with intensive agriculture. Africa has 10% of the world's population and 14% and 26% of its arable and grass land. Yet it has only 13% of its cattle and produces merely 5% of its beef, 4% of all meat, 3% of its milk and 5% of its cereals and pulses. Africa is the poorest continent.

Tanzania, since the Arusha Declaration of a decade ago, has attempted to translate African Socialism, or more accurately Ujamaa or familyhood, into agrarian practice. The programme has aimed at communal action and direct
participation in decision making by the rural populace. It was introduced at two levels: far-flung hamlets were reconstituted into 'development' villages endowed with a government framework for communal management. Though smallholdings remain the predominant mode of agricultural production, the programme has helped in the provision of social services and it has enabled a degree of equity in farm sizes to be achieved along with a transition from extensive to more intensive farming. Tanzania's collective agricultural scheme, the Ujamaa village, has been less successful and greater coercion has been resorted to with time. Individual plots do play an important role in many Ujamaa villages. What is significant is that collective action in the countryside in Tanzania has exhibited itself more successfully in relation to public works and to non-farming productive enterprises than to collective agriculture. On balance, it would seem that Tanzania has achieved a set of preconditions favourable to greater co-operative if not collective endeavour based on communal planning mechanisms. 9

A more pessimistic view, advanced by Goran Hyden, is that the State in Tanzania has failed to engage or to "capture" the peasantry. 10 The peasantry, living virtually untouched by past colonial attempts to bring them into the cash economy, remain safe within a pre-capitalist mode of production. They have chosen to retain loyalty to what Hyden terms their 'economy of affection' rather than submit to dependency on Tanzania's other classes.

Tanzania's poor resource base, her years of underdevelopment and the failure of her attempt to rely mainly upon a political market-place, degrading the market as a policy tool, form the gist of the economic analysis behind Hyden's theory. Unfortunately, he advances no clear prescription. In southern Africa, the position is, for the most part, quite different. Land is in short supply and the migrant labour system links most families to the towns. The countryside would welcome measures that enabled its population to put poverty and immobility behind them.

Tanzania's experience belies the often presumed logical extension of informal African labour sharing and extended family arrangements to proposals for the pooling of land or of cattle. 11 The co-operative rather than the collective idiom is in keeping with African values. Evidence from Botswana supports this contention with regard to cattle. 12
The Small Farm Sector

The original collectivization proposals were made in Russia at a time when large-scale mechanised farming was held to be more efficient. In the cereal belts of Russia, that supposition may still hold, particularly where returns to capital and labour are held to be more valuable than to land. In much of the Third World that option does not exist for land is the commodity in short supply. Indeed, the bulk of evidence from the 1960s and 1970s demonstrates that small-scale, mostly family, farming achieves the greatest intensity of land use. Moreover, small farms that are well serviced can markedly increase the number employed on the land. Combined with the development of local markets and of service and processing industries, this helps to elicit further local comparative advantages; opportunities to which large units often cannot respond. Tanzania and Kenya in Africa and most of Asia demonstrate the pattern.13

The lessons of experience elsewhere point to the desirability of a small farm rural sector operating under communal controls over land use. Co-operative forms of service organisation and relatively high levels of collective consumption of social services are desirable as arising out of communal institutions and as offering modes of participation and of support to the individual.

The Nature of Development

The concept of development used must treat as an integral process a widening of opportunities for individuals, social groups and territorially organised communities at local and intermediate levels and the mobilisation of human capabilities and resources for common social, economic and political benefit.14

The experience of no one country can be borrowed wholesale. Each country has to explore its own history and its own reality before it can find a way to a solution of its problems. Popular clamour for radical change presupposes that a ready-made model exists, waiting in the wings to be drawn onto the national stage. If introduced as the only or superior model, it can endanger constitutional institutions for it radicalizes the political struggle. Renato Zangheri, invested with thirty years of civic reform in Bologna, remarked, 'It is not those who shout "revolution" loudest who necessarily want it. It is those who create the conditions for the revolution's coming. And it never comes in the same way. Each time it comes in a different guise and everyone must find his own way to change'.15
Basic Needs Approach

From the dissatisfaction with the results of past development efforts has arisen the 'Basic Needs Approach.' It is a world-wide movement directed at a set of action priorities on behalf of the poor. Its major strength is its concern for people rather than economies or other abstract systems. It sets out to fulfil urgent individual and collective consumer needs (shelter, food, clothing, health services, education, civil rights and the like) within a loose paradigm that postulates that such an approach will optimise employment and resource use and ease the balance of payments.

The basic needs approach emanates from no economic or political theory. The emphasis is on the immediate needs of the poor, placing present consumption ahead of investment. It does go on, however, to stress the investment benefits that would flow from a healthier, better housed and better trained population. Its egalitarian focus lends it a moral justification. That strength, despite conceptual weaknesses, should not be underestimated.

The approach raises no new questions and provides no new answers. Rather it demands greater success than hitherto in economic management with particular reference to the poor. In that sense, it is akin to a political movement. It aims to strengthen the hand of the poor, the women, and rural as against urban dwellers. It seeks to define an acceptable social order in which human fulfilment is possible.

The basic needs approach requires effective decentralisation. The concern with everyday needs suggests that the people, rather than central planners, should have the say in setting or defining basic needs as these are essentially individual or group value judgements. Indeed, the approach advocates decentralisation and debureaucratisation; both threats to the status quo.

Basic Needs and Economic Planning

Planners cannot as yet handle the differentials between inputs (food, teachers, nurses, etc.) and the 'output indicators' (calories, literacy rates, mortality, etc.). The planners' tendency to use an input-output framework, linear programming techniques and the setting of targets is likely to result in one-solution approaches, thus countering individual and group choice, and limiting variety and modes of participation. If the planners come to dominate, the approach becomes an issue of central political choice, with problems of definition and measurement for implementation and for evaluation. If this happens, then the centre cannot act as the reflection of local conditions and wishes.
The first major exercise to plan for a western country with a basic needs approach is that undertaken for Portugal's medium-term plan for 1977-80. The exercise produced a useful set of indicators with which to assess the efficiency of policy and programmes and against which to measure performance. It did not provide the institutional, programme or investment details needed for implementation. Manuela Silva, at the time the Secretary of State for Planning in Portugal, expressed the dilemma involved as follows: 'If basic needs are to be regarded as the structural pole of development and as the vector of the orientation of the economy, the machinery of government must be capable of effective formulation and execution of plans. In particular, undue centralisation or concentration of administrative functions might create a bottleneck. Also, methods of operation that are ossified or excessively bureaucratic handicap the definition and implementation of a policy directed towards the satisfaction of basic needs, and may be invoked as reasons for the impracticability of the project.'

The basic needs approach contains elements suggestive of a robust though caring society. Equality, mass participation, redistributive measures, freedom, human rights and self-reliance are usually held to be '...central to an application of the basic needs approach to planning'. Well-developed forms of organisation and representation must exist which guarantee effective modes of participation to individuals in the formulation of needs and of governance over local and central functions during implementation. Few countries can boast such institutional development. Nonetheless, suitable institutional models exist which can be drawn upon, all with significant implications for the redistribution of power. If the necessary redistribution is to take place, then a pre-condition may well be a legal system that convers rights upon individuals to challenge the arrangements, procedures and policies of institutions and government agencies, subject only to the working out of the public interest, as against individual or group interests, in each case in courts of law. This pre-supposes that Parliament and the Cabinet cannot and should not attempt to pay attention to details that animate local and neighbourhood affairs or to seek public silence by issuing blanket formulae or by close central management.

Any departure from the self-reliance ethos and spirit of the approach must seem authoritarian or, at best, paternalistic. Definition of needs, of rights, of procedures and of obligations must rather be sought by society through the richness and dynamism of public forums sanctioned by a suitable legal framework within general policy prescriptions set by Parliament. A redefinition of
functions from field to centre is then possible under a progressive social and administrative system that builds and sustains individual and group choice within the sanctions of state policy and legally definable public interests. In the countryside the system can best be built upon communal control of the basic resource, the land.

The first task in the design of rural development lies in the area of institutions, the definition of membership rights, with legal systems and with programmes that underwrite change by providing individuals and groups with a degree of control over physical resources and over government expenditures and thereby of economic security. As a corollary, government must move away from day-to-day management through regulatory colonial administrative structures towards a proper concern with service, facilitation and the dissemination of knowledge. If that first task cannot be completed expeditiously, then, as the authors of Portugal's exercise warn, 'Realism dictates that acceptance of this approach at the country level will generally imply that the process of determining and establishing targets for basic needs will usually follow the methods evolved for the formulation of development plans... Typically plan formulation is a highly centralised and technocratic exercise with minimal grass-roots participation'.

Where there is a strong political party cadre keen to oversee rapid change, the democratic and constitutional elements of society can be endangered. This is particularly so when borrowed models are held out as solutions. In the process, many elements in society feel ignored and can turn sour, often leading to coercive actions by party members. A mass party has to play the role of mediation between the masses and the state machinery without trespassing upon their legitimate roles. What it does that is new and useful is to reject both the idea of the state as detached from civil society and the extreme view of the party as the vanguard of the working class, leading that class 'from the outside'. The mediation role opens up a political strategy for the party which is the unfolding of a progressive bloc, not defined by the goal of the revolution - which in all socialist states appears to remain some distance in the future - but more immediate and continuously altering objectives of a structural nature.

We can conclude that there is strong empirical evidence which suggests that local organisation is a necessary if not sufficient condition for accelerated rural development. Local organisation is especially important if development is to arise from the increased productivity of the majority of poor rural people and lead to their enhanced economic and social welfare. Well-defined individual
rights and public interests are vital to institutional functioning.

Local institutions require a high degree of autonomy. To be effective, they also require the reinforcement of working links with other institutions above the field which provides more specialist services. These services must reinforce, by way of physical and human investment and of information, local authority, initiative and resource mobilisation.

The design of a system of institutions must steer between the paternalist approach, which treats rural people as passive and fatalistic, necessitating state intervention to improve their lot, and the populist approach which simply asks that politicians and bureaucrats stop blocking local endeavours. The paternalist model is fatally flawed, for it expects the passive recipients of its attention to become initiators and responsible citizens. The populist model ignores the strength of entrenched local interests which often only rules and controls imposed from higher levels of administration can move.

FOOTNOTES TO CHAPTER 2


4. Rhodesia's Land Husbandry Act of the 1960s, South Africa's Tomlinson Commission (1955), KwaZulu's 'Towards a Plan' (1979), and Zimbabwe's first draft rural programme, INDA-1, 1980, share similar approaches.

5. China's continuity of experience, as well as her achievements in the use of labour intensive methods in agriculture and the support of agricultural gains by rural industries are well recorded in Economic Growth and Employment in China by Thomas Rawski, O.U.P. for the World Bank, 1979.

6. Man-days employed in agriculture rose by 4.6% annually from an initially high level of about 200 days, between 1957 and 1975, while average productivity per man-day declined by 20% between 1965 and 1976. The marginal productivity of labour in many areas and for many activities being near zero. Thomas Rawski, ibid, p.113-119.

8. Various FAO Yearbooks.


13. See, for instance: India's Fifth (1973) and Sixth (1978) Plans which adopt a smallholder strategy. India's earlier community development and cooperative farm programmes have been quietly dropped. South Korea, Japan and Taiwan are frequently cited as models for small farm, labour-intensive modes of development.


16. See in particular:


20. Max Jaggi et al, op cit., p.162. It is rather like Gandhi's hope that the Congress Party would disband as a political entity upon Independence in favour of service and public watchdog roles over political and administrative functioning.

CHAPTER 3

THE UNDERWRITING OF SECURITY AND THE FURTHERANCE OF A SOCIAL CONTRACT IN THE COUNTRYSIDE: THE ROLE AND POTENTIAL OF AN EMPLOYMENT GUARANTEED SCHEME

Aim

The provision of a degree of control by individuals and groups over extra employment in the countryside within the rules of a public works programme. This programme to be so designed as to provide government with the means to manage an increasingly efficient employment creation/capital works creation/asset utilisation / and community development set of activities.

Method

The translation of constitutional and other society provisions around the right to work and the dignity of labour, into a programme in which the decision for more work and income than is ordinarily available in the countryside, rests upon individuals and groups.

1. People who seek manual labour on public works, register for work at a suitable local office.
2. Government, operating through local government structures, guarantees to provide work within 15 days for a period of at least 30 days.
3. Labour is rewarded on a piece rate basis which eases supervision, encourages group functioning and makes for greater efficiency. Wage rates are determined by piece rate norms set by government adjusted against a normative daily wage set below economic wages operative at the time in that locality: i.e. labour is not attracted away from on-going activities. Normally the rate is set 25% - 30% below ruling economic wages or, when they are absent or weak, as in the off-season in agriculture, at a minimum wage set by government.
4. Labour is expected to complete 25 days of continuous work over five weeks.
5. When labour has to travel beyond a designated distance for that region to a work site, usually 6 to 8 kilometres, then the scheme must provide transport or a camp site with latrines, potable water, a store selling necessities of food and fuel.
6. If no suitable work site exists in the region that can accommodate additional labour, then 50 persons have to have registered for work before a new site is opened.

7. Government pays people who qualify for work under the rules the normative wage at the time for up to 30 days or until work is provided.

8. Government deducts 30% at the weekly wage payout. Ten per cent of this is deposited into a savings account in the name of the labourer and cannot be withdrawn for two years except as a loan issued by a Credit Union (see chapter 7). The remaining 20% is held against completion of the work or of the 25 days contracted for, whichever occurs first. The latter deduction can be moderated and eventually done away with in areas where workers display responsibility towards the completion of the work period or the work at hand. The purpose behind the two deductions are (1) to build savings and to dampen any inflationary effect an inefficient scheme may embody and (2) to complete the 'Social Contract' implicit in the guarantee as a contract between two parties: State and Citizen.

Implications of an Employment Guarantee Scheme

The working of the scheme:

1. It is strongly redistributive.
2. Promotes individual and group security,
3. Underwrites the acceptance of change within the ethics of the social contract. The working of the scheme is a highly decentralised programme and supports the evolution of local institutional and technical design.
4. The dispersed nature of the scheme reverses the hierarchical, prestige-project, capital intensive inclination of technical departments. Technical departments working under the local government management of the scheme in each district, have to find useful things to do in each locality or not receive budget allocations. Empires can only be built in response to the declared work and income needs of individuals and communities as expressed through the programme.
5. The scheme provides a rich flow of information from the field, particularly on employment, on income and on the physical resource base of each locality and region. Information on demand for work by season, locality and by age, sex and skill group can be mapped. That map can then be compared with another map which illustrates areas of high and low investment potential. In many cases areas of high demand for work from a poorly constituted work force will coincide with a set of resources providing low returns to investment. Management can then decide to move work seekers into areas of little work demand but enjoying a good resource base. This procedure can form the basis of longer term population shifts within regional and, in terms of population and EGS finance, inter-regional planning. For instance EGS labour can reforest an area whilst becoming trained and gaining equity participation (through the savings concept) to play a permanent resident labour role in the subsequent operation of the forest, saw-mill etc. Where other people's land is involved, the EGS workers can be prepared to operate and participate in a service co-operative that manages in some degree the forestry operations on private or other community land. The same procedures can be used for most investments; e.g. horticulture, dairy, sugar etc.

6. Training and education programmes can be built into the scheme. Workers can become eligible for training on the completion of four days' or four and a half days' continuous work. A peripatetic team can visit work sites on particular days or half days of the week to conduct training. Those who participate would be credited with work output equal to their average over the preceding four or four and a half days. In some areas, where useful physical investments are lacking and when longer term planning has yet to begin, more ambitious training components can be contemplated covering more than one day a week. The basic purpose of the training would be to further the skills needed in the EGS (brick laying, culvert construction etc.) and to use the group construction atmosphere that the EGS can generate to extend 'learning for living' programmes. Presumably the people who seek work are poor and not likely to spend time and effort acquiring knowledge or skills except within a supportive format as provided by the EGS.
Control of the Assets

There are three legal categories of land upon which EGS investments can be made:

1. **State Land.** Here the assets created remain under state auspices unless some joint state/community scheme exists. Under the latter, elements of control would be modulated by state technical sanction and audit powers and within a contract over EGS finance, institutional credit and royalty or other form of part payment.

2. **Communal Land.** Here EGS works are designed and implemented in conjunction with communities. A variety of programmes and arrangements between the EGS and the community and within the community are possible. The principle involved is the use of negative sanction powers by government until the community come up with acceptable arrangements. Government for its part is under pressure to fulfil the guarantee of employment. The need to monitor and to evaluate investments is apparent at this point for government reserves the right to alter EGS rules towards securing a more efficient scheme.

3. **Private Land or individually controlled tribal holdings.** The normal procedure is governed by the balance in any one location between the right of the individual holder of land to disagree with proposals for EGS investment on that land and his keenness to receive EGS investment and pay for a part of it. The overall rules would stipulate that for each type of investment a part EGS subsidy and part loan permutation would be used. For instance, well irrigation might carry only a 30% subsidy, but soil conservation a 70% subsidy. A return flow of cash reflecting a part of the benefit stream arising from the investment could be credited to community funds: this at the expense of the loan component since they would off-set each other.

The Cost of an EGS

An EGS finances activities which would be undertaken anyway: investment in irrigation, roads, etc. In addition it re-orders the scale, capital intensity and location of investments to fit the more immediate needs of
individuals for employment and to support decentralisation and community development. The experience of Maharashtra State in India, where the author worked on District Planning and on the EGS, is instructive. Half of Maharashtra's 50 million people inhabit a poorly endowed rain shadow area. An average of roughly 500,000 people, or one person from every 16 families, work on the EGS every week-day of the year. In the peak season, after the harvest, the figure rises to 900,000. At the lowest, during the rains, it drops to 300,000. An EGS of this magnitude costs only 9% of the 'Plan' or capital outlay of the state. Half is funded by re-allocations within the budget, essentially cuts in the technical departments' budgets - they are expected to compete for EGS activities to regain their levels of activity. And half is raised by a variety of taxes that affect mostly the urban and middle classes: entertainment tax, property taxes, sales tax etc. In other words, India can well afford the EGS.

Benefits of an EGS

An EGS operates as an organic rather than legal minimum wage without the concern with the latter's effect on the number of jobs offered. It can act to stem the flow of job seekers to towns. And it serves to bolster family income levels amongst small-holders, providing them with greater opportunities for savings and investment within an improving physical environment in the countryside.

Poverty is largely the result of low productivity of many existing occupations in the countryside combined with varying degrees of under-employment. Much of the rural labourer's time is spent securing the reproduction of the means of production. Itinerant public works schemes, as Lesotho's 'food for work' programme, remain inefficient not only in terms of the cost of capital or jobs created but in their inability to underwrite peasant saving and change of production methods. Once confidence in an EGS is established, families will be able to 'target' their total income needs over the year and to use the EGS to realise the saving and production goals inherent in the target.

The use of piece rates encourages work seekers to capitalise themselves in terms of simple tools. For instance, group work emerges quickly and rewards
those groups who equip themselves with wheelbarrows, spades etc. In fact
the additional output would pay for the equipment in a matter of days.
Group organisation reinforces the important link between the technical
design of physical work and the institutional elements of control and
maintenance.

An EGS operating primarily on small scale projects should be able to achieve
an outlay on wages in excess of 65% of total cost. The result is a strong
direct redistributive aspect of the EGS which the control, saving, and
educational elements can reinforce over time. Increased wage payments to
the poor will increase the demand for certain consumer goods. Staples,
preferred foods, bread and biscuits, textiles, soaps, bicycles and expenditure
on health and education are the likely areas of expenditure. An increased
and steady flow of income in the countryside is a prerequisite for the
promotion of cottage and small scale industries. Without it, artisans
and small industrialists are forced to base themselves in urban centres to
find a steady market. From there, if big enough, they may be able to treat
the countryside as a fickle export market. An EGS, in this manner, can
help to bring to life local markets and rural industries.

An EGS operates as an automatic measure of and response to the demand for
work (income) in the countryside. In that manner it replaces the political
and administrative difficulties of determining when an area has been
drought, flood or crop or cattle disease affected and of mounting useful
works in an emergency. Relief work, the alternative to an  onrion: EGS, is
invariably wasteful, inflationary and often politically exploited.

Table 1 reports the expenditure pattern calculated for a works programme
in India. It illustrates the composition of commodities on which wages
are likely to be spent with the proviso that the scheme was itinerant in
character and consequently could not be managed by work seekers to realise
target incomes. This would reduce expenditure on items like education,
radios, house building etc.
Table 1

Additional Expenditure from Wage Income of Public Works

<table>
<thead>
<tr>
<th>Category</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Agricultural Commodities</td>
<td></td>
</tr>
<tr>
<td>Foodgrains</td>
<td>28</td>
</tr>
<tr>
<td>Milk and milk products</td>
<td>12</td>
</tr>
<tr>
<td>Meat, eggs and fish</td>
<td>3</td>
</tr>
<tr>
<td>Other foods (incl. fruit and vegetables)</td>
<td>7</td>
</tr>
<tr>
<td>Tobacco</td>
<td>1</td>
</tr>
<tr>
<td>Oils and sweeteners</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>61</strong></td>
</tr>
<tr>
<td>B. Non-Agricultural Commodities</td>
<td></td>
</tr>
<tr>
<td>Textiles</td>
<td>9</td>
</tr>
<tr>
<td>Education</td>
<td>2</td>
</tr>
<tr>
<td>Fuel and light</td>
<td>7</td>
</tr>
<tr>
<td>Other</td>
<td>21</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>39</strong></td>
</tr>
<tr>
<td><strong>Total All</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

In Zimbabwe an EGS fits with the need to underwrite a return to normality, to mount a reconstructive programme, to generate jobs in return for food and cash payments rather than handouts and to exhibit in real terms the new 'social contract' possible and politically desirable post-independence.

In South Africa and in neighbouring countries an EGS could help provide the basis of a moral claim upon the centre for economic security in the countryside. It would do this whilst laying the foundations in terms of policy instruments and economic stability for the removal of influx controls over population movements to towns.

In India the EGS has inculcated a desire for regular work in the countryside and, with higher incomes amongst the poor, it has fulfilled the promise of better nutritional status and greater work output per unit of time. It has also provided a set of forums for decision making within communities and between communities and government: all controlled by the individual's demand for work.
An EGS has to be framed, evolved, monitored and evaluated in broad terms, for these best represent its promise and scope. It should not be confined by a narrow concern for investment or employment creation; though on these scores it can perform creditably. Rather, it should be regarded as a central motor to rural development. As with credit, disappointing results are likely to be caused by weaknesses in related areas: tenure, communal organisations, terms of trade, technology, etc. An EGS will illuminate weaknesses as few other programmes or surveys can.

FOOTNOTES TO CHAPTER 3

1. The norms, in the form of tables, represent typical labour operations, mainly of an earth moving nature common to road, dam, soil conservation, afforestation, irrigation channels etc. i.e. volume of earth or gravel dug, lifted, carried, placed or compacted.

2. See Norman Reynolds and Pushpa Sundar, 'Maharashtra's Employment Guarantee Scheme. A programme to emulate?'. Economic and Political Weekly, July 16, 1977. A more recent all India figure emanating from the Planning Commission is 12% - 13%.

3. In Maharashtra a maximum of 40% is allowed for materials and supervision without causing management difficulties. Such a rule can be altered from region to region and from time to time.


5. Useful in the crisis following independence when so many families had to be assisted to resettle on the land.
CHAPTER 4

THE COMMUNITY LAND COMPANY (CLC) ¹

"Let a hundred flowers bloom" (Mao Tse-Tung)

A communal tenure system has to address the following requirements:

i. Member management should be established under democratic rules subject only to certain limited and well defined 'accountability' sanctions retained by government.

ii. Membership is defined in such a way that equality is established in relation to both voting rights and to the communally held assets, principally land, forests and irrigation, i.e. equity in voting and in participation in routine procedures that determine individual and group welfare.

iii. A system must be produced under which the common properties (grazing, woodlot, irrigation sources, and the general field of land and water conservation) can be managed communally in terms of their protective and complementary relationship to arable agriculture.

iv. A variety of individual and voluntary group co-operative tenures over arable and common lands must be provided for.

v. A tax base upon which to raise communal and state revenues and through which to achieve a measure of direct redistribution must be established.

vi. The traditional land-abundant right of access over land must be altered to a share in the control of a finite asset, the common land.

vii. Objective technical management and price criteria must be introduced into land use, herd size, husbandry practices etc. with provision for arbitration between members and the CLC committee and between the CLC and government; the latter retaining final accountability for the husbandry of resources.
viii The CLC must be treated as the basic unit of government in the countryside in which members find a variety of modes for participation and for joint mobilisation of human and material resources. Its autonomy should be established by legal registration and by the receipt of pre-determined annual funds from government.

ix Membership rules provide for compensation for non-use of communal resources, ease the transition of members to new non-farm occupations and to urban living and maintain open conditions of return and of retirement.

x Membership, inheritance and access to resources must be a dynamic set of relations in which equity is maintained primarily in relation to asset values. (Women enjoy equality of membership with men and freedom to manage share rights). A mechanical insistence on equal plots which decrease with every round of population growth can drag communities into a subsistence slough.

xi Security and welfare is sought through a combination of minimum but equal automatic rights to household and garden plots and to grazing, and by member rights to bid for use of arable land and for extra grazing units, and by co-operative and collective modes of economic and social service provision.

The Constitution and Working of the Community Land Company (CLC)

Physical Definition of a CLC

In southern Africa in the reserved areas, a ward or the area controlled by a village headman would form natural boundaries for CLCs. In resettlement areas, units encompassing all the elements of a land system, the complementary, protective and directly productive factors of land use should be included. Members should feel a strong sense of historical, social or at least geographic identity. To start with, more intimate units are to be preferred to larger units. Perhaps ultimately by merging together smaller units can join with neighbours to manage larger, more complex land use and infrastructure plans. This process is discussed later under the Community Service Organisation. (Chapter 5).
Every resident over sixteen years, male and female, qualifies for membership. Residence is established by locally determined rules approved by government under the registration provisions of CLCs. They should encompass residence by birth, by domestic establishment over three years, and by invitation by the elected Management Committee, approved by the general body of members, of persons with particular skills needed in the community (for instance a baker or a blacksmith) and which cannot be provided from within the community.

A provision in the law under which CLCs register would allow government to limit the conferral of shares in the common properties to a given number per family; however, family is best defined in local terms. One prohibition could be that no family should hold more than five shares between father, wife or wives and adult children. When the number of adults exceeds five, then the shareholding of each individual drops to a fraction of one. Upon the death of a family adult or when children reach the age of twenty-one and are deemed to have left the family, the value of the shares held would be readjusted upwards at the beginning of the next financial year. This procedure would serve to reinforce a sense of communal property that is limited in extent though not in capacity for improvement. This would promote family planning and communal savings, and investment in the joint assets.

It should be stressed that the shareholding relates only to common properties. Membership would not be affected. Adult members would still enjoy the right to a homestead site and a garden plot, and to bid for the use of arable land and grazing rights.

The shareholding of members would lapse after two years' working absence from the community, but would be regained automatically upon return at the start of the next financial year. Membership would lapse after four years' absence but be reinstated upon return. Local definition of residence is required. The aim would be to secure long term membership, to ease the passage between countryside and town and to retain modes of participation for grass-widows and adult children in the absence of the male head of the household.

The prime responsibility of the membership would be to elect the management committee and any sub-committee established and to vote in general meetings.
on matters of general community interest. Apart from social services, the prime subject of general meetings would be the demarcation of land and of investments between the competing claims: residential, garden, arable, grazing, forest, irrigation and road, and social and industrial infrastructure. Government would retain negative sanction powers over the allocation of land use based on technical limits to use derived from capability maps drawn up on the basis of rainfall, slope, soil structure and nutritional status. Where land capability maps do not exist, rough approximations can be drawn, based on scientific observation, some soil sampling and local knowledge. Land capability maps are for guidance and procedures for revision are required as investment, technical changes and experience warrant. Such general meetings would provide the basic forum for community decision-making over villagisation and land husbandry programmes.

Shareholding

Each member would hold one share in the assets controlled by the community. This would be so whether the CLC or the state owned the joint property. Shareholding would relate to the common properties, grazing land, forests and irrigation sources, and to arable land. Rules over each category can differ to fit local conditions and wishes. Member equality is founded on the holding of an equal share.

Grazing Land

In the areas of southern Africa to which blacks have been restricted by legislation, land not suited to cultivation forms at least 50% of the land.

The use of the share concept is proposed to enable communities to resist the individual urge to claim land by ploughing it and to provide the institutional basis for group husbandry of that land. It serves to separate communal interest in the improvement of the assets from individual or group running of livestock over that common property.

The operation of the share system is straightforward. It contains its own logic which, together with information on weather, grass cover, markets and prices, and nutritional, breeding and veterinary service factors held within the community or supplied from outside, provides an educational forum for all members.
At the beginning of every grazing period the elected CLC Committee, acting under sanctions over the use of land retained by government, sets the carrying capacity of the community grazing land. The carrying capacity is then divided into a rounded number of livestock units per share. The livestock unit is a common measure under which different animals can be treated uniformly. Local variations are possible and are sometimes desirable. Normally large animals are treated as one unit (ox, cow, horse) and small animals as a fraction of a unit (sheep and goats 1/6) etc. Given the present mal-distribution of livestock in most parts of southern Africa, a majority of members in most CLCs are likely to possess fewer animals than the number of livestock units allotted per share. They will have the choice of purchasing additional animals to fulfil their quota, which many could not immediately afford, or to sell off spare livestock units to other members seeking extra units to accommodate larger than average herds. In this way those who do not participate in grazing up to their allocation of livestock units receive a payment, or compensation, for not doing so from those who graze in excess of the allocation per share. A price for grazing, which has not existed before under traditional arrangements, is established through the legal process of the redistribution of grazing rights amongst members.

The grazing capacity is set and the buying and selling of grazing rights amongst members follows at least once a year at a date that coincides with the transition period between livestock seasons. In most communities this would be after the rains and before the flush of new births. Regular calendars of community business meetings ensure that the majority interest in the husbandry of the grazing land asset is paramount to the likely minority dominance of the grazing. It also provides individuals with regular opportunities to increase their participation in livestock in lieu of compensation payments for not grazing.

Group or co-operative ranching ventures are possible within the communal asset/share system on a voluntary basis. Groups might seek permission for exclusive grazing on land set aside for that purpose. Land equivalent to the rights to graze held by the group as a pro-rata proportion of the total held by the community could be voted to be set aside at a general meeting of the members.

Under traditional systems of communal tenure a disparity exists between social and marginal costs. In figure 1 PMC is Private Marginal Cost. The curve
represents the aggregation of all PMCs of individual cattle owners. SMC is Social Marginal Cost which, after a certain point, exceeds PMC: i.e. social costs of overgrazing or misuse are not reflected, at least in the short term, in private costs. Once SMC crosses the marginal revenue line, \( X_1 \), horizontal as the individual owner is a price taker on the cattle market — social cost becomes infinite. \( X_1 \) represents the present carrying capacity of the communal land. Individual owners will maximize their profits by holding cattle up until \( X_2 \) where their \( MPC = MR \).

**FIG. 1:**

Marginal Cost and Marginal Revenue

\[
\begin{align*}
\text{SMC} & \quad \text{PMC} \\
\text{MR} & \quad \text{No. of cattle}
\end{align*}
\]

Under the CLC, the number of cattle to be grazed on the communal land is fixed each season or year at \( X_1 \). The purchase of additional grazing rights shifts PMC upwards. The auction of grazing rights should take place at a price which brings PMC and SMC into line such that SMC and PMC cross at \( X_1 \) (Figure 2).²

**FIG. 2:**

Marginal Cost and Marginal Revenue

\[
\begin{align*}
\text{SMC} & \quad \text{PMC}
\end{align*}
\]

\[
\begin{align*}
\text{MR} & \quad \text{No. of cattle}
\end{align*}
\]
Taxation

The establishment of a price for grazing, i.e. for the use of an asset, also establishes an acceptable basis for local taxation. At the same time the primary communal interest in the husbandry of the land and the provision of infrastructure and services provides a vehicle for the investment of communal revenues. A tax can be imposed on each share at the time of the redistribution of grazing rights amongst members. This would ease payment since the poorer members would probably be selling rights at the time. The tax can take two forms: a percentage of the price ruling that season or a fixed amount regardless of the price established. The former, which would realise revenue that fluctuated with grazing and market conditions, would be more acceptable to members but would require some modulation by means of a stabilisation fund. A fixed amount per share, while easing revenue administration, could prove onerous in difficult years when the price of grazing dropped.

In most third world countries land taxes have tended to dwindle in importance or have been repealed following the advent of popularly elected governments. Indirect taxes, particularly sales and entertainment taxes, have taken their place. Yet it remains true that moderate land or assets taxes are useful state or, in this case, community instruments to encourage the proper use of land. In the formulation proposed, the limits set on communal herd size and the establishment of a price for grazing amongst members acts as an assets tax governing both land and livestock use. The existence of a communal tax structure suggests that the government could use the same to realise state revenue. In other words, government could impose a tax on each share in tandem with the communal tax. The effect of a state and a communal tax is hard to predict in the abstract. The total incidence of the taxes would have to be judged in conjunction with the mode of finance and fixing of services provided by government and of state support for community budgets. In principle the state should share in the revenue from grazing and should take advantage of communal structures to do so at little cost. Almost certainly the state tax should be less than the communal. The state should regard its tandem use of the communal tax structure as a way of auditing community books. This can be most effective if the taxman collects soon after the community has settled the grazing arrangements for the next season.
and realised the revenue due. Government could usefully hold the CLC accountable for payment of the state tax by a date soon thereafter. That would reinforce the tax collection process within the community. Government's audit and receipt for payment would serve to confirm in members' minds that the annual operation had been properly conducted. The audit report should be a public document and copies posted in the community. It should not replace, however, the annual independent audit of the CLC as required by law for that would investigate and report on a wider range of community business.

The Objective Governance of Livestock Management

Under tribal, communal and other forms of common land grazing two physically and socially destructive trends operate. Over a span of good weather years the herd on the common land builds up. After a few years the build-up accelerates. This is caused by the combination of a low take-off rate and a growing breeding potential within the herd. The result is that, when the good weather breaks, it does so over a herd that is probably larger than the present maximum carrying capacity and which is set to continue increasing its numbers rapidly. As drought sets in and carrying capacity dwindles quickly, owners find it hard to adjust. Past market sales and infrastructure are not geared to any large jump in sales of livestock except at low prices. As owners delay selling, so the weight of their animals declines, often rapidly, compounding the effect of low prices. Within a short period it becomes a desperate bid on the part of owners to outlast their neighbours in the hope that good rains will follow soon. The longer good rains are delayed, the more the smaller or weaker owners are driven to the wall, losing animals by death or by unremunerative emergency sales. Meanwhile the grazing lands are depleted. Come the good rains the powerful owners are in a relatively stronger position than before having retained at least a breeding stock. The small owners may have neither a breeding stock nor animals for traction so that their arable farming, now more important than before, is severely handicapped. The result is both greater social stratification as well as the indirect cost to the community of the misuse of the common grazing land.

Faced with an increasingly unmanageable and socially threatening situation, government officials have resorted to culling programmes to keep herd size
within bounds. The approach never worked. Culling is a doctrinaire, often inequitable and purely short term measure. Its aftermath, antipathy or even hostility towards the livestock services and grievances within communities, has ill-effects that outweigh and outlive any short term gains that might be realised. Its successor, the government sponsored local livestock auction with guaranteed minimum prices or similar devices to attract sales, is a great conceptual improvement but has not had much impact on the low turnover rates common to the region.

In contrast, a price established over grazing, and one which fluctuates over time in reflection of weather and market conditions, acts as a natural incentive to efficient herd management. As good weather lasts, so the carrying capacity of the CLC grazing lands may be raised. Faced with taxes on shares and a price for grazing, individual members will calculate not only the number of animals they wish to graze but also herd composition and turnover, as against the remuneration they can expect. Meat, wool, hide and milk prices are likely to be squeezed downwards, relative to inflation during periods of good weather and herd build-up. As an organised community enjoying a local tax base, the members can, probably working with government's technical services, review, re-design and assist in implementing improved technical and marketing services. The interest in such investment and recurrent expenditure should not be limited only to those members who graze. Greater efficiencies, services and remuneration will play back into higher grazing prices which flow to non-grazers through the sale of grazing rights season by season. No extraordinary build-up of total herd size should occur. Rather, individual and group moves towards greater efficiency can be expected. At the onset of drought, members of traditional societies avoid the full consequence of falling prices for livestock by their ability to transfer the real costs of continued, and increasingly destructive grazing, onto the community. In contrast, a CLC community would enter a drought with objective governors over grazing in operation. Grazers would benefit from better maintained grasslands and from access to better developed market and other services.

As the drought progressed, the periodic review of the carrying capacity would provide a useful opportunity for CLC members, the shareholders over the grazing land, and government technical officers to review and reset the carrying capacity, presumably downwards. If grazers were to make decisions
as predicted, herd size should have fallen already so that a downward revision of the carrying capacity should not be a traumatic event. Any excess in the numbers of animals that members wish to graze above the revised carrying capacity will act to drive the price of grazing up - a proper response since it reflects the diminished resource base. Prices for livestock products can alter quickly in times of drought. Usually they fall rapidly as distress sales take place and then begin a slow rise to high levels as supplies tail off. Given this pattern of prices for livestock products members would not bid strongly for grazing rights in the early stages. Later, in the period of recovery it would bolster attempts to recreate efficient sized and well composed herds. In the interim a premium would be placed on milk production. All these factors suggest that a share/grazing price system would maintain a degree of equity in individual herd sizes with a bias towards smaller owners who link backyard milk production with group or extended family managed herds. (See Chapter 10).

Communal Forestry

The fuelwood crisis in much of the developing world is now well recognised as a problem, the solution to which is central to advancement on most fronts in the countryside. Forestry, mixed forestry, multi-storey plantations and agroforestry are terms for a set of new technical and crop potentials now just beginning to receive the attention of modern science. The International Agro-Forestry Institute headquartered in Nairobi is in the vanguard. The task is to match the wealth of knowledge of flora and fauna and their uses held by so-called primitive peoples, a symbiotic relationship, with scientific assessments of how man can intervene to build upon rather than push aside complex natural settings. Although much of southern Africa is natural grassland, a great amount of local knowledge of indigenous plant associations exists that can still be drawn upon to upgrade the production of fuels, special tubers, fodders, gums, medicinal plants, non-edible and edible oils, etc. This is, as it were, the nexus of improving or deteriorating environments.

As with grazing, common woodlots face exploitation by individuals acting in competition with each other. Once the balance between plentiful supply and demand is upset, increasingly desperate individuals adopt destructive short
term methods of extraction and use, and the chance of group management disappears. In areas where many families are landless and employment is in short supply, forests are treated as a resource of last recourse; i.e. they carry the brunt of poverty as the poor extract the free public goods they still hold and sell them for income. Forest officials cannot police forests under these conditions. Not only is it physically difficult to police forests, the poor will accept as necessary the payment of heavy bribes or even the risk of fines or jail if they have no other way of survival. The result is that individual users, communities and government itself cannot attempt or realise the benefits of forest investment and management.

The above is not to say that governments have not attempted to reforest or even afforest large areas. From the 1860s, Indian Commissions have called for the establishment of village woodlots as the most important step towards increased crop yields, the aim being simply to release cow dung used as a fuel for the traditional manuring of the fields. Today that call encompasses the more urgent concern expressed in the race between the production of food and the means to cook it. China, since the revolution, has planted to forest an area reportedly greater than all other countries' efforts over the same period of time.

Everywhere, China included, the results have been disappointing. People help to plant forests - it provides employment - but seldom act in concert with each other or with officials to protect them. Control over the produce tends to remain with government or it is proposed that it be shared between government and village councils. The place and (immediate) interests of the family cannot be accommodated within that formula. Moreover, as in the Lesotho Woodlot Project, at harvest the produce is invariably intended to be sold locally at a nominal price. How that price is to be set between the competing claims of government and village council for revenue (a high price) and villagers for cheap wood (a low price) is not easily settled. Even if the produce is sold at well below market prices and only to villagers in the area of the forest, or to villagers upon whose village land the forest was planted, poorer or less powerful families may not be able to buy an equal share of the produce. Others will stockpile for future use or even engage in trade upon the market created by the nominal price. Communal cohesion
is unlikely to weather the ambiguities of the arrangement so that the second crop may start without general support or, if planted, without community-wide commitment to its protection.

A resolution to the, by now, historical dilemma is offered by a variant of the grazing scheme above. It is derived from a 'Community Forestry' scheme the author designed in Bihar and Madhya Pradesh States of India. It also derives its logic from the conception of the CLC. All forest, woodlot or other tree crop land could be vested in the CLC and managed, on an equal share basis, as a forest-company. Two formats for management follow. The simpler is one in which the members set aside a part of the forest land for individual woodlots, seri-culture or other tree use. (The forest land is presumably not suited to arable crops). As with gardens, each member or family may enjoy a right to a plot. Those who wish for more land for tree planting, can bid for the remainder or pay a steeply progressive rent. Leases from the CLC would be for ten years or more. As with grazing, a tax or rent can and should be introduced to ensure efficient use and to raise local revenue. Plots are best sited close to members' homesteads.

In the second model, forest land at a distance may best be developed and maintained on an estate basis. In that case the operation is entrusted to an elected committee or board and policy guidelines approved by the general membership. The board appoints a manager who hires staff and labour, the latter perhaps reserved for members. It is run as a company, the member shareholders receiving a cash dividend from time to time and enjoying no special privilege over the price paid or quantity reserved for them of forest produce. Or, and preferable in a simple community, forest produce is divided equally amongst members who may consume, store or sell it as they will. A mixture of the cash and material dividend is likely as some crops may be sold under contract, as approved by the membership, to third parties. In either case the dividend is a payment net of all costs and reserve fund transfers. Income to cover costs in the second, material method, has first to be realised by keeping back for general sale a proportion of the crop realised. As administered and every member receives identical treatment with provision for individual plots hired under a progressive rental agreement. As with the grazing model, the land as an asset to be husbanded and capable of producing dividends in cash or kind is separated from individual or group use of that land for forest operations.
The forest model can be extended to cover state forest land. A significant proportion of state forest land in most countries lies adjacent to villages and receives the attention of villagers within or without official arrangements. It is possible to extend the community forestry model to include state land brought in under a long lease agreement which leaves technical sanction powers over the use to which the land may be put with the Forest Department. Apart from the benefit it confers on members, namely an enlarged resource per shareholding, it enables foresters to drop their policeman role in favour of a professional partnership. The audit and supervision role should then pass to a regional service organisation, the Community Forest Organisation, the board of which is composed of a majority of CIC members and a minority of representatives of the Forest, Finance, Sericulture, Livestock and related departments and from the industrial and banking sectors.

The lease agreement should, as between CIC and individual or group members, include a rent. A progressive rent can be used if state forest is to be set aside for competing CICs over and above a minimum allocation each. The best way of realising the rent, whilst sharing in the risks of the forest venture, is to apportion a part of the crop to government and the remainder to the CIC. Loans from government or financial institutions can be similarly handled. If there is a breakdown in the maintenance of the forest set aside for rent or loan repayments or of some other part of the agreement, then the rent or instalment becomes due in cash or other produce is realised for the purpose ahead of the members' or CIC interest.

**Irrigation**

Irrigation water tends to be carefully used when direct costs form a large part of its use, i.e. when the cultivator draws water by hand, animal or engine power under his control or when he owns the structures involved in flood irrigation. The larger the irrigation system, the more indirect the costs, usually water rates, and the more remote the management, the more careless the operation becomes. It quickly deteriorates into unequal access depending on physical location at the head or tail of a canal or on the corruption of the officials. It may then become a political rather than an economic system in which nominal water charges prevail. This encourages further rounds of excess water use leading to the flotation of salts to the surface in the best sited fields.
Boreholes and wells have equipped the wealthier farmers with a technology that allows them, especially in water scarce areas, to tap ground water ahead of their neighbours. In Botswana water barons have gained a monopoly control over grazing adjacent to their boreholes despite the traditional and moral common property of land and of water sources. In many other arable areas the rich have deepened their wells as the groundwater has receded upon the mining of it, leaving poorer neighbours high and dry.4

Water, as with other common properties, it seems, must be controlled within the community. Traditional communal irrigation systems in many parts of the world are the object of a great deal of research at present because of their apparent technical and social efficiencies. Arrangements that establish a foundation of equitable relations and which operate to produce prices which reflect true costs are necessary if community control is to provide members with the indicators and the means to judge what the individual and the group interests are and how those positions might best be brought into harmony.

Proposals for the communal management of irrigation sources are difficult to discuss briefly because it is a more varied system than is either grazing or forestry. For one, fields, unlike cattle, cannot walk, and the poor tend to have the less well-sited fields above the areas naturally commanded by canals or wells. The basic requirement is to enshrine water as communal property. Let us take the case of a canal system emanating from a dam and which is administered by government:

i The command is delineated on the map, covering let us suppose, part of two CLCs.

ii The irrigation authority notifies the CLCs of the water available over the year.

iii The CLCs then bid for the water, perhaps against a minimum price the authority sets to cover recurrent and capital cost.

iv In order to bid, each CLC determines beforehand what total amount of water members wish to have in each period and what maximum price they will pay.

v Once the canal distribution, the major system, is settled between the CLCs and the authority, each CLC undertakes a share/bidding distribution amongst members. To illustrate, for period x, the CLC will receive y amount of water in the major canal at price z per unit.
The task of the CLC is to sell that water amongst members so as to realise yxz plus local operating costs. Each member receives, as per his equal share, a right to water of a certain quantity and at a minimum price, the latter rather like the tax on grazing. Members then announce their intention to purchase or to resell the water rights allotted per share and an auction follows.

Cultivators on minor canals would have to act in concert to secure sufficient rights to fulfil their plans as a group of users. The given price plus the sale price ruling at the auction would enable individuals and groups to decide whether they should take on additional costs, but now more marginal than hitherto, to purchase water rights and to pump that quantity of water to fields above the canal, or to forgo the benefit and take the proceeds from sales of rights minus the charge payable to the CLC.

In communities where a mix of canal and groundwater irrigation managed in conjunction is desirable in order to optimise soil conditions, local rules can encourage private or group use of tube wells by a discount system. Or the CLC can augment major canal water purchase by running communal tube wells that charge the canals.

The achievement of prices for water and compensation for non-use within a communal management system is likely to lead to a number of smaller structures placed higher up in the catchment, and to a fuller utilization of available water, resulting in greater direct costs and larger maintenance elements than systems devised by the public authorities, with their prestige engineering ethos, could produce. All of which is to the good. It may lessen downstream availabilities. However, it will provide greater opportunities to re-cycle water and to extend the flow period in streams, both of which add to downstream welfare.

Arable Land

The simplest formulation for the communal management of arable land is for the members of a CLC:
in conjunction with government technical services, to map and agree upon land that is suitable for cropping and to define its capability, proper crop uses and husbandry;

ii to decide, upon that information and knowledge of grazing, forest, irrigation and garden potentials and demands, how much of the arable land to devote to cropping - the more marginal land or fields susceptible to erosion may best be allotted to grazing or forestry to secure the environment and an adequate supply of the complementary factors (fodder, traction, fuel, humus, tree crops);

iii to decide how to divide the land set aside for arable uses between that allocated to families on a normative basis at a fixed rent (e.g. 4 acres per family of two adults and all children under sixteen years, ½ acre more for every additional adult over sixteen etc.) and that reserved for use at progressive rentals above the norm applicable per family. The interest of every member in the common properties (grazing, irrigation and forestry) established by the shares and dividend system eases communal decision-making on land use away from arable to the other complementary land uses. The process is in fact iterative, becoming steady with experience but remaining open to alteration in the face of structural, demographic, technical or market changes.

The Financing of the CLC

In the next chapter the upward flow of decision making from field institutions to local government and service organisations is explained. The object is to lodge democratic power as far down as possible to enable active participation by individuals and groups. National support for rural development should reinforce that objective, primarily by direct budget support of CLCs. The national budget should not, as is usual, be allocated entirely among government sectors and then spent through direct action by Ministries.

A rural development budget should be set every year by Parliament as a part of normal budget exercises. The economic and social weight of the countryside should be reflected in the sum allocated. That budget, a global sum, should then be divided amongst CLCs according to a simple formula. The formula might give weightage to three factors, as:
Population (perhaps adult members) .......... 70%
Matching grants to locally raised funds .... 20%
Area backwardness ............................ 10%

100%

Backwardness can be measured by fairly objective criteria such as average land per adult member and physical infrastructure region by region.

The percentage given against each factor above has to be seen in terms of other programmes proposed, especially the Employment Guarantee Scheme (EGS) outlined in chapter 3. The EGS underwrites individual economic security while allowing group and community initiative in the design and the management of capital assets (irrigation, forests, etc.) created by the scheme.

As a registered society, the CLC can receive and hold funds. It should not be subject to the same audit procedures as are government departments. Moreover, unused funds should not lapse at the financial year end or be offset by a reduction on the next budget. The audit and the official supervision of the use of public funds by the CLC is described in the next chapter. The budget received by each CLC is to be used for purposes decided by members but approved by government. Here we are concerned with decision making within the CLC.

Participation in the share system within CLCs will familiarise members with individual rights, prices and group decision making. A single budget received annually from government for community-wide development allows individuals and groups to think afresh about the opportunities and limitations the budget represents in relation to their own human and natural resources. It does not preclude local innovation and the injection of local design and resources, as does the conventional hierarchy of budgetary controls.

At the field level it is possible, within one budget, to resolve the dichotomy between capital and recurrent budgets. It is a dichotomy that has especially plagued the field end of centrally planned economies. Maintenance need not suffer in favour of new capital items. The phenomenon of new buildings, extra tractors and additional teachers amidst decay and filth, equipment lying idle for want of parts and mechanics, and the failure to attend to existing teachers' competence and renewal as expansion lowers standards, is all too
common. It reflects the fascination of capital budgets, the tip of the national budget, and the false measure of government achievement that political concentration on capital or plan items allows. Members enjoying the rights and modes of participation provided by a CLC are unlikely to fall into such a syndrome. Rather, as with a householder, they will weigh carefully the maintenance of existing assets and services against new or additional items.

The manner in which a CLC utilises its budget is the germ in the design of local government. Moreover, government has to retain accountability for the use of public funds. The coming together of these two forces, autonomy and accountability, is the subject of the next chapter.

The model provides for a growing specialisation of economic interests within the community and for adjustments as members move away. Specialisation usually requires an increasing scale of operation. For instance, it would be expected that a large majority of members would keep a small herd of cattle for milk purposes based on nearby pastures and private gardens. A smaller number, though perhaps a majority of members, would also keep a stock of traction animals for crop agriculture maintained on distant pastures when not required and otherwise on crop stubble and green fodders. A minority would own and run large individual or group herds, say above 40 and with no upper limit, for beef purposes on the communal grazing lands. The communal tax system would evolve from the share/land base to cover all activities. Communal investments would raise returns of a dividend nature, thereby enabling the community to undertake or sponsor an increasingly rich and sophisticated set of activities. The realisation of economies of scale would result from this growth process, but without smaller members being pushed out of all worthwhile economic activities and out of any meaningful relationship to communal assets.
FOOTNOTES TO CHAPTER 4

1. 'Company' is used in its correct technical sense. If the concept is implemented, the term should be replaced by a more popular term, such as 'umjamaa' in Tanzania.


3. Similar arrangements are found in recent World Bank supported 'social forestry' projects. See also 'Forestry for Human Needs', Erik Eckholm, World Watch Paper 26, 1979.

4. The result can be a few farmers with (high cost) water growing flowers for export, in order to cover costs, while neighbours realise poor staple grain crops in an area no longer able to support its population.

5. It can be expected, in relatively land abundant CLCs, that the majority of (small) members would seek to maximize CLC income by the introduction of progressive rentals above a basic arable plot size that itself is close to a minimum. This expectation follows on the foundation interest of members in the performance of the CLC as a whole.

6. See chapter 10, an alternate dairy model.
CHAPTER · 5

THE COMMUNITY SERVICE ORGANISATION (CSO)

Government departments would be removed from direct field management by the organisation of the countryside into CLCs. Nonetheless, the size, influence and hierarchical nature of departments would still remain a threat to the autonomy of CLCs for they could penetrate the boundaries of CLCs, developing client groups within communities. This is the present situation in most countries (see Figure 1). The response in the past, especially in the heyday of community development, has been to provide community workers, 'friends, philosophers and guides', to mediate the relationship between villagers and government officials (see Figure 2). Community workers were officials which meant that government still crossed over the boundary of the village, denying that boundary its management role. Other problems have beset the community worker model, notably that he became a jack of all trades answerable to no-one. For most departments, the community worker was either a lowly servant to be used for dirty jobs (census, organising meetings, etc.) or a nuisance to be circumvented. To some villagers, particularly the powerful, he was a lever into government to be used; to others, simply another official who required bribes. The institution of elected village bodies did not correct the situation for they lacked real business and budgets. As most villagers were without definite rights of participation in major economic affairs, village-government degenerated into an extension of the official patronage system. The lesson, it appears, is that communities, suitably organised, have to gain control over local government structures.

For communities to gain control over local government structures, a re-definition of rights, of services and of accountability is necessary. Figure 3 illustrates the altered relationships required. The first step is the segregation of a Rural Budget from the regular budgets of government departments. The separation leaves departments with funds to cover establishment and line or single jurisdiction activities which they manage individually at all levels. For instance, national highways operate with little or no effective contact with other departments or other levels of government once overall plans are set and budgeted nationally. Many departments will be drawn into activities on behalf of the EGS and by CLCs on a contractual basis. In each case the funds would come from the EGS or a CLC budget.
FIGURE 3

RURAL ORGANISATION PROPOSED: AUTONOMOUS COMMUNITIES

- Government
- Registrar of Community Organisations
- National Rural Budget
- Sanction Office
- EGS
- Local EGS Committee
- C. S. O.
- C. L. C.
- Villagers
- Individual right to work
- Field operations
- Objective sanctions over expenditure proposals
- Services
- Member vote and share rights
- Member control, budget allocation
- divided by formula amongst CLCs
The National Rural Budget would be divided amongst CLCs according to the formula chosen (see previous chapter on the CLC).

The autonomy of the rural communities would be underwritten by their receiving and holding all monies to do with rural development. The holding of relatively large single budgets, the amounts of which are open knowledge, should stir in all members of CLCs an interest as to what their respective budget promises. Use of the budget requires a service/support institution and a mechanism whereby government can exercise its basic role, accountability to Parliament for the use of public funds.

It is proposed that the institution of Community Service Organisations (CSO) play both roles of support and accountability. The aim would be to advance local determination within a system of higher governance.

The CSO is a form of local government. Its Board is dominated by elected representatives from amongst the chairmen of member CLCs. In that sense it is a co-operative service organisation controlled by the CLCs. Government nominates a minority of members on the Board. The Board of a CSO might be made up as follows:

- 7 chairmen of member CLCs elected from amongst themselves
- 3 nominees of member CLC chairman
- 2 elected representatives of women's or other local organisations
- 12
- 1 member of Planning Commission or equivalent national body
- 1 District Development Officer
- 1 nominee of the banking sector
- 1 cross nominee of the local BGS committee
- 2 state nominees
- 6

total - 18

The composition proposed represents a mix of elected representatives and nominees by local and central organisations. Local interests predominate.

It is presumed that the appointment of nominees will add experience and
knowledge to local leadership. Official representation is kept to a minimum, two out of eighteen. This should ease problems of attendance and reduce the senior officials' ability to lay down the law. They would in fact have a well defined power to refer proposals to government (see below) but would probably not wish to use it except in clear cut cases.

Each CSO, like the CLCs, would be registered as a society with the Registrar of Community Organisations. The Registrar's office and its role in helping to secure member interests is important to the well-being of the whole.

The professional staff of a CSO, working under policy set by its Board, would be charged with:

i. the collection and analysis of planning data for the area comprised by its constituent member CLCs,

ii. the preparation of investment plans at community (CLC) and regional level (CSO) in consultation with or in response to representative groups,

iii. the creation, management or supervision of services to member CLCs,

iv. liaison with pure and applied research bodies, with government departments and with commercial and public bodies,

v. monitoring and evaluation.

The two part functioning of the CSO can be briefly described. CLCs hold their own monies and initiate proposals for its use. Expenditure can only be made, however, with the approval of the CSO which vets proposals in terms of objective criteria set by government on equity, technical feasibility, financial viability, environmental protection grounds etc. In practice CLCs would be free to act on items under a given amount, that amount subject to official review based on performance. Above the given amount, proposals would be forwarded on behalf of CLCs by CSO staff to the CSO Board. The Board's refusal to approve a proposal would result in reformulation to satisfy the written objection, with the help of CSO staff if requested, the dropping of the proposal, or a challenge against
the written decision. Arbitration would be by a special office within
government (see Figure 3). The government members of the Board, if they
decem it necessary, would have the power to refer proposals to the special
office in government for clearance. In this manner the two functions
can be combined in one local government institution. In practice
conventions would arise based on experience and precedents elsewhere
and would guide all the parties. Novel approaches would receive careful
scrutiny in an environment basically friendly to local wishes but disciplined
within fairly specific and therefore testable criteria set by Parliament
and overseen by senior officials backed by a specialist office. The whole,
in the open society proposed, would be scrutinised by political, professional
and research groups. Learning, rather than control, should infuse its
working. From village society to Parliament the system should be decen­
tralised by a multiplicity of forums in which problems and their solution
are identified and acted upon.

CLCs will discover that many services and even investments they wish to
undertake require joint action with neighbouring CLCs. In that case the
CSO would act to bring relevant parties together. The CSO might itself
undertake to manage or at least supervise joint CLC projects. In such
cases, each CLC would appropriate a part of its budget for the project
according to the joint agreement reached. Funds would be placed in
possession of the respective administrative body and be overseen by the
CSO as part of its regular responsibility. Large scale irrigation,
regional roads, storage facilities and rural electrification are the type
of investments requiring joint action.

As services develop, so specialist institutions could be hived off from
the CSO. For instance, in the dairy model proposed, a Dairy Co-operative
Union would arise early on with the help of those CLCs and CSOs, plus
technical agencies of government, in the area it served. A Community
Forestry Board, Rural Electrification Corporations, Regional Irrigation
Authorities, Producer Co-operatives and Credit Union Leagues could arise
with initial staff and financial help from the CSOs.

Once a full gambit of economic services and investment pieces were in
place, the role of the CSO would decline, but only relatively. It would
still act as a dual agency on behalf of government, granting approval
to member CLC expenditure proposals and conducting its monitoring and evaluation activities. Since the CSO is an open, member dominated organisation, the monitoring and evaluation work would lend confidence to members in their dealings with numerous co-operatives and service bodies. Members, both individuals and CLCs, would continue to look to their respective CSO for information, analysis and support as new issues and opportunities arise. What may change is the staffing pattern and a decline in overhead cost. Indeed, it is conceivable that CSOs would join together to effect economies in the accomplishment of routine responsibilities.
AGRICULTURAL LAND SETTLEMENT

In Zimbabwe and later, though equally certainly, in parts of South Africa black families will move in appreciable numbers from tribal areas to areas once reserved for white farming. Settlement of this nature will occupy a central place in political and economic life. The political attractiveness of the opportunity to achieve a more equitable distribution of land should not prevail over more sanguine concerns. Settlement, whether spontaneous or organised by government, is a complex process. Indeed, and in Africa in particular, settlement has seldom realised more than a minimum of economic benefits. Initial justification on political and social grounds can sour when economic viability fails to mature.¹

Settlement in southern Africa would avoid the agronomic risks inherent in opening up virgin lands. The potential land uses should be fairly well known from existing resource surveys and from the experience of white farmers. The issues are likely to centre on the degree of government involvement and the mode of settlement chosen.

The World Bank has built up the core of its preferred approach to settlement schemes around the settler family. 'Successful settlement depends to a large extent on the initiative and character of the settler family ... Settlement projects should be designed to provide an opportunity for betterment to settler families willing to undertake the considerable effort required. The initiative to move to the settlement should come from potential settlers rather than from the settlement authority. A large element of settler voluntarism is preferable in most instances to vigorous recruitment by the authority. Self-selection also helps to ensure that a large proportion of settler families will be poor, landless and with limited economic opportunities elsewhere. Settler performance will be good if a clearly discernible relationship exists between effort and reward.'²

The Bank's position lies between the poles of possible programmes. Spontaneous settlement can become a mass movement of desperate people to claim land. The poverty of the settlers and the lack of infrastructure and
services may well cause such settlers to become destroyers of the land, taking the capital out of the soil while they wait for a better tomorrow. Government is then drawn in under difficult conditions, having to rectify malpractices. Official moves may be interpreted as opposed to the immediate welfare of the settlers.

The lack of agricultural and social services will in any case unduly delay the settlement from becoming productive. Government assisted settlement projects, even the more costly per settler, are, according to the record, no more likely to succeed than the largely spontaneous settlements. The considerable experience of Latin America suggests that 'extensive government assistance' stultifies settler dynamism, largely due to poor technical services and administration. A high degree of government or of political party support runs the risk of settler demands for official subsidies that are hard to refuse and which can last many years.

A careful mix of settler initiative and government support appears to be required if the worst problems are to be avoided. The mix has to be so designed that it can manage other issues as well. The highly visible process of allocating people and land must not be open to political manipulation. The involvement of government must balance the need for skilled manpower and capital in the already settled areas. The costs, skill requirements and arrangements must be capable of rapid replication. Settlement schemes should reinforce general rural development in the country. As far as the likely political exigencies permit, they should not be treated as special cases.

The proposal is to extend the use, and thereby the attractiveness, of the Community Land Companies (CLCs). Once organised and operating, CLCs could bid to expand their land bases. CLCs with poor land/man ratios would enjoy larger budgets according to the formula proposed by which government supports CLCs. They would entertain less attractive investment opportunities than would the more fortunate CLCs unless the latter were fully developed. Moreover the members should have gained experience of and confidence in an EGS. They should be in a position to foresee much of the development work and the working capital of a settlement being financed on a subsidy/loan basis by EGS works in which they participated on the newly acquired land and on infrastructure in the vicinity.
The method of settlement proposed is as follows. Members of a CLC vote at an AGM to explore the possibility of acquiring more land by renting in or by purchase. They then weigh possible rents or purchases, net of government or bank loans, interest rates, repayment schedules etc., against other uses of the CLC budget. In other words, a true choice between further support for current and capital programmes, including the raising of additional local resources, and investment opportunities in additional land.

The benefits of organising the redistribution of the rural population around the CLC is that group initiative, saving and discipline become the core of the model. At the same time, and thinking of the World Bank's emphasis on the settler family, the CLC provides ample scope for individual advancement. For instance, a difficult decision in officially sponsored settlements is the resolution of projected settler incomes, number of settlers and the achievement of a modicum of return. Using the CLC and the EGS as the instruments of settlement would vest initiative and the determination of the scale and speed of settlement with communities. The process of decision making would help to secure high returns to savings by communities and individuals and to EGS funds.

Government financial and programme assistance would be provided as part of ongoing rural development support. Government would retain governance of the process through known and accepted channels, receiving through the same regular up-to-date information. Factors which government could vary to achieve national policy goals would include: the price of loans; the imposition of ceilings on land purchase to protect the interests of weaker or slower CLCs; and rules of the EGS so as to accommodate special needs (for instance housing which consumes a larger proportion of materials than normally allowed, or short-term intensive training for new crops).

The pattern of present black and white rural settlement suggests that it is unlikely that many CLCs could acquire additional land nearby. That need not be a problem for, once a CLC has selected those who are to settle the new land and the settlement is operative, the membership and the books of the old and the new settlements can be separated. The Registrar of
CLCs can frame suitable rules and act as arbitrator if need be. In most cases a pro rata system related to the number of members in the old and the new settlements can be used to divide the total assets and liabilities. After a period of five or so years the two constituent communities should resemble each other in wealth, making a separation exercise simpler.

CLC rent or purchase of additional land in the 'white' areas would act to maintain the value of land by the process of member selection of appropriate investments. Conversely good prices for land would ease the lease or sale of land and hence speed up the operation whilst underpinning continued efficient white farming. Government budget support to the CLCs and loan and other financial assistance by the EGS or other agencies would be major components of the CLCs' wherewithal with which to acquire and utilise productively additional land. In other words, government would be the major financier of land transactions in favour of the CLCs but without itself becoming involved in land purchases. 4

It may be apprehended that government support could lead to higher than normal prices, the benefits of which would go to the seller or renter. High prices should lead to decisions within CLCs to use available funds in other ways than the acquisition of additional land. Nonetheless, the pent up land hunger amongst Africans is likely to stomach high prices for land and the concomitant skimping on other activities. Indeed, once CLCs are established, the public may seek government support for a fairly rapid redistribution of land.

Government nationalisation of land, whatever the compensation, does raise the spectre of the price of land to CLCs being more politically than market determined. Any artificial reduction in the price of land below what might otherwise have ruled will lead to a degree of mal-allocation by CLCs in favour of the acquisition of additional land rather than the development and service of present assets. The pent-up land hunger will fuel any such tendency. Low prices will weaken the savings function possible within CLCs and open up the likelihood of a scramble for land ahead of community or government ability to secure the good husbandry of the considerable assets involved. The checks and balances in the approach
to settlement proposed would allow government to oversee the achievement of a complex of goals: equity, employment, high savings rates, efficiency and the maintenance of existing production.

As CLCs engaged in expansion, so government would want to ensure that supporting services and infrastructure were ready or could be provided quickly. Established CLCs could provide many of the more immediate services through group action and support of the parent body and its respective CSO. Government would promote new CSOs in the neighbourhood to service and to link new settlements together. The EGS would respond to settler demands for extra work and accommodate local design; for instance it could finance on a loan/subsidy basis brickmaking and the construction of simple buildings.

A body within government, either a special agency or a division of a Ministry, should be charged with the overall supervision of the settlement programme, with the management of the financial assistance programmes and with the monitoring and evaluation. The latter function might best be entrusted to a sub-group composed of Ministry officials, representatives of CLCs, members of agricultural bodies and of the central planning organisation.

FOOTNOTES TO CHAPTER 6

1. Robert Chalmers concluded that the record in Africa since 1945 was discouraging in both social and economic terms, in Settlement Schemes in Tropical Africa, Praeger, N.Y., 1969, p.7.


4. In South Africa there is no legal barrier to prevent CLCs renting-in white farms on long lease. In fact members of so-called 'coloured' reserves rent white farms in the Cape. For the EGS to operate on white farms, the rental agreement would have to include clear provisions for compensation to be paid for improvements if the lease were to be terminated by the owner. The paucity of land in areas like KwaZulu may lead in a very few years to a declining return to further public works and to investments by CLCs. In that case it would be correct economic policy to ease black settlement on white farms, even if initially only under suitable long term lease arrangements with an option to buy should the law be so changed. The scheme, whether outright purchase or long-term lease, represents a productive alternative to the costly purchase of a handful of white farms to be gifted to the 'homelands'.
CHAPTER 7

AGRICULTURAL CREDIT : THE ROLE OF THE CREDIT UNION

Introduction

Southern Africa has yet to witness any serious countrywide effort to provide small farmers and artisans with institutional credit. Worldwide some 70% to 80% of small farmers commonly have no access to such credit. In Africa about 5% of farmers obtain institutional credit though for many countries the figure is close to 1%. In Asia and Latin America the figure is 15%. In almost all countries large farmers have been the main beneficiaries. The informal sector provides the great bulk of credit at interest rates from 3 to 20 times that of institutional credit.

The scope of institutional credit is almost limitless. However, severe caveats have to be introduced. To be productive, credit has to work in conjunction with opportunities for economic gain, alongside the requisite physical, technical and training inputs and suitable market outlets. Under productive conditions, credit can play the great role that S.H. Frankel assigned it, 'Just as the bursting of customary or physical frontiers releases man from bonds of space, so too the creation of debt releases him from the bonds of time and can be regarded as a forcing-house of civilization'. Another authority, W.A. Lewis, accepting the historical evidence from many parts of the world that independent peasants are frequently avid savers, believes that peasant farmers would 'save more if they could borrow more'.

The failure of institutional credit to play the role expected of it appears to centre around one consideration. Practically no institutional credit agencies make a profit dealing with small farmers. The average lending rate of institutional agencies ranges from 6% to 30% with an average of about 10%. The cost of lending to small farmers ranges from 15% to 22%, made up as follows:
a. The opportunity cost of capital (or the interest rate plus administration costs of attracting deposits) 8%

b. Loan administration costs: long term credit 3% - 5%
short term credit 7% - 10%

c. Cost of defaults, normally efficient institution

<table>
<thead>
<tr>
<th>Institution</th>
<th>Cost of Defaults</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>15% - 22%</td>
</tr>
</tbody>
</table>

The nominal interest rates charged, ranging from 6% to 30%, when adjusted for inflation, become real interest rates ranging from -16% to +16%, with a mean of +3%.6 In short, institutional credit is invariably made available at real interest rates that barely cover administration costs and pay nothing towards the cost of capital, the risk of default or of ancillary though often useful services such as farm planning, supervision etc. Each loan made represents a further depletion of the lending institution’s resources. A build up of the supply of institutional credit becomes impossible without support from government - a move that, although quite common, opens government to the financing of bottomless pits and the institutions to diminished independence. The alternative, as realised in Japan and the Republic of China, is to attract capital by paying high rates on deposits. That in turn necessitates real rates of interest to be charged on loans.

Artificially low interest rates lead to a misallocation of resources (for instance the over capitalisation of big farms often with detrimental employment effects); to big farmer relending of cheap credit at far higher interest rates to the poor, often with the intent of acquiring land through default; to high delinquency rates on repayment;7 and to inter-sectoral leakages. Little cheap credit reaches the small farmer. Rather cheap credit makes a productive well served small-farm sector hard to achieve.

Evidence collected by the World Bank and supported by the informal sector interest rates suggest that small farmers operating in a productive milieu would be prepared to pay interest rates that cover the real costs of institutional credit. Most agricultural borrowing is for short periods, roughly four months, and covers a small fraction of total farm outlays. Hence interest on credit, even at apparently high interest rates, for most small farmers would seldom amount to more than 1% of annual expenditure.
The obstacles to real rates of interest and a viable institutional agricultural credit sector are of two types: (1) The real cost of lending to small farmers is higher than the cost to other sectors of the economy. Well ordered and comparable inter-sector interest rate structures, as arose historically from the urban, industrial and modern sectors, in which the cost and risk of lending is less than in agriculture, are beloved of Central Banks. (2) Low, or subsidised interest rates to small farmers are amongst the most emotionally endowed pieces of socialist tradition.

Conservative institutions, like the World Bank, see the problem of interest rates for agricultural credit as inseparable from interest rates for the economy at large and argue that, 'A solution rests on restructuring lending rates under a national policy on interest rates'. A single system of interest rates is desired because that is in keeping with a single system of credit institutions and with continued Central Bank governance. It is a denial of the essential duality of the credit market; low cost, efficient operation in the modern sector and high cost, high risk, politically, socially and economically sensitive lending to small farmers and to the poor in town and country. That denial has been a major obstacle to the success of 'nationalised' banks working with small farmers and artisans.

There is a need for more innovation and for the modification of rules and regulations that dictate the requirements for collateral and the procedures for borrowing by small farmers. Nonetheless, it remains true that one lends largely against character, best tested by an individual's standing in the community, and against judgements made as efficiently as possible that the proposed use of the credit on that farm is feasible and the expected cash flow to be generated will carry the burden of the repayment schedule. Acknowledging the above, the World Bank admits that, 'The best prospects, in the future, will lie in some form of group responsibility for individual borrowings - an approach which has yet to be developed on a large scale.'

The proposal that follows allows for a form of duality in the market - a partnership between formal institutions operating under Central Bank governance and member controlled institutions setting their own interest rate structure on deposits and loans. The latter, termed Credit Unions, are,
in this formulation, the logical conclusion of group (i.e. mutual member) responsibility for individual borrowings. The Credit Union is seen as a parallel member controlled institution to community land, grazing, forestry and irrigation companies, and to co-operative dairying.

The Proposal: a national banking system built upon the Credit Union

A Credit Union is a savings and loans society. Credit Unions have only been tried in Africa from the 1960s. The institution is little known in southern Africa though it exists in a small way in Zimbabwe and in Lesotho. South Africa has no appropriate legislation under which to register though groups in several centres are organising the first stages of training and the formation of savings societies. A Cape Credit Union League has been formed following the preparation of League and Union constitutions that draw upon the resources of common law. Credit Unions are major institutions in North America and increasingly in South America. In Britain a Credit Union Act was passed in 1979 to bring existing unions under more effective control and to provide for rapid expansion.

The aim and the working of a Credit Union can be briefly stated.

(i) It is built upon the savings of members who form a community: neighbourhood, work, profession, church, etc. At first a group comes together to form a savings society. This operates like a post office or building society in that members have savings books and can withdraw as they wish. The savings society maintains an account with another registered financial institution: a bank, building society or post office, in which it deposits members' savings. By joining forces, the members can invest a larger proportion in time deposits, with higher interest, than most members would otherwise.

(ii) Regular meetings are held at a convenient location and time at which all members have to deposit a small minimum amount. The purpose is to teach the habit of regular saving, or thrift. Meetings are usually weekly or fortnightly and held in a school, church hall or a member's house.
(iii) A notice of withdrawal is required at the meeting prior to the meeting at which payment is desired. This stipulation is necessary to enable the Treasurer to manage the society's affairs in an orderly manner. It also fits in with the service component of joint-banking which, in many rural and even black urban areas where banking offices are few and far between, can greatly reduce the cost and inconvenience of using established institutions.

(iv) After some time, usually not before one or two years have elapsed, and when the savings society has accumulated sufficient funds, it may apply to register as a savings and loans society, a Credit Union, to the appropriate Registrar. Throughout it is helped by a Credit Union League, a service organisation somewhat like the CSO except that it is wholly controlled by member Credit Unions (see below).

(v) Under a Credit Union members build their savings, using the funds to lend among themselves and to invest in a professionally advised portfolio. Income earned from interest charges and dividends is distributed in the following order: a reserve fund to build the corpus of the institution, a community fund to mount common endeavours, and a balance to pay interest on members' deposits. The Credit Union has little in the way of overheads (membership fee of the League, post and stationery, audit fees). Committee members are honorary workers and there is usually no need to pay rent. Consequently it can pay competitive interest rates on deposits even after 40% of net income is distributed, say 30% to reserve and 10% to community funds.

(vi) There are various ways in which loans can be applied for and granted to members. Legislation may specify particular procedures or, if not, Credit Unions can in their constitutions which are approved by the Registrar. Following the North American model, most Credit Unions in Africa vest approval in a Loans Committee. The Committee has to ascertain that the
purpose for and the amount of the loan requested are reasonable and that sufficient collateral and/or the signatures of two co-guarantors accompany the application. The North American model is not suited to the poorer communities of southern Africa and should be regarded as a second phase. A third phase would be one of signature borrowing by established members up to a specified amount. In southern Africa the principle of collateral is difficult to manage. Most loan requests would not involve a capital item which can be pledged against repayment, such as a car or other moveable items. Titles in property are few among blacks so that mortgages are inappropriate. Moreover, the task of collection of collateral is nasty, it can be expensive and should be avoided.

It is too disruptive of small groups and often, when understanding of business practices is not that sophisticated, can rebound on the committee members. A simple procedure, and one which underlines the standing-for-each-other principle, is as follows: the loan applicant obtains agreements, with signatures on completed forms, of other members who will stand guarantee for his loan. To illustrate. A member wishes to borrow R100. He has in his account R40. He decides that he is willing to block only R20 of his R40 against repayment since he wants to remain liquid to the extent of R20. He then canvasses other members to stand for the balance in amounts from a minimum, say R5. When he has agreements from other members, plus his own blocked sum, amounting to R100, he presents the completed forms to the Loans Committee. The Committee, which, in this procedure, has been relieved of its decision making responsibility, has only to verify the signatures and their correspondence to the funds to be blocked and the amount of the loan applied for. In short, it acts as a verification body over decisions reached by members. The act of blocking funds in members' accounts equal to the amount of the loan secures the institution of the Credit Union since only members are at risk. Later, once a large reserve fund has been built up, the Credit Union may automatically underwrite a fixed percentage of every loan, say 15%. Or it may include in every loan a premium charge for insurance by an outside agency for default. That agency could be owned by a number of Credit Unions acting in concert through a Credit Union League. In either case, each Credit Union
will have to build a reputation for repayment over some years before it is feasible to reduce the absolute standing-for-each-other by members. Even then, it should not reduce the risk to below half; or else provide a choice of blocked funds, collateral, insurance and institutional acceptance of responsibility to suit members' preferences.

(vii) A strength of loan business within a Credit Union is that decisions are based on local knowledge and reputation; factors which are already, or are readily, available to members. When circumstances change so that repayment becomes difficult, a member, acting in good faith, can expect a ready and helpful response. Illness, loss of a job, drought and pestilence are typical external factors. The conversion of a short-term to a medium-term loan is an obvious response. In the case of blocked accounts, the Loans Committee would have to verify that the original guarantors, or others were prepared to continue their backing beyond the original period. Once a reserve fund is built, the Committee may be able to offer greater institutional cover to ease the position of guarantors; perhaps an increase of from 15% to 20% in an established institution, or a first round of 15% in a younger institution. It all depends on the strength of the particular Credit Union. The whole has to be carefully audited and must fall within constitutional and overall member control.

Repayment schedules are agreed at the time of loan making. In agricultural communities they would match the expected cash flow of the borrower. Except in exceptional circumstances, most loans would include a regular repayment along with the obligatory minimum savings every meeting. In an agricultural community where income is received once or at most a few times a year, the repayment schedule might contain small regular payments and one or more large repayments when crops are harvested. In this manner member and institution are kept in close touch. Failure to deposit and to repay for two meetings results in a standard letter requiring the amounts to be made up, or expulsion will follow. When a loan is outstanding the Committee would want to discuss the matter, explaining among other things that default would vitiate guarantor arrangements
on the loan and that savings not previously blocked become
blocked automatically to secure the interest of the institution.

(viii) Members should be free to decide on the interest structure for
loans made by their Credit Union. In North America there is a
preference for a mechanical 1% per month on the outstanding
balance. There seems to be no reason, however, why loans should
not be classified as short, medium and long term (up to 1 year,
1 to 3 years, 3 to 6 years), and by purpose (productivity, social,
emergency) with different interest rates for each. Short-term
productive loans, as for seed and fertilizer, or materials and
wage payments in an owner-operated business, can carry quite high
interest rates. If banks are charging 10%, the Credit Union can
go a few percentage points higher for it offers greater member
determination plus interest charged on reducing balances, simpler
application procedures, greater certainty of the loan being granted
without delay, and it avoids costs of travel and repeat visits.

In countries where there are dual markets for credit - an institutional and
an informal market - Credit Unions should operate outside the Reserve Bank
interest structure. Interest on loans of up to 30% and deposit rates of up
to 18% may be in keeping with local market conditions. Loans at 30%, pro-
vided without delay with little cost or red tape, to finance crops would be
attractive to villagers in many countries. Interest would seldom amount to
more than 1% - 2% of total farm outlay. Interest rates of 18% on deposits
would serve to mop-up much of the speculative money now used to lend to the
poor at fantastic rates or to hoard supplies of basic commodities - the latter
a serious factor in poor countries. An increased capacity to supply credit
may break the monopoly position placed on money lenders. A wide margin
between deposit and loan rates is desirable so that reserve and community
fund requirements can be generously met. In that manner the risk element
carried by members operating in a poor society can be reduced over time in
favour of institutional risk. Consequently the degree of dualism in the
credit markets would be reduced as capital controlled by Credit Unions rose,
local monopolies were broken, and 'credit was increasingly channelled into
productive and social rather than speculative purposes. Credit would
become a service rather than an exploitative operation, helping peasant
agriculture to become more viable and peasants more autonomous.
In southern Africa, where interest rates have not been common in traditional relations, the freedom to set interest rates may not appear to carry much weight. However, the principle that a Credit Union should mirror the local situation remains important. In many urban areas recent reports suggest that money lending is becoming a business with interest rates as high as any elsewhere. Of course, the high interest rates reflect high risks - the growth of poverty, landlessness and unemployment - but they also reflect the scarcity of capital. An amalgam of relatively high interest rates on loans and deposits may well be healthy in many cases and should not be denied by legislation. In any case, as has been proven, it is a useful anti-inflation tool.11

At the other extreme, a Credit Union is a community instrument. Members would like it to provide loans at cheap rates and with speed to help them meet emergencies. A typical spread of interest rates might be as follows:

<table>
<thead>
<tr>
<th></th>
<th>Short</th>
<th>Medium</th>
<th>Long Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Productive Loan</td>
<td>22</td>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td>Social Loan</td>
<td>10</td>
<td>8</td>
<td>-</td>
</tr>
<tr>
<td>Emergency Loan</td>
<td>4</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

The Credit Union League in its training and advisory capacities would seek to help member Unions find a balance between short term direct benefit (cheap loans) and the longer term benefits offered by a strong institution. The latter include part coverage of loans, loan insurance, large flows to the community fund which is controlled by members, a wide interest spread and growing institutional income flows from the rapid growth of reserve funds - income which underwrites high deposit/low loan rates. As soon as there is stability in a Credit Union it can begin to arrange group life and other bulk insurance, using the bargaining power of an organised membership. Much of the paper work (automatic premium payments etc.) can be handled by the Credit Union or the Credit Union League.

The efficiencies that can be achieved in all operations by a Credit Union under an active and professionally led Credit Union League are a direct counter to the inefficiencies of the countless burial, saving, Christmas Club, wage deduction and other schemes, most of which fall outside the law.
Small people organised into a strong financial institution, a Credit Union, circulate savings within the community so that it works primarily for them. This is the opposite of most other arrangements whereby small savers fund employers' working capital without interest (most wage deduction schemes), lose heavily in times of inflation (deposit accounts held by burial and savings societies), and carry high overheads (burial and life insurance schemes by large companies and Christmas Clubs). The amounts of money involved are gigantic, certainly tens of millions of Rand every year in South Africa. The business replacement potential of Credit Unions alone is enormous.

Two final points need to be made. The encouragement to take a loan rather than to withdraw savings is psychologically important. It is true that loans usually cost more than the interest earned on the deposit that is maintained in the blocked account. More valuable is the principle inherent in the process of regular saving, even during a period of loan repayment. Loan repayment is easier than the process of rebuilding an expended savings account. The principle of loan rather than deposit withdrawal is vital. The preservation of savings and the use and repayment of a loan builds an ever-increasing momentum in the individual member and in the institution. Taking a loan is an act in favour of the community for it builds reserve and community funds and, except for emergency funds, normally increases the return of funds controlled by the Credit Union. As Credit Unions welcome deposits and loan repayments of small amounts, amounts regular institutions cannot but despise because of the inordinate handling costs, and charge interest on loans on reducing balances, effective rates on loans over time can be significantly reduced.

At Elim in the Cape, one resident built a large savings society almost single-handed over forty years by going from house to house in the evening to collect the monthly savings from members. The Elim Savings Society, now in its 75th year, and with a record of sound if conservative management, has been emasculated by government's insistence on registration. The reason is that the Registrar of Friendly Societies has debarred the Society from doing loan business with members, present law making no provision for Credit Union type activities. The members receive a service from the Society, but their funds, which are on long term deposit in a bank, are put to work by other clients.
of the bank. Not being constituted to undertake loan business, the members have not explored the obstacles to credit use in their own community. Legal advice has been sought from a group in Cape Town seeking to clarify the constraints to a Credit Union movement in South Africa. It appears that where membership is confined, i.e. not open to the public, by prior membership of a church, factory, residential area etc., Credit Unions can be formed outside present Banking and Friendly Society law.

A number of southern Africa's financial giants, banks and building societies, have been built largely by the savings of small people. Yet small people have not become the prime beneficiaries of loan business. In several countries there are or have been legal obstacles to urban property and to tribal land offered as collateral. Attitudes, initially racist but perhaps as much class as race conscious in recent years, have produced wide gulfs in understanding between small clients and bank staff. The result is that southern Africa is unbanked in wide areas and suffers legal and attitudinal lopsidedness in the banked areas. Countries which have made major efforts to spread banking into the countryside and into poorer urban communities have found that conventional banks and banking practices make reaching small customers, especially with loan business, prohibitively expensive. An intermediate 'field' agency is needed. Where government promotes co-operatives the record reveals numerous pitfalls, some of which have been mentioned above. The knowledge that the funds are government's, or bank's by government arrangement, has led to the logical treatment by farmers and other borrowers of the interest charge on the loan as a premium to cover risks. In that situation financial disciplines is hard to achieve and enormous sums of money can be tied up, often unproductively.

Once established and with a record of sound management, there is no reason why a Credit Union, facing a greater demand for loans than the funds available, should not seek a simple gearing relationship with a bank. In the first instance the bank might agree to be a party to the tune of 10% on every loan, or for loans for particular purposes, made after a certain date. The bank's security would not be collateral. It would be the judgement and social control exercised by all those members who have blocked funds to cover the balance of 90% of each loan. By borrowing and re-lending to members, the Credit Union acts as a 'retail' agent to the 'wholesale' bank.
68

The use of bank funds would swell Credit Union business. It would also enhance society profit since the Union would relend borrowed moneys to members at a higher rate. All this within the governance of member control and use of their own savings. Technically a bank could agree to gear its lending up to 99% of Credit Union loans to members so long as the Union had a marvellous record. In practice the level of gearing should not exceed 40%. Beyond that it would put the bank at risk, not technically but in the sense that it would undermine the philosophic core of member savings and group co-responsibility in the client Union. Up to 40%, built up slowly on knowledge and confidence, can allow Credit Unions greater leeway in meeting members' demands. Gearing would in fact be a recognition of the role of Credit Unions at the retail end of the banking sector among small member clients organised for the purpose. Gearing could vary with the purpose of the loan: a low gearing, 10% say, on emergency loans and up to 40% on productive loans. Loans towards the acquisition of property mortgages and many other investments in education and training, in agricultural, fabrication and in working capital are some fields in which a vast demand for credit exists but is not met by institutional credit.

Earlier, in chapter 3 on the EGS, it was proposed that 10% of wage earnings on the scheme be automatically placed into Building Society, Bank, Post Office or Credit Union accounts. Workers on an EGS should be free to specify with which approved institution they would like the deduction to be credited in their name. The rule should be that deposits cannot be withdrawn for three years. The only exception should be a provision that savings in other institutions can be transferred at the saver's instruction to his or her account with a registered Credit Union. In this way the 10% deduction on EGS wages can be used by the saver under institutional direction within the socially encompassed discipline of a Credit Union loan. Credit Unions which have agreed with the EGS management to follow a loans only policy, at least with regard to savings derived from EGS wage deductions, may allow EGS savings to be blocked in favour of loans to that member. Such a measure would allow small members to become fully acquainted with Credit Union practice, thereby reinforcing the practice of thrift and the experience of money management. It would also fuel the savings of small members bringing them into potentially significant standing to utilise re-finance by banks.
The Credit Union League

A Credit Union League is a professionally managed office providing services to member Credit Unions. It is controlled by the member Credit Unions who elect its Board. The organisation and functions of a League office have become well established and need not occupy us here.

Many of the training, supervisory, legal service, investment management and audit functions required by Credit Unions can be provided more cheaply by sharing with other Unions. Benefits of scale can be realised through a League without having to sacrifice the close identity and cohesion of Union members. Thus a League Office can look after 100 000 odd members in a thousand Unions of 100 members each if that size Union accommodates the pattern of settlement, cultural factors etc. of the region. In practice, most Unions would be bigger in membership and many may amalgamate at a later date. The point, nonetheless, is that there must be an operational principle embraced in the League which allows Unions to stay as small as they please.

In chapter 14 we have outlined acceptable ways in which commerce and industry in the public and the private sector can support rural development, primarily with the transference of management expertise. Established financial institutions may well regard the beginning of a Credit Union movement with hostility. They would understand its ability to attract away depositors. Enlightened bankers and building society managers should appreciate that the Credit Union can open up a large market for institutional credit and for the mobilization of savings into the institutional banking sector. This is a market which they are unlikely to create for themselves except through a wholesale/retail type partnership with Credit Unions.

Banks and Building Societies, even without the incentive of a tax rebate as proposed, should see that support for Credit Unions is in their own interest. The most efficient way to subsidise credit to small borrowers is to subsidise the extra administrative costs involved in the setting up of the League and during the early years of Union activity.

Usually it is social workers and priests who start Credit Unions. Limits to expansion from one or a few carefully monitored Unions arise quickly
because a proper League office cannot be financed or properly staffed. Given the need and the scope for Credit Unions, established financial institutions should help to ensure that the capacity of a League office is always beyond that demanded by present member Unions and by groups seeking assistance to start a Union. The loan of experienced and sympathetic staff on a regular or long term basis and cash to cover training, administrative and legal fees should be undertaken.

Conclusion

It is as well to summarise the principles under which Credit Unions operate for those principles differ radically from the officially sponsored credit co-operatives which have had such a dismal record all over the third world.

i The Credit Union is built upon members savings under the discipline of regular though nominal minimal deposits.

ii The Credit Union is a business, albeit set up by voluntary association.

iii The Credit Union is a corporate body, enjoying perpetual succession and, thereby, has an identity separate from that of its members.

iv It operates, with loans, on the principle of putting members', reserve or special funds at risk; not the corpus of the institution itself.

v It operates as an autonomous, member owned and controlled body and should not be over supervised by the Registrar of Co-operatives or any other official 'guardian'. Nonetheless, the Credit Union movement would benefit from the provision of suitable law under which registration is possible. It must not be regarded as material that can be bent to suit public policy.

vi Like any other business, the Credit Union must be free to trade in the market: to determine its own interest rate structure according to local conditions. The Credit Union has appropriate rules for distributing net income or profit, amongst which are provisions for rebates on loan business which act to reduce the cost of borrowing by members. Cheap interest, officially confused with efficiency in the co-operative credit model long in vogue in many parts of the ex-British Empire, is anathema to member and institution well-being.

vii Artificial (i.e. imposed) rates of interest lead to the misallocation of resources and encourage misuse and even corruption. Low interest rates put the benefits of some members ahead of others and members ahead of the well-being of the institution.
FOOTNOTES TO CHAPTER 7


5. Ibid., p.10.

6. Ibid., p.11.

7. In many developing countries delinquency rates of up to 50% are common. While final default rates may be much lower, delinquency raises administration costs, slows the turn-over of funds and jeopardises the life of the institution.

8. op.cit., p.48.


10. The Reserve Fund, which is invested in ways approved by the Registrar of Co-operatives or, as in South Africa where registration is not yet appropriate, under the guidance of the League, earns income which swells the income of the Credit Union over time.

11. South Korea and Nationalist China have managed high interest rate anti-inflation programmes which had remarkable beneficial effects on savings. See Anand G. Chandavarkar, 'Some Aspects of Interest Rate Policies in Less Developed Economies', in I.M.F. Staff Papers, Vol. XVIII, No. 1, March 1971.
CHAPTER 8

AGRICULTURAL RESEARCH AND EXTENSION

Striking anomalies exist within the agricultural sector in southern Africa. Just as the earlier proposals set out to correct resource and income disparities and to underwrite change with security, so measures must be consciously adopted to bring the official agricultural establishment into the service of the peasant.

The success of agricultural research is easily apparent in the role it has played in the growth of the large commercial agricultural sector in southern Africa. Indeed, throughout the world science has mainly served the larger farms and the plantation economies. It has not yet developed a strong sense of constituency amongst small farmers except in exceptional cases where cash crops have been actively promoted. Throughout the third world there has been an official push to develop a strong agricultural research and extension network. The growth of the international agricultural research centres system, supported by private foundations and increasingly by United Nations agencies and governments, has lent considerable momentum to the development of national agricultural research and extension systems. Continued support for the international and national networks is underwritten by research into the investment efficiency of such activities. Agricultural research productivity has been measured in numerous studies covering a number of developed and third world countries. The observed annual rates of return typically fall within the 30% to 60% range. It is hard to imagine that any other investment in either private or public sector activity would produce more favourable rates of return than those from agricultural research. In other words, there has been an underinvestment in agricultural research and extension services in most countries, both developed and underdeveloped. This is in contrast to the thrust of much of the literature on public economics. That literature directs attention to areas of overinvestment and decreasing efficiency in the supply of bureaucratic services. Agricultural research appears to be a strong exception to the general theory.

High rates of return to agricultural research in third world countries pose a dilemma for the policy maker. It suggests that a vastly increased
funding of agricultural research would produce large benefits. At the same time a substantial body of evidence exists which suggests that only a small proportion of peasant producers have adopted scientific innovations and that those who have were mostly the relatively well-placed. Smaller farmers and landless labourers have been left behind in the countryside. Is this a function of poorly developed agricultural research and extension services, or is it an outcome of a more general malaise in which policies and programmes do not reach the small and poor? Growing frustration with the efficacy of official development projects and programmes in all countries in the third world suggests that there is a structural hindrance to the flow of knowledge and investment. For instance, a detailed examination and evaluation of 36 rural development projects in Africa and Latin America concluded that project success depended largely on whether farmers were involved in decision making during implementation of the project and whether they committed their own labour and/or cash to the activity. The report urged that projects be designed more carefully in response to these criteria and that this in turn would require more time and knowledge of local conditions than aid agencies normally deemed necessary. It recommended that aid agencies should either adopt a more locally based organic development approach or support smaller institutions that would be able to operate on this basis.

There is a management problem that needs to be recognised for it does affect the ability and the willingness of agricultural scientists to work with farmers in marginal physical or commercial areas. Once a country embarks upon intensive agriculture based upon HYV seeds and purchased inputs of fertilizers, pesticides etc., a vital dependency is created. The maintenance of initial yield increases can develop into an increasingly complex, sophisticated and expensive operation in the face of threats posed by new diseases or altered factor prices. The farmers who have become adopters of new varieties and who use purchased inputs are bound to be commercially active and are likely to represent a powerful constituency if, as is probable, they are a major source of foodgrain surpluses or of crops for industrial processing or export, or both.

The agricultural research establishment, unless consciously organised and financed otherwise, is likely to be drawn increasingly into activities
related to the maintenance of yield increases already gained and away from the less pressing and longer term issues of the marginal farmers, farmers, who, despite their large numbers, are poorly organised and represented. Finding, as we shall argue, that conventionally they are not equipped to converse on mutual terms with marginal farmers, scientists in fact may welcome the distraction of regular crises in the already 'modern' farm sector. Such a syndrome can serve to validate existing inappropriate attitudes towards farmer knowledge and to reinforce the difficulties of countering regional imbalances.

In the late 1960s, a general disappointment with the top-down development theories arose and was given more concrete impetus following the entry of other disciplines, notably geography and ecology, into the field. The series of crises of the late 1970s lent urgency to the issue; the energy crisis, the rapid growth in systems of production that were dependent upon non-renewable fossil fuels; the incidence of largely man-made ecological disasters such as the drought in the Sahel and the fuel-wood and desertification scares that were formally acknowledged; and the more widespread concern that the potential promised by the green revolution had revealed problems inherent in the institutional systems which governed the countryside as well as in the strategies used to promote the technology.

It is possible today to assess the potential for the growth of what is often termed ethnoscience, the study of indigenous knowledge systems, and to set that promise and the method it demands against the conventional position held by agricultural research and extension. We shall argue that the ethnoscience system offers the means whereby it may be possible to attain high returns to investment in agricultural research by combining local knowledge and initiative with new materials and understandings derived from modern science. If that can be achieved then it should be reasonable to expect that agricultural science, working in the service of peasant producers, can lead to rapid production increases together with the maintenance of stable ecological systems and a furthering of equity.

The promise of ethnoscience is based on the demand that development planners must take into account the accumulated knowledge and the traditional skills and technology of the people amongst whom they work. This position is
in contra-distinction to that which has arisen in western science from its origins in a logical-positivist mode wherein knowledge is held to arise at the centre, in the policy or planning office or in the laboratory, and is disseminated outward to clients. In the case of peasant farmers the client is regarded as a clean slate upon which to write recommendations. The belief that knowledge originates at the centre is reinforced by a hierarchical structure with research scientists placed at the top and agricultural extension workers at the bottom. The classical agricultural extension model that results is, 'a set of assumptions, principles, and organisational structures for diffusing agricultural research to farm audiences'.

The model, as developed in the United States, emphasises the outward flow of communication for the 'extension' of knowledge from scientifically trained extension agents to clientele who share at least a minimal scientific education. The working of the 'classical' extension model in the United States is further modulated by the degree of pragmatism evident in the culture, by the economy's past ability to support simplified, externally supported agricultural ecosystems, and by the fact that farmer groups often hire and therefore control extension agents. With the growth of the industrial farming venture, scientists have become both company servants as well as farm managers. The relationship between research and development is close and reinforces the role of pragmatism.

In third world countries farmers seldom enjoy a medium of science education and few have the resources and confidence in the necessary institutional and technical support to emulate the American way. Colonial attitudes amongst administrators and scientists have often served to weaken the farmers' ability to organise around a problem. Moreover, in some cases the dominant scientific establishment represents a marriage between a logical positivist philosophy and a ruling cultural group. India offers a clear cut example. Cultural and educational leadership has traditionally been vested in the Brahmin caste. The marriage of western science and Brahmin values has resulted in a reinforcement of the proclivity of scientists in the establishment to pronounce desirable farmer activities. It is also reflected in India's planning. In her five year and annual plans India has presumed that documents issued at the centre can determine
what farmers in their millions will decide to do. In short, Indian planning denies the decision making and autonomous nature of her farmers. The same pattern is true of practically all third world countries though it differs in degree. One authoritative report describes extension agents as 'one-way messengers' and adds that their task is seen to be limited to 'passing along' to farmers, 'a package of recommended practices which experts at a higher level have decided will fit the farmers' needs and opportunities'.

The process under the classical extension model is illustrated in Figure I. Knowledge originates in the first box and is disseminated or extended to the second box in which is housed the clientele. In the formulation box A is an entirely independent variable. This leads to the deduction that if a recommendation which is generated in box A fails to take hold in farmers' fields in box B, then clearly there is something wrong either in the process of transmission or with the farmers themselves. The failure of the earlier development models and agricultural programs has led to attempts to improve the feed-back of information from the field to 'decision makers'. The 'agro-economic constraints network' employed by IRRI and the CYMMIT monitoring program are recent examples of serious attempts to improve the flow of communication between boxes A and B, Figure II. They suffer the critical limitation that they remain 'within the overall philosophical position that knowledge is to be transmitted from research to farmers'. It results in a dichotomy between scientists and farmers, a 'them and us' syndrome, in which the farmer is confined to a passive role and the data that is communicated back to the scientist is of a type pre-judged to be important by those scientists. It ties down skilled manpower in activities which might equally efficiently or more beneficially be carried out by farmers themselves.

Quite dramatic differences arise between the specialist interest of modern scientists and the more general understanding of peasant farmers: an agricultural extension system must be designed to modulate the differences. Specialisation in modern science has meant that increasingly scientists in the field have particular knowledge about a single crop or indeed about a single aspect of that crop. This contrasts with the universe of understanding held by peasants in which they place empirical knowledge gained about a plant and its utility. Two examples will suffice.
FIGURE I  The Classic Extension Model

Scientists -> One way transmission -> Farmer

FIGURE II  With Attempts to Improve Communication

A -> C <- B

Improved communication feed-back, B → C, determined by requirements of A

FIGURE III  With Multi-disciplinary Research into Farmer Systems

A -> C <- B

Inter-disciplinary research affecting requirements set by A
The first is the juxtaposition of the science based monoculture cropping, which has been a standard aim and recommendation of modern science in the tropics during this century, and African agricultural systems. Mono-culture derives from a world view in which society is conceived as an entity apart from nature, and in which society is able to manipulate its environment in the pursuit of its own ends. The epitome of this approach is the success gained with the high yielding variety seeds. The key to the success of the high yielding programme is the provision of an artificially created and highly simplified eco-system supported by non-biological inputs. The mixed or 'dirty' fields of the typical tropical cultivator are based on a far more complex understanding of plants and their associations combined with the farmer's pursuit to minimise risk while increasing returns to labour inputs. This contrasts directly with the scientist's objective which is invariably to increase the yield of a single crop from a given piece of land. Mixed fields are inherently more stable as an eco-system and allow peasant farmers to attain a high degree of autonomy. A recent international symposium has concluded that the potential of inter-cropping remains to be properly explored.

A secondary conflict is that the modern scientist's view of multi-cropping tends to be limited to sequential cropping of any one field, often made possible only by investment in irrigation. In the inter-cropping system of peasant farmers a series of harvests are extracted from one piece of land over a period of time. Belshaw has observed research and policy development in East Africa and has reported on the recommendations that scientists and policy makers have put forward during the last decade. The gist of which is that the agricultural science and extension establishment should begin to work with farmers on the improvement of their inter-cropping systems. Despite this, no recommended crop practices involving inter-cropping techniques have been issued to the agricultural extension services in East Africa. He concludes that this can be explained by the inappropriate criteria applied in the experimental research programme. Measurement has concentrated on yield per unit area whereas farmers using inter-cropping techniques aim to achieve a number of functions which can be summarised thus:

Farmers aim to:
1) raise total farm output,
2) reduce the variance in output levels,
3) reduce labour inputs per unit of product,
4) ensure a conveniently placed, timely and varied supply of fresh foods,
5) avoid or reduce cash outlays on farm inputs such as fertilizers. 13
6) To Belshaw’s list may be added the maintenance of the eco-system.

Belshaw argues that a concept of multi-disciplinary research of farmer systems has not yet been adopted by the agricultural science establishment. Such an approach would take account of the fundamental human needs of rural farmers and their families as well as the interests of future generations. He argues that the material components of the farm system—energy flows, plants, animals, technology, or whatever—enter as only secondary considerations in the farmers' valuation of alternatives to the improvement of human welfare. 14

Belshaw’s proposal in support of multi-disciplinary research that can feed more directly into extension practice can be regarded as a longer term attempt to educate the scientific establishment; to improve the flow and pictures of the field between B and A, Figure III. There remains a need to look at the structure of the formal relations between farmers and scientists.

The second example of the conflict of interests between scientist and farmer has arisen in the management of India’s forests. The Indian Forest Service, only the second official forest service in modern times, was founded in the 1860s as a reaction to the over-exploitation of valuable timber and to the threat that posed to state revenues. A century of primary concern for valuable timber has been spent at variance with the needs of an increasingly impoverished peasantry. Trained foresters have a limited knowledge of forest species and crop uses. This contrasts with the considerable knowledge of flora held by villagers, especially the tribals of the forested central uplands and the inhabitants of the Himalayan foothills; two groups who lost control over common (forest) lands under British land settlement in the mid-nineteenth century. This led to a situation in which foresters policed the forest against incursions by people largely dependent upon access to the same land. As a result, the vital and relevant knowledge systems of the peasantry lie buried under layers of
mutual suspicion and corruption. A new programme, Community Forestry, aims to place peasants in the position of shareholders and managers over forest tracts and to replace the police role of the forester with a professional support role. It is expected that multi-storey forestry, the exploitation, with the help of modern industrial research and processing, of hundreds of plant types; and local value-adding activities will bring high returns to labour and to land: the opposite of the degenerative cycle that has been in operation since the 1860s.

Indigenous knowledge has been held to be inherently mystical and irrational. In recent years a school has developed which regards indigenous knowledge as primarily 'utilitarian'; in other words, that peasants do not pursue knowledge for its own sake. As Howes points out, by labelling indigenous knowledge as utilitarian it denies it an abstract or intellectual dimension and thereby effectively excludes it from consideration as having potential for independent development and growth. The utilitarian school simply replaces the earlier dichotomy between rational and irrational thought with a view that contrasts abstract and intellectual dimensions with simple utility. A way out of the dilemma is provided by Lévi-Strauss. He has held that 'the thirst for objective knowledge is one of the most neglected aspects of the thought of the people we call primitive. Even if it is rarely directed towards facts of the same level as those with which modern science is concerned it implies comparable intellectual application and methods of observation. In both cases the universe is an object of thought at least as much as it is a means of satisfying needs'.

Current understanding of and theorising about knowledge - its source, generation, measurement, quantity or quality - is a Gordian knot that holds philosophers, anthropologists and psychologists among others in a stranglehold. The very complexity of its nurture, transmission and expression enable cognitive systems to elude attempts by social scientists to confine and to define them. Research this century, nonetheless, has exploded numerous myths about cognition.

The present context does not allow for a detailed analysis of current views of systems of knowledge held across cultures, classes, professions ... We can but draw upon a number of premises put forward by leading authorities to illustrate our affirmation that the individual acquisition and communal
realisation of knowledge is a creative process that has not been properly explored nor utilised for the benefit of farmers in agricultural development. The premises that follow do help in setting the qualities an agricultural research and extension system should accord in its formal design.

Jean Piaget: Every individual recreates knowledge. Knowledge is reconstructed by each generation. There is no thought that is not tied to activity. There is no thought that does not emanate from interaction between an individual and a community or environment.

Paulo Freire: There is important generative vitality within a community.

Gregory Bateson: Mind is immanent in the larger system - man plus environment.

Karl Popper: Conjecture or hypothesis must come before observation or perception.
All learning is a modification (it may be a refutation) of some prior knowledge.

Lévi-Strauss: Primitive man does seek objective knowledge.

Mao-Tse-tung: Knowledge originates in perception of the objective, external world through direct human physical experience.
Ideas grow out of practical experience and, in turn, shape that experience.
The world can be seen as a series of problems which are the occasion for both theory and action (similar to and influenced by John Dewey, the American pragmatist).

These premises can be summarised, without great injury, as follows:

There is no monopoly on knowledge held by any one scientific community.
Thought is construction.
Thought can be nurtured, especially through exploration and experimentation (activity plus a variety of objects). It requires, however, the possibility for spontaneous activity in the social and physical environment.

The hold that logical positivism has held over science has recently been shaken, noticeably by the work of Karl Popper. Knowledge has no longer to be held to be the monopoly of the central or higher orders of society.
Rather knowledge is seen to progress from the willingness of man to forego what Thomas Kuhn called 'normal science' or the dull conformity to existing theories, and to seek advance by the continual overthrowing of established understanding. In short, that knowledge emanates from the use of broad theories, that is theories that are general and hence operationally useful but which are also liable to be disproved. It is precisely the willingness to countenance faults which advances knowledge. In operational terms, learning takes place at the periphery of society where theory is tested, found wanting and revised in numerous situations. The approach serves to unleash positive processes of change over relatively short time periods and in finite, identifiable areas of action. Improvements occur by the continual adjustment of mechanisms, procedures and measures as reactions to field experience. Central to the learning and planning process is the acknowledgement of large areas of concern over which individuals and communities must be free to express themselves.

A less rampant philosophy governing the working of science and planning does promise to grant to peasants recognition that they are thinking men with knowledge and experience. A recognition that modern science and indigenous knowledge systems are indeed both ethnosciences would help to 'deflate the rhetorical humbug of "modernisation" theory or its socialist-technocratic equivalent'.

The Organisation of Agricultural Research and Extension

In an ideal society groups of small farmers would employ their own scientists, provide them with facilities and set them field problems upon which to work, recognising that agricultural research has been and surely will remain a good investment. The mechanics of an extension system governed by small farmers were mirrored in the practical nature of Chinese and Israeli experience. Both countries have made striking progress by adapting basic knowledge to local conditions. In China there is now a need to replenish basic knowledge, a correction China is pursuing with the international agricultural research institutes. Israel has adopted an intensely practical research programme aimed at the problems at hand. As a small country, Israel regarded pure research as an activity she could not immediately afford, preferring instead to draw upon the enormous store of knowledge held in other countries.
of organised rural communities has provided farmers with a political and an institutional counter to central agencies and with mechanisms for group initiative and action.

Southern Africa is characterised by a dual system of agricultural research and extension with a preponderant philosophy and organisational capacity working in close support of large commercial farming. It is possible today for well endowed and usefully modulated local research institutions to draw upon the politically and financially well supported international and national research networks at little cost. Joint comparative trials, the exchange of scientists and other mutual arrangements are possible, are sought and should be encouraged. Local research should be characterised by adaptive work, by the identification of field problems, by farm management studies, and by a concern for local knowledge systems. Its hallmark should be its ability to respond to farmer demands and to act as a counterpoise to much of the science practised on behalf of small farmers in distant fields and laboratories.

The organisation of agricultural research and extension should attempt to check the tendency, long operative, whereby the agents of extension are translated into scientists who use their so-called scientific knowledge to demand superior status and to maintain their farmer clients in a dependent relationship. This value system, as with colonial administrative attitudes, debases local self-regard and throttles the likelihood of self-help and the generation of new knowledge. As one illustration, Howes and Chambers report that Mali pastoralists, 'are said to have accepted the dependent status which has been thrust upon them (through an IDA project), and now believe that their major hope of salvation lies with the World Bank'.

As insidious is the dilution of the farmer-extension worker relationship by the latter's subservience to the needs of district government. This has been particularly marked where party cadres serve as Regional Party Secretaries, as in Tanzania, and come to dislike other and constructive ties with the peasantry. Similarly, as in Tanzania and in India, the dominance of political and dependent elements in development administration can replace the slow, complex evolution of patterns characteristic of sound development in favour of easily mobilised, short-term operations of the 'campaign' type.
Four correctives to the conventional hierarchical agricultural research and extension system appear to be needed:

i Small farmers should be organised and equipped so that they can play a governing role over a part of the agricultural research and extension establishment.

ii Extension and research personnel should be knitted together so that field issues permeate research programmes and a sense of responsibility towards farmers can be established.

iii Government should be removed from responsibility for daily affairs so that it can acquire a more detached, more professional approach to the analysis of obstacles to rural development.

iv Rural institutions must be allowed to challenge the large body of monopoly practices which exist and which are paraded behind what are in fact inappropriate standards of production, processing and marketing; standards which are often defended by reference to myths about black competency which are themselves at odds with historical and contemporary facts.

The Organisation of the Extension System

The basic principles to be established are:

i extension workers are well trained and partake in regular programme planning with fellow workers, senior staff and research scientists;

ii extension workers derive their status amongst colleagues and research staff from the fact that they are answerable first to a particular farm community;

iii extension workers follow strict routines in terms of field visits so that farmers and superiors know where they are on any morning or afternoon;

iv extension workers operate primarily through a few selected farmers in each locality each season;

v extension workers and the selected farmers receive regular support and training from crop specialists and research scientists.

Figure IV on the following page illustrates the administrative relationships proposed.
Extension workers have to hold minimum qualifications set by government. But they are hired, and can be fired, by the CLCs or by the CSOs. The normal development would be joint CSO and CLC selection with hiring by the CLC of one or more extension workers. As the CSO grows, with a number of member CLCs, so the CSO might appoint a senior extension officer to strengthen liaison, training and supervision functions. Accountability is thus clearly to the community. Government must avoid involvement in salaries and service conditions. The extension workers can organise as a union to press claims. Personnel reports by the secretary of the hiring body, the CLC or CSO, and by the Regional Agricultural Officer will be completed annually, made available to members of the hiring body and placed for review on the agenda of the respective Regional Advisory Board which would recommend salary increases and promotions to the hiring body.

Each extension worker will work with about eight selected farmers for a whole or a half day once in a fortnight, i.e. three to four days a week. Selected farmers will each be chosen by the farmers themselves, all members of a CLC, according to criteria agreed by the District Agricultural Officer and the CSO. This will allow for selection within categories of crop grown, size of farm, labour composition, capital employed etc. Criteria can be altered from season to season, as can the period of selection, to accommodate particular requirements. Normally the period would be for one or two years. On the fifth day, the extension workers will conduct a half day demonstration or training programme, ideally within an operating periodic market (see Chapter 9), and spend half a day in the office.

Some may object that no compulsory proposal is recommended to ensure that communities hire extension workers. Any compulsory move, even though backed by government budgets to CLCs, would include the danger that government would be drawn into questions of emoluments etc. In the system proposed, the joint payment of fixed daily stipends to selected farmers plus the planning and training programmes means that there is a strong incentive for communities to join the research and extension network - membership of which begins with the community hire of a suitably qualified extension worker.
Selected farmers have to agree to act on behalf of their neighbours, primarily by reporting field problems to the extension worker, and to undertake from one to two days per week as part-time paid workers of the extension service. Selected farmers' duties include the running and overseeing of demonstration plots on their own and neighbours' fields, attendance at the monthly meeting at the Regional Agricultural Office and at bi-annual short courses. A standard daily wage for selected farmers is fixed jointly by local government and the CSOs in the area. Payment is by the CLCs to which the selected farmers belong.

The structure of the extension service is as follows. Each Agricultural Officer would supervise and organise the support for roughly twenty extension workers. That means that each Agricultural Officer handles an extension system that has four levels with forty as the largest factor between levels: 1:20:8:40 (Officer, extension workers, selected farmers, neighbouring farmers) or 6 400 farmers. The present, and hopelessly deficient, norm for developing countries is 8 000 farmers per extension agent. Here the figure for farmers per extension worker is only 320. In fact more favourable than the norm for developed countries which is one extension agent per 400 farmers. Of course, mathematical relationships tell only a part of the story. The point in making the comparison is that the proposed system accepts the premise of high returns and sees itself as capable of generating significant improvements in communication, in the utility of research and, through training and field experience, in human capital and group operational knowledge. Its management is poised about the duality of farmer control of extension workers and Agriculture Department supervision of the extension system. The balance is held in check by mutual farmer and Agriculture Department planning of extension goals and programmes and by the collegial rather than hierarchical relationships within the professional research and extension structure.

As organised communities of farmers gain experience and confidence, so a fifth level can be interposed; that of a senior extension worker hired by the CSO and acting as a Deputy Agricultural Officer. If one agricultural region was comprised of four CSOs, that would give a system composed as follows: 1:4:10:8:40, i.e. with 4 Deputy Agricultural Officers each in charge of 10 extension workers, or one Agricultural Officer per 12 800 farmers. In other words, adjustment in the ratio is possible between levels whilst
keeping a favourable ratio of extension agents to farmers. In fact, selected farmers and natural leaders of farmer groups should properly be regarded as agents. The system is flexible and no one ratio is sacrosanct. In time, as has happened elsewhere, greater specialist crop interest and reliance upon commercial (fertilizer etc.) representatives will alter the role and the intensity of a once symmetrical system.

At the Regional Office, the Agricultural Officer heads a team of subject matter specialists: not all of whom need be full-time members. The team operates as a management group, initially through the mechanism of a one day monthly meeting of all extension workers and selected farmers in the region. At the same meeting technical staff of the CSOs, senior staff of the Agricultural Department and representatives of agricultural colleges and research institutions should be present to ensure that information, co-ordination and policy purposes are fulfilled. During a part of the same day, short courses to upgrade knowledge or to reinforce field programmes should be conducted.

At other times of the year a similar grouping of personnel would meet to help finalise land use, production planning, community budget exercises and farm plans under the jurisdiction of a CSO or even a CLC.

The success of extension activities depends on a strong sense of accountability to the client (farmers), and on all participants keeping abreast of field problems, policy options and knowledge. The system proposed goes as far as any system can to secure accountability to farmers and a central focus on field problems. Intensive in-service training and objective evaluation studies can help to realise the latter. Two week long courses twice a year for all levels of staff should be the policy. Training programmes should be the responsibility of the Agricultural University or College, guided by a Training Committee composed of the Director of Agriculture, the Head of the Extension Service, the University or College principal(s), the Head of the Planning Department, a representative of the CSOs, a representative of the banking sector and, at most, two independent nominees of the government. Selected farmers should attend separate week long courses. For the last day and a half of the course the extension workers should join to enable analysis and discussion, and to facilitate exercises in evaluation and in forward planning.
Extension workers, who operate on their own a great deal, need continuous reinforcement. Regular schedules of work with selected farmers and their neighbours make it possible for the Agricultural Officer and his subject matter specialists to join him in the field on pre-arranged or surprise visits. Each other week, alternating with the longer monthly visit, the extension workers should meet with the regional staff. This in-house meeting, without farmers and members of other institutions, provides extension workers with a chance to update their activities, to check themselves and their methods, and for the whole programme to be scrutinised by professionals enjoying collegial relations. The lodgement of extension workers, security and accountability with client farmer groups who hire them, rather than in the hierarchy of the Agriculture Department is important for it helps to achieve collegial relations between largely autonomous professional persons working within one mutually supporting system.

In far too many countries differing entry qualifications and rigid seniority codes in the agricultural extension service have combined to stifle open working so that the only communication is in orders passed down. One result has been that crop production, fertilizer consumption and other fictitious 'targets' have been set by planners and senior technicians to goad the extension system into life. The fact that farmers alone make such decisions has been ignored. In a target extension system the extension worker has been converted into a false performer. He has pushed technical proposals that he knew his seniors favoured even when that caused him to deny his own and the farmer's knowledge of local conditions and preferences. The converse of the coin was that he concocted reports to his superiors claiming successes in meeting the targets laid down: all the result of loyalty, born of security and promotion concerns, to a false system.

In the system proposed, work programmes, training inputs and field demonstrations arise out of mutual arrangements in which the farmers and their organisations, principally the extension workers, the CILCs and the CSOs, set the goals. The extension system helps to provide initial paper tests of the goals by bringing research and market knowledge to bear and by analysis conducted in open sessions. Once the programmes are adopted, their implementation comprises an open test of the inherent technical production and market hypotheses contained. Until proved otherwise and corrections made, farmers, their organisations and the support
system managed by the Agricultural Department can be presumed to be working towards the achievement of common goals. A further strength is that no grand once-for-all or faddish technical or crop preference can be imposed across the land by utopian or despotic officials. Rather, there should be a series of concurrent tests, the results of which hold wholly only in particular localities but the principles of which can be extrapolated and tested elsewhere.

The benefits of a dual-cum-mutual system can be expected to operate at several levels; levels which should emerge in a sequence as confidence and mutual understanding grows. At first, as Richards has observed, 'an idea borrowed from the people, developed by the agronomist and returned to the people, is much more likely to be adopted than something alien to the culture'. That leaves farmers in a passive role and allows the system to continue to deny farmer ability to create knowledge. At that level, as Kusum Nair so eloquently showed, individuality will surface for there is nothing predictable about persons' uses of resources. Indeed, as argued earlier, farmers do seek objective knowledge and many will be conducting their own experiments.

Farmer knowledge and man's inherent quest for a greater ability to order knowledge can be drawn upon in the early work of CLC formation and the beginnings of agricultural extension assistance. Farmer knowledge of micro-environments can be used in the preparation of soil maps, local groups can be organised into monitoring teams over environmental degradation and as the field personnel of crop reporting systems, and farmers can provide useful guidelines to expected productivity in the absence of scientific tests (as with indigenous milk yields under existing and 'improved management' pastures). All such activities offer savings in terms of time, trained personnel and cost. They also contain elements of local determination, group functioning and of mutual working with professional staff. Chapman has noted that farmers may prove to be comparable or even superior at conceptualising a local problem than scientists.

Because industrialised agricultural systems take time to arise, are beset by cost and environmental questions and hence offer no panacea, 'new' directions in modern agriculture now share many features of the traditional systems that scientists and developers once sought to replace. The
mutuality of the system proposed is designed to allow a milieu that facilitates the construction of novelties in agricultural science and in community functioning and use of resources, for it is out of a common search for novel solutions that farmer and scientist will find each other.

In another sense, novelty and mutual discovery requires the development of a meta-language to bridge farmer and scientist perceptions. Paulo Freire's experiments with the use of semantics and with the determination of generative themes in community life provides a validation of its possibility and utility. That does not mean that no progress can be made without following Freire's procedures closely. Dialogue and farmer control are cornerstones of the system proposed. Attitudes and behaviour inimical to a dialectic process should be constrained because the relationship of technique to culture and to prior understanding is intended to operate as a communal governor over the system. Nonetheless, Freire's illumination of the requirements for dialogue are valuable and provide useful training material and a basis for concurrent research. The transactions expected in the system proposed are held to be the result of a structure designed for dialogue.

A government managed and controlled extension service, as is common in most developing countries, tends to lead to a situation in which employment is regarded as a club for life. Well led and well disciplined, an extension army might achieve wonders. However, it is seldom well equipped or trained, victories are too few and personal ends dominate within a wooden concern for conformity and security. Agricultural graduates in too many countries seek, even expect, to be employed as extension staff in the Agriculture Department. Very few ever practise as farmers or as entrepreneurs in crop processing and marketing. Consequently the Agricultural University becomes open to capture by the Agriculture Department simply because the latter is its only client as well as its governmental master. This vicious circle is completed when University staff are appointed almost solely from Departmental ranks, making the research, training and extension systems increasingly inbred and unresponsive to new needs, opportunities or leadership.
In the farmer controlled, government managed system proposed, the choice and governance of staff is split, and the University enjoys client relations with government, as part of a service structure, and with diverse and autonomous communities. The University Board should be able to use the duality of the system to maintain its autonomy and to build up other client relations: organised crop interests as dairy co-operatives, sugar associations etc. and women's and young farmers' groups.

What is an Optimum Level of Investment in Agricultural Research and Extension?

Knowledge, participation and experience are all factors in economic growth. The agricultural research and extension system proposed is designed to advance each factor and their interplay within and between farmer groups, extension workers and scientists. W.A. Lewis has argued that, 'one of the main deficiencies of underdeveloped countries is their failure to spend adequately upon research and upon the development of new processes and materials appropriate to their circumstances'. He points out that, unlike developed countries where entrepreneurs fund a great deal of research, in underdeveloped countries the funding of research is largely a prosaic function of government, 'and ought to be one of their major fields of activity'.

In the system proposed, government's role is one of initial fueler and then financial securer of a growing agricultural and extension effort that provides room for community and for crop interests to become major financial supporters of research out of their own self-interest. In other words, the decision to push investment above a basic norm set by government up to the point where returns are optimised for each crop and activity is best judged and executed by farmers operating through an increasingly confident and varied institutional setting.

Lewis points out that in the USA expenditure on agricultural research is just under 0.5% of the net value of agricultural output and that in industry in the western world expenditure on research and development is just under 1% of the income generated. Proportional figures between rich and poor countries translate into very different cash amounts. One estimate puts the annual expenditure on agricultural research in rich countries at US $120-150 per farm family and in poor countries at a mere US $2! In southern Africa, where structural adjustments and a backlog of research
and of extension require to be financed, it would seem that governments could not err on the extravagant side if they set out to create a system that cost at least 0.5% of agricultural output or, whichever is greater, the equivalent of US $30 per peasant family.

Allied to the budget for agricultural research and extension, governments should bend their undoubtedly large and growing education budget towards the production of large numbers of well qualified agricultural scientists, technicians and related social scientists. In most countries this largely ignored field appears to be extremely profitable.

The ability of national scientists to draw upon international research is itself partly dependent upon their confidence in their own training and work methods. Foreign training, joint national and foreign graduate programmes aimed at strengthening local institutions, and scientist exchange programmes are important elements. As important is the status accorded agriculture and the countryside within the nation. A bias of prestige school and university level scholarships towards 'agriculture', as the Rockefeller Foundation helped to institute in Mexico, can be useful; certainly it can produce a leadership sympathetic to the needs of agriculture. Real status will only come when the countryside, suitably organised and financially fueled, develops itself in dialogue with government as the underwriter of change. Investment in the type of agricultural research and extension system proposed can be expected to pay rich dividends in production, in farmer and community knowledge and cohesion, and in the capacity for rural self-renewal.

Figure V completes the progression in correctives used or proposed to alter the uni-directional character of the classic extension model (see Figures I - III). It summarises the relationships between scientists and farmers within the agricultural research and extension system proposed. It should be read together with figure IV since it is derived from the organisation principles, principles which it in turn informs.

There is a wide discrepancy between the ratio of extension workers to farmers proposed, 320, and existing ratios. For instance, in Zimbabwe the goal is one extension worker per 1 000 peasant farmers; a goal that will take some time to achieve. In southern Africa, the purer commercial
farming regions can be expected to carry extension and research costs more directly whilst remaining the object of extension work by fertilizer and other input enterprises. In the remainder of each country, the system proposed provides organised communities with much of the initial finance required upon which to make decisions to hire extension workers and thereby to tap and to influence agricultural research.

Figure V  The Proposed Agricultural Extension Model

1. The figure is a revision of Peter Meehan's work: Science, Ethnoscientific Concepts and Propositions and Agricultural Knowledge Utilization, in Brokensha et.al., op.cit., p.389
The close supervision of extension workers in the field, the demonstrable success sought in the intimate and regular working of extension workers with a few selected farmers, and reinforcement through mutual planning and through training programmes should not be dissolved to accommodate the wishes of communities seeking an inexpensive relationship. The model must be based on the premise that research pays and that costs can increasingly be passed over to communities and farmer organisations. That being so, budget provisions to CLCs under the National Rural Budget should adequately fund communities' initial hire of extension workers to set up the system correctly. This can be done in the expectation that CLCs will be formed over a period of several years so that the demand for official budgetary support will be spread over time and decrease with experience.

The prime quality of that experience should reflect the growth of awareness amongst peasant farmers that there can be other explanations for physical phenomena than those provided by traditional thought. In other words that a strong sense of progress can arise, as in western science, from governance over and participation in controlled experiments. That experience, together with group action upon generative themes, should lead communities to invest increasingly in agricultural research. Close working between research, development and production under farmer/client governance promises the surest route to non-official support for agricultural research.
FOOTNOTES TO CHAPTER 8


8. N. Reynolds, ibid.


23. Hyden has reported that the extension service lost control of its vehicles following on the 1972 decentralisation reform which created regional authorities with financial autonomy chaired by Party Secretaries. op.cit., p.134-135.

24. Ibid.


27. Kusum Nair, Blossoms in the Dust The Lonely Furrow.


34. Ibid.

35. Ibid., p. 175.

36. J. Power, op. cit.
To anybody interested in what is happening in Southern Africa at the present time, it is clear that an understanding of changes taking place in the field of labour is crucial. The whole debate about the political implications of economic growth, for example, revolves very largely around different assessments of the role of black workers in the mines and factories of the Republic. Many of the questions with which people involved in Southern Africa are now concerned relate, in one way or another, to the field generally set aside for labour economists to cultivate. The impact of trade unions; the causes of unemployment; the economic consequences of different educational policies; the determination of wage structures; the economics of discrimination; all these and more are matters with which labour economists have been wrestling over the years in various parts of the world.

At the same time there are many who would argue that these issues are far wider than can be contained within the narrow context of ‘labour economics’. These issues, it is pointed out, go to the heart of the whole nature of development. In recent studies, commissioned by the International Labour Office, of development problems in Columbia, Sri Lanka, and Kenya, for example, leading scholars have identified the three crucial issues facing these countries as being poverty, unemployment, and the distribution of income. Thus the distinction between labour and development studies is becoming more blurred as economists come face to face with problems of real life in the Third World.

It is here too that an increasing number of people are coming to see that study of the political economy of South Africa must not be done on the assumption that the problems there are absolutely different from those facing other parts of the world. Indeed it can be argued that far from being an isolated, special case, South Africa is a model of the whole world containing within it all the divisions and tensions (black/white; rich/poor; migrant/nonmigrant; capitalist west/third-world; etc.) that may be seen in global perspective. Be that as it may, the fact remains that the economy of Southern Africa (for the political and economic boundaries are singularly out of line with each other) is one of the most fascinating in the world. It is one on which far more research work needs to be done, and about which further understanding of the forces at work is urgently required. It is in order to attempt to contribute to such an understanding that Saldu is issuing these working papers.