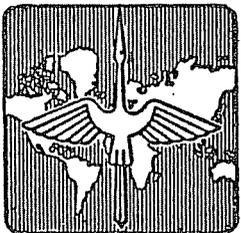


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**The Dialectics of  
Class and State Formation  
and of Development Policy  
in Papua New Guinea**

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To maintain an  
effective and efficient  
system of management it is  
essential that the  
management staff be  
adequately trained and  
equipped with the  
necessary skills and  
resources to perform  
their duties.

Management Staff

1. The management staff  
should be composed of  
individuals who are  
qualified to perform  
the duties of their  
positions.

2. The management staff  
should be trained in  
the use of modern  
management techniques  
and tools.

## INTRODUCTION

In this paper an attempt is made to review the effects of colonial rule on the transformation of society in what is now Papua New Guinea, and in particular on the process of class formation. The paper also reviews the ways in which, in the first years after Independence in 1975, by supporting capitalist modernization in the context of Papua New Guinea's growing incorporation into the dominant world economy, the State promoted uneven growth.

Special attention is given to the transformation in land use and production relations under the pressures of the emerging rural bourgeoisie and to the effects on the self-provisioning capacities of Papua New Guinean society. Rural growth policies and project approaches pursued in the first years after Independence are briefly reviewed and experiments which run counter to predominant practices are analysed.

Underlying the analysis is the proposition that the process of modernization as it characterizes Papua New Guinea today tends to block the liberation of the productive and creative potential of the majority of the people. As a consequence they are compelled to subsist in what has traditionally been called the 'subsistence sector'. A second proposition is that their retention within the 'subsistence sector' is an essential condition for the process of capital modernization. Moreover, the stagnation and decline of the 'subsistence sector', which is at the roots of the continual exodus from the rural areas to the urban centres and is evident in the deterioration of food production, nutrition and health of a great deal of the rural and urban population can only be arrested and reversed, insofar as Papua New Guinea's development will be oriented not by the basic needs

and interests of its new elites and associated (Australian, Japanese, American and European) foreign interests, which determine the thrust of its modernization strategy and are its major beneficiaries, but by the basic needs of the common people.

This paper is based on two study visits to Papua New Guinea in 1975 and 1977. It is the assumption of the author that a socio-genetic analysis of the evolution of the class structure and of the processes that contributed to State formation and which were reflected in government policy in the colonial period and the first years after Independence, may help the understanding of the prevailing tendencies as they shape the new nation's destiny.

## 2. THE DISINTEGRATING EFFECTS OF COLONIZATION

The break-up and disintegration of the multiple small-scale, self-contained and self-reliant societies started around the middle of the 19th century, and has not yet come to an end. The remoteness of the islands and the relative inaccessibility of the interior made it a slow and uneven process.

Gradual incorporation into the dominant world economy forged conditions for cheap resource exploitation first by blackbirding, then by forced labour and the practice of indentured and 'free' wage labour, and finally by the support given by the subsistence to the export economy. Multiple self-centred societies, in which production was planned and resources were organized to meet basic needs, were wholly transformed into societies whose organization and resource relocation became increasingly shaped by the requirements of foreign interests, capital

and profit maximization.

The 'natives' were forced to work for the colonizers. This was seen as essential to their 'civilization', considered by missions, private business and administration alike as conditional to the elevation of the natives towards becoming human beings. The material needs of the population, in view of the slight division of labour and rudimentary development of technology and limited exchange had been very limited. Taxes were imposed to break-up self-sufficiency. This brought about wage labour, which was also stimulated by the import of simple consumer goods.

Low and deferred wages further induced the need to labour as a condition for obtaining more consumer goods. In the primary stages, income tended principally to be used to meet customary obligations within the clan-groups, with the perspective of accumulating more goods. This gave rise to pressure which led to a breaking up of the age-old obligations of reciprocity and sharing among kin. With the expanded exchange of money for goods between people and communities through trade stores the desire for individual accumulation and possession rose.

The creation of a labour force to serve foreign interests in the production, construction and maintenance of the infrastructure met with great resistance. People preferred the security and leisure of their own way of life to being exploited. This may explain why the practice of indentured labour continued for so long: penal sanctions for the breaking of labour contracts were abolished only in 1950.

The effects of violent labour recruitment threatened the survival of the people and therewith the very reproduction of the labour force. 'Protective' measures had to be introduced to regulate the recruitment of labour in the villages in order to secure continued subsistence

production and the future labour supply (Rowley: 109). Thus, the 'natural' economy, although it was destroyed, had at the same time to be maintained and enabled to fulfil its service function to the growth of the export economy.

Only men were recruited as 'units of labour'. Women had to remain in the village and produce the future generation of labourers (Ibidem: 104). The reward for labour was minimal and labourers were forced regularly to go home to recuperate. The subsistence economy functioned as a social security system on which a significant part of the cost of the development of the "modern" sector could be discharged. Thus, the production and reproduction of colonial labour power occurred within the domestic economy. Subsistence production and labour power could be bought for less than their value, at a cost which would have been exceeded had it been produced under conditions of capitalist reproduction, i.e. if all the workers and their families had to be fed and maintained within the market economy and were entirely dependent on wages and their social complements (Meillassoux 1974: 29).

This externalization of cost by the export-oriented sector of the economy provided the reason for the entry of foreign capital. Foreign investment would be interested and could be attracted to the extent that colonies, by relying on cheap labour, could secure a higher rate of return assuming equal productivity.

The basis of this attraction thus was located in the maintenance of a system of labour which, in the words of one of the Australian governors of Papua New Guinea, Sir Hubert Murray, was 'really rather like slavery.'

As pressure grew for more efficient management of the export sector and for a rise in productivity so as to secure increased profits, the practice of indentured labour was gradually perceived as an impediment and a 'free' wage labour force developed. In view of the stagnation of the indigenous economy, this labour force was strictly dependent on the modern-export sector and, as the Review of Native Labour Legislation admitted, was 'forced to rely on the European' (Fitzpatrick and Good: 7).

In establishing law and order and organizing the labour force, the colonial administration was forced to rely on indigenous leaders and intermediaries to supply intelligence, interpretation and labour, and to prepare the ground for the acceptance of colonial designs. Thus, the establishment and expansion of control relied on a 'class of collaborators' (Gerritsen: 3) who were cultivated by the colonial administration and rewarded for their services. By assimilating Australian culture and behaviour, they became the carriers of capitalist modernization within their own communities. Some were from big men families, and played a crucial role in the process of class formation in what was to become Papua New Guinea society.

Alongside the plantation economy, pressurised by the demand for more export production and for participation, small-scale peasant production started to develop with the support of the government as the 'development' of Papua New Guinea became a deliberate policy. Small-scale peasant production offered the advantage of speeding up and broadening the involvement of the population in the exchange economy so that the market for consumer goods could grow. It diminished potential labour conflict, spread the risk of price fluctuations, and yet enabled

Those in control of marketing to ensure a profit. Although the direct producer had apparent control over production, his dependence on those who controlled the local and world prices of his inputs and outputs made him in effect a wage labourer, even though nominally he might be owner (Vergolopoulos: 219).

Production of commodities for profit and the market caused complex pressures to transform the traditional pre-colonial pre-market social and production relations. Pressures grew for the individualization of land ownership, but contradiction grew between this and the customary right of all the members of the clan to use a portion of clan land to meet the needs of their families. Thus, a process towards the individual appropriation of land started which endangered inequality in resource use and control. The relations between families in clans and lineages also changed as some started to make use of the labour of others on 'their' land or on clan land and appropriated a disproportionate part of what was produced. In the process, individual independent producers became subordinate to those for whom they worked. With the change in ownership, in control over labour and in the distribution of the fruits of labour, a class structure development relied on the maintenance and promotion of further inequality.

The reciprocity and solidarity that cemented kinship relations in the pre-market societies within the structure of the clan, lineages and extended families eroded to be gradually replaced by domination/dependency relations between patrons and clients. Thus, use of the basic resource, land, tended to shift from production to meet common basic need, to production of commodities to meet the interests of those who had acquired control over land, thanks to their traditional political position as big men and their special relations with government.

With the growth of commodity production under pressure from within the indigenous society (in which contradictions between the big men and the group always had existed) and as a result of 'development' policy designed to speed up modernization and to raise production and productivity, individual accumulation and enrichment developed simultaneously with deprivation and impoverishment. Insofar as commodity production increasingly competed for land and labour which hitherto had been devoted to food production, its further growth and a rise in wealth may well be accompanied by a growing shortage of food, malnutrition, and even hunger.

Among those Papua New Guinean intellectuals who oppose the growing subordination of the peoples to the values and life style of the industrialized market countries, there is a tendency to romanticize the past by idealizing the ancestors in the image of 'the Melanesian man'. They draw a glowing picture of the tradition of equality and solidarity. Such an idealization tends to ignore the fact that competition in the old society was fierce, entrepreneurship highly valued, and the distribution of power far from equal.

In some societies a class system or hereditary leadership appears not to have existed (Howlet: 253), but in others social relations were marked significantly by hierarchy and inequality and big men developed various ways by which to control and mobilize their followers in the pursuit of wealth and prestige. The heirs to a rich man were in a favoured position (Epstein: 308). Thus, in spite of the barriers to private accumulation, because of the adaptation of production relations to the rudimentary development of productive forces, and the absence of storage except for shells, inequality in wealth did exist.

Rather than viewing kinship relations as non-economic relations as distinct from economic ones, it makes more sense to view them as a particular expression of political and production relations at a specific stage of development which change as these relations change under the weight of growth of productive forces and contradictions develop (Alawi: 32). The dominant ethos and ideology of sharing and reciprocity among kinsmen was rooted in the very nature of that society. That society was characterized by a modest level of development of productive forces and technology so that survival, which depended on self-maintenance of the group as a whole, was a primary need. Reciprocal obligations and the exchange of gifts between kinsmen and between lineages and clans, in order to create, reinforce or confirm co-operation and alliances in the precarious life in a hostile environment, were the very foundation of life, livelihood and security. That need for security was also the rationale for the ceremonial fund (Howlet: 254) which each family formed in addition to the food fund for self-sustenance and the fund to assure continued production. By renewing social relations in the community, the community in turn would support and protect each family. In the face of hardship and danger solidarity evolved as the dominant value, born out of necessity.

As the necessity for, and the interest in, individual accumulation declined, the compelling force of reciprocity disintegrated.

### 3. SOME IMPLICATIONS OF THE CAPITALIST MODERNIZATION STRATEGY AFTER INDEPENDENCE

The changes in social and production relations in Papua New Guinea were caused by the interplay of three dialectical processes which structured each other: pressures from Australia, Japan, the United States and other industrialized countries; the policies and actions of the Government of Papua New Guinea; and the processes

within Papua New Guinean society. These processes involve the evolution of relations between various groups and classes and the way in which these groups and classes have attempted to utilize the State and have responded to foreign interests. The way which foreign interests have made use of the State and in which the State has dealt with the various groups and classes in society, have also affected those processes.

Few countries at the moment of their formal political independence have formulated such a nationalist-sounding progressive national development strategy as that of Papua New Guinea, which was enshrined in the 'Eight Aims'. These aims committed the government to a policy of promoting national self-reliance to control over own resources, to equality in the distribution of income and services and in the distribution of benefits. With Independence in 1975, the government continued to declare the Eight Aims as being its basic source of inspiration, but it did not hesitate through its own national development planning committee to review the contradictions between theory and practice as they developed after Independence (Papua New Guinea Government White Paper, October 1976, Waigani). The director of the Central Planning Office observed: "Realization of the Eight Aims could not be expected to come about spontaneously but they require 'radical changes' which necessitate the 'development of a political machinery and mass mobilization'" (Lepiani, 76).

Numerous mass movements sprang up during the colonial period, Messianistic in form they were proto-nationalist and proto-liberation, whose basic inspiration was egalitarian and anti-elite. As a rule these cargo cults were suppressed by the colonial administration as 'irrational'. In actual fact they challenged the inequalities that were developing in the colonial society.

It has been argued that although they formally disappeared they surfaced again in the form of communal groups and associations at the eve of Independence when they sought to promote people's government and to oppose foreign interests and the emergence of a privileged national farmers' elite (Gerritsen: 15). These new movements were also opposed by government. At a later stage, however, they gave up their struggle and were partly neutralized. Their leaders were incorporated into the political establishment or used their leadership positions for private business. In the pre-and post-independence periods, however, no political mass movements were organized or relied upon by the political leadership for the mobilization of support for the realization and concretization of the Eight Aims. But was this to be expected? The political leadership which emerged had not been actively supported by a mass political movement struggling to achieve Independence. Rather, Independence was granted to pre-empt the growth of such a movement.

Political organization remained carefully limited to the reproduction of a parliamentary type of government. The role of the population was confined to that of supplying votes to support those political parties which promised the most. The proclamation of the Eight Aims generated support and enthusiasm among those with more income or education because they represented a challenge to colonial privilege. The potentially radical implications of the Eight Aims, as providing the foundation for a radical strategy for self-reliant development, did not serve as a basis for a broad-based movement for the transformation of society and the economy, but were only retained to ensure the support of the population in view of their anti-colonial egalitarian ring. A year after Independence the primacy originally accorded to the practice of self-reliance

had already been dropped, the concept being reduced to that of the ability of government to meet its revenues from internal resources. The way was thus opened to increasing reliance on foreign investment, which actually came to be considered as essential to the achievement of future self-reliance. The implication was that, to achieve self-reliance, Papua New Guinea would have to accept its growing incorporation into the dominant world economic order. It should foment its modernization by attracting foreign investment, and should finance its capital imports and services as well as the consumer imports needed to meet the demands of those within the modern sector (the foreign community and the national elites) from the proceeds of its exports. It has been argued that this restricted interpretation of self-reliance was based on a realistic assessment and recognition of the dependent position of Papua New Guinea vis-à-vis Australia and the dominant industrialized countries, as long as these were capable of maintaining the unequal international order and of resisting the emergence of a new international order. Undoubtedly, this position responded to the internal balance of forces which had evolved within Papua New Guinean society and to the demands and interests of its dominant groups, i.e. the rich farmers and entrepreneurs, the political establishment and the educated elite, an elite which benefits from the high incomes and privileges accorded by membership of the Public Services. The political and social mobilization of the masses of Papua New Guinea would have been incompatible with the maintenance and development of the interests of these privileged groups and would have entailed a drastic re-allocation and redistribution of power, income, services and benefits of development.

It has been argued that 'It is better for all people to be directly involved in raising their own standard of living than to rely on the eventual redistribution from the better-off sections of the population' (Summary edition, Government White Paper on the National Development Strategy, Waigaini, October, 1976). This may be taken to mean that it is good for the masses to exercise self-reliance, but this should not affect the prevailing unequal distribution of power, income and benefits. It would appear, however, that there is genuine scope for self-reliance by the majority of the population, who have to subsist in their communities only to the extent that resources and services reserved for the elite and for foreign investment are used to support a broad-based transformation of the indigenous economy, to create conditions for integrated self-reliant development.

It may be argued that if growth is limited to the modern sector (export, agriculture, mining, trade, industry), we cannot speak of development but only of growth without development, if development at least is taken to imply the productive involvement of all people in economic construction. The prevailing nature of and direction of the economic growth restricts and prevents the involvement of the masses whose productive resources (land) and labour are under-utilized.

The prevailing pattern of surplus absorption by way of export of profits by foreign firms, capital-intensive investment and unproductive forms of investment and conspicuous consumption by the elite constitute severe barriers to the generation of demand among the rural majority population and, as a consequence, prevent the spread of productive activity.

The White Paper (p. 5) mentions that the 'dominant, modern component of manufacturing and service activities

continues to rely on foreign capital to finance growth, and foreign management of the largest enterprises'. The almost total absence of handicraft workers and small-scale traders, shopkeepers and service-repair establishments which in many other countries provide such a large volume of employment is striking. This may reflect the recent nature of urban growth, but it also reflects the restrictions imposed by the Australian administration in the enforcement of Australian standards of health and hygiene. The imposition of such restrictions may well have served to prevent too much competition for the largely expatriate establishments (World Bank Report on Papua New Guinea; July 1976: 22). The few oligopolistic old trading firms have no difficulty in applying transfer pricing and are a major source of inflation. They generate pressures for higher incomes among the elite and the middle classes and make disproportionately high profits. The creation of a statutory trading corporation which would control wholesale and retail margins and would feed local markets and villages from a few centralized bulk stores though appointed agents could, at least in theory, be an effective answer (Lam: 21).

The scope for the growth and spread of self-employment and small-scale business is likely to be severely impaired by the recent phenomenon of joint ventures, in which foreign companies of large and medium size invite prominent members of the political establishment to become shareholders or members of the board. Such an approach by foreign capital and entrepreneurs guarantees continued operations and profits. It pre-empt critical government intervention, facilitates the formation of monopolistic and oligopolistic activities and prevents genuine indigenisation of the economy. The national elite become partners in the exploitation of their own society and people. This approach also

undermines the position of those in the public service who with commitment, competence and integrity, defend Papua New Guinea's rights to a fair share of profits from foreign investment, and who stand for self-reliance.

Foreign enterprise in industry and mining tends to rely on advanced technology and skills; it therefore creates few labour opportunities and may even displace labour. Pressure for capital-intensive operations is not only induced from outside by technological or management criteria, but is also stimulated by the prevailing cost and wage structure. The colonial salary structure of the Australian civil service still forms the basis of the income structure for the political establishment and the educated élite in the public and private sectors. The price structure is rooted wholly in the colonial and continued dependency relationship with Australia. It is therefore inevitable that with the rises in rewards and the highest incomes, pressures develop within the urban labour force. For example, the minimum urban wage doubled in 1976. These pressures lead to the creation of a 'labour aristocracy' which undermines its own opportunities for employment in the future, as it prevents import substitution and helps to justify capital-intensive operations.

Even more seriously, it limits the spread of work and income, as more capital will be concentrated on the creation of fewer places, and the increase of wage employment in urban areas will prevent the rise and spread of earnings in rural areas.

An equitable distribution of income cannot be more equitable for some and less for others. Attempts by the State to contain the pressures exercised by the urban labour unions can only seem credible and legitimate to the workers insofar as the public service elite is willing to restrict its own demands. But even

these demands do not arise in isolation but as a result of the inflation imported with the goods required by the expatriates and the national elite. Policies of indexation, whether enforced by Government on the public service elite or on the workers, do not eliminate but only regulate the increasing imbalanced relationship between classes and groups and urban and rural areas. Unless this imbalance is reduced and a far more equal distribution of benefits is realized, there is no way by which to slow down or arrest the exodus from the rural areas. The magnitude of this inequality is illustrated by the following estimates:

<i>Average Per Capita Income</i>					
Expa- triates	PNG national	PNG Gov. servants	Subsistence cultivators	Legal rural minimum wage	Legal urban minimum wage
5000/ 6000 kina	250 kina	400 kina	up to 100 kina	90 kina	260 kina

(World Bank Report, July 1976: 11)

The *per capita* income of government servants is that of the average government worker; that of the civil servants in the higher echelons is a multiple of the 400 kina quoted, while that of many subsistence cultivators is well below the indicated figure. Foreign investment may well generate revenue, particularly through a few major enclave projects. This may enable the State to fulfil its rôle as 'the leading sector' and as the main provider of capital, employment and funds for local development. The question may be asked, however, whether the State will generate development 'from within' and by the masses, or whether it will concentrate its activities on strengthening the elite to which its own servants belong in view of their income. Apart from providing revenue to the State, enclave projects, which are undertaken mainly by foreign firms to secure metropolitan profits,

rarely have multiplier effects within the local economy. Insofar as they generate economic activity (e.g. the production of vegetables for a mining complex), they link production to the modern sector. By doing so, they prevent the development of a process of internal exchange. They also contribute to a major increase in import requirements for capital goods, services and consumer goods. New islands of modernization emerge and new pressures for conspicuous consumption develop. New concentrations of wealth arise which have to be supported by expanded exports and imports. This will force the government to equate rural development with an agricultural export growth strategy. Also, the government will be bound to direct funds, originally allocated to poor priority areas, towards meeting the demand for modern communications, infrastructure, and highly qualified national manpower. Even if the government would charge foreign investors for the use of infrastructure at rates that would secure a reasonable return on its investment, as contemplated in the new Government's policy, this would not do away with the effects of concentrated modernization. As one representative of a major mining company said at a foreign investment symposium early in 1977: 'Compared with other countries, the taxation provisions we have agreed on with the Papua New Guinea Government are probably as attractive from an investor's point of view as have been reached elsewhere in the world' (*Far Eastern Economic Review* 9 December 1977).

In actual fact, the public service and the national training capabilities would have to be increasingly directed towards supporting agriculture and mineral exports. To justify the required resource allocation, these exports tend to be viewed as the natural foundation for national development, although not officially. Under such conditions 'the expatriate community remains a vital resource in the economy which would quickly collapse if

this input were withdrawn' (World Bank Paper, July 1976: 27). The question to be asked is: 'whose economy and to whose benefit?'

In its framework for Industrial Development, the government regards foreign investment as a principle means for realizing its objectives (Ibidem: 31). This clarifies the ambiguities laid down in the Eight Aims. At the same time it reveals the populist nature of the Aims.

If such forms of modernization are considered essential for national development, then one would have to disagree with the contention that it is 'a short-sighted assumption that the high-level manpower problem in Papua New Guinea is essentially one of supply' (East Anglia Group Report: 46) and that the preparation of high level manpower to fill existing vacancies should not be a priority. On the contrary it would have to be argued not only that high level positions would have to be filled, but new ones would have to be created to meet the needs of modernization (e.g. to man the costly sophisticated telecommunications system; to prepare food technologists for the foreign food processing firms; and to train environmentalists to control the environment of the contemplated hydro-electric power project on the Purari River, which is to provide energy for industries that, in view of their environmental effects, are no longer accepted in industrialized societies). It has been argued that 'the departing colonial power, Australia, tended to see it as its main responsibility to create an indigenous elite of administrators, managers and technical experts capable of running the society created by colonial rule'. However, 'in their anxiety to gain control over the bureaucracy, indigenous politicians and public servants have paid insufficient attention to the need to reform the public service itself with the result that the old system survives under a new management'.

Hence 'the highly unequal distribution of real income is perpetuated' (Ibidem: 46). This observation seems to lack any appreciation of the real forces behind the process of decolonization and internal class formation.

Could an elite emerge which would serve the people as a whole and would be willing to forego incomes and life styles that are patterned on those of the colonial elite and the present expatriate community? In view of its reliance on imported consumer goods, such a life style requires a continuous rise in income which necessarily alienates it from the masses. Also the search by the masses, clansmen, subsistence cultivators, small peasants, fishermen, unskilled and semi-skilled workers for a redistribution of opportunities and income is likely to be experienced by the elite as a threat to their position. The new elite are well-organized through their public and private interest organizations but the mass of small cultivators and workers are atomized and scattered. Basic changes can therefore hardly be expected without major crises. One of these would be a drastic reduction of Australian aid on which the government will continue to rely for 40 per cent of its budget in the coming years, a major part of which goes back to Australia in the form of savings by expatriates and income from government contracts and services. Such a reduction would force the government to rely on development 'from within', and on the mobilization of the underutilized talents and creativity of the people. This type of development would be generated by the multiplicity of gradually expanding exchanges between agriculture and industrial production and services. It would require not only a restructuring of the public administration, but also 'political cadres' (Ibidem: 23). These cadres would have to help the masses to become politically conscious, to organize themselves

for co-operative action and capital formation, to articulate their needs, to assist them in reviewing those needs among themselves and with neighbouring communities, and to secure support from 'their' government to support the people's efforts at self-reliant development. Such a process of self-reliant development would only engender interest among the people to the extent that it relies on self-organized and culturally homogeneous groups and groupings of groups. As they gain experience in democratic practices of self-managed production and in improving the quality of life, these groups would generate a major release of productive forces. The State, by regulating the relations between communities and productive units and by subsidizing inputs, would help the communities to diversify and to raise production and productivity. Thus it would help to create a basis for social self-development in health, education, recreation and other conditions for self-realization.

Such an approach, however, cannot evolve in a society in which the dominant mode of production requires resources to be allocated primarily on the basis of profitability. A development strategy of a dependent society which is geared to profitability (the structure of income distribution, and of relative prices and demand being what they are) will inevitably lead to an economy in which the production of export goods and the import or production of non-basic consumer goods is given precedence over that of basic goods and services and capital goods (including small-scale tools and equipment) necessary to provide stimuli for mass production and mass consumption (Amin 1973). Such a government role would imply a radical change in the function of the modern sector. Instead of being directed primarily towards exports, investment should be directed towards the creation of development stimuli in the subsistence economy by the

production of capital and consumer goods that meet the people's basic needs (Arrighi and Saul: 21) Unless the masses come to exercise democratic control over the means of production, however, it will be difficult for a government to plan the use of the modern sector so as to generate commitment to work among the masses. Historical evidence suggests that, unless such planning is based on the voluntary association of the people, it is bound to fail (Raikes 1975: 33). The experience of Tanzania served originally to inspire Papua New Guinea, but its forced village organization illustrates the ineffectiveness of authoritarian methods.

No amount of exhortation or education can substitute for material stimuli, but these can only become effective to the extent that they support an already-initiated strategy in the direction indicated.

In view of the class character of the bureaucratic elite, the question 'Can the bureaucracy bring about development?', has to be given a negative answer. It could bring about modernization, but development would need a qualitative transformation from an administrative technocratic managerial elite into a movement-inspired organization which identified and associated with the common people. The prevailing focus and implementation of PNG development policies is not accidental. Its roots lie in the nature of the colonial experience, in which most Australian civil servants took their own society and dominant values as a model on which they trained their Papua New Guinea subordinates who were to become their colleagues.

This is not to argue that Papua New Guinea should not make use of exports and of some enclave projects to support its development, but unless the government gives incontrovertible priority to self-reliant development, which would include a proper utilization of the proceeds from exports, it will benefit the few at the expense of the many. A

self-reliance approach would need a policy of opposition to excessive inequality and privilege, by organizing proper use and access to the State's resources by the common people and their groups and production units and by restricting privileged access by the elite.

The alternative is not either to severe relations with the dominant world economy or to accept economic growth through effective but decreasing utilization of overseas aid and capital (Lepani), but to give primacy to internal transformations so that foreign aid can support national development. Although Australia's aid is formally untied, it is nevertheless rooted in self-interest, as is Japanese, American and European Community aid. Together these donors receive the bulk of Papua New Guinea's exports and supply most of its imports. Their aid will not be forthcoming unless Papua New Guinea abides by the rules of the International Monetary Fund and the World Bank, whose aid is also based on the maintenance of respect for 'free market' forces and a favourable approach to foreign capital. In that sense, the government of Papua New Guinea is in a difficult situation. But it would be too easy to shift all responsibility onto the outside pressure by international agencies and the industrialized countries which, in a period of recession, are likely to seek higher profits in third world countries to compensate for internal declines in rates of return. Primary responsibility lies in the country itself and in the unwillingness of public service elites to give primacy to the national and community interests above individual self-interest. Their high incomes, based on those of the Australians, shape the total income structure and create the incontainable urge for all in the subsistence economy to scramble for opportunities in the wage economy. Foreign interests need to adapt to internal transformation, as is frankly recognized in the review paper by the Central Planning Office of September 1975 (Papua New Guinea's Post Independence Strategy: 18/21), a paper which notes the absence

of a 'clear political and ideological line' and 'the lack of strong political direction to encourage commitment'. It also recognizes that 'the Public Service embodies the majority of the elite in Papua New Guinea and that their political relationship with other sections of the community in matters of the protection of their interests does have a major contributory effect to the conflict of interests in the eight national Aims'.

4. THE DYNAMICS OF CLASS FORMATION AND ITS IMPLICATIONS  
 Modernization in Papua New Guinea not only relied on those who traditionally had power and status in the clans, but also made use of other agents such as interpreters, drivers, orderlies, policemen who thus acquired status and influence in their communities. When local councils were set up as organs of local administrative control, those who elected tended to be big men and intermediaries. These people also spear-headed agricultural modernization through cash and export cropping and thus gradually came to be what may now be called the rich peasantry in the most advanced agricultural growth areas (the Gazelle Peninsula and the Eastern and Western Highlands). Such groups have also emerged in other areas but these are as yet embryonic and less articulate as a class, as they had a later start due to government policy. Agricultural growth was concentrated first on the areas of most potential and councils generally came to be controlled by rich farmers and modernizing big men. When the House of Assembly was opened in 1964, two thirds of the members had council experience.

A process of private appropriation of clan lands gradually developed. The modernizers secured support by relying on the traditional instruments of control. Thus they organized exchanged ceremonies, (pig) feasts, and gave rewards in kind or promised returns in the future. They were perceived by their own people as those who could combine politics and business so that all would benefit. Therefore, their appropriation of land and use of their kin as cheap

labour was accepted as traditional and as beneficial for all. After some time these modernizers also started to buy and sell clan land on behalf of their clans, but not infrequently out of self-interest. Thus, a process of differentiation evolved in land use and possession, with the big men proving to be the largest land users and controllers. They were in the best position to seize opportunities for gainful production, as they were relatively more knowledgeable and were more experienced in the art of politics which enabled them to utilize and to profit from relations with the outside world. Private plantations were organized by relying on cheap or unpaid labour (Finney: 63). And the profits used to expand and diversify production. A start was also made with modern processing, again by making use of cheap labour.

The benefits of modernization accumulated by this elite generated new pressure for the individualization of land. It also incited a change in the dominant ideology. Over the past years, several proposals have been made by provincial political leaders to do away with customary law which recognizes only community ownership. It was argued that the maintenance of this system was a barrier to progress and restricted the use of 'unused and unimproved' land. Customary law should be changed so as to secure the fruits of cash cropping for the individual producer. Also, the laws of inheritance should be modified so as to guarantee individual succession (Good: 16).

Thus, the 'idleness of the land as well as the people's "laziness"' which earlier had served as an alibi for colonial exploitation, now served as a pretext for the new indigenous rural elite (Sack: 207). As a provincial premier put it, the law protecting clan property would hinder the more active people who wish to get involved in business. He suggested that the law be changed to allow different groups of Papua New Guineans to buy properties in other areas and provinces than their own. Another prominent promoter of private

business complained of the policy which gave first purchase option on expatriate lands to the traditional landowners, arguing that such a policy deterred many Papua New Guineans from developing the land (Donaldson and Good: 9).

Conflicting claims to land between competing big men and rich farmers serve to explain the rising frequency of fights since Independence rather than rivalry between clans as such.

To the rich farmers, a principal factor that determined the profitability of Australian-owned plantations was the availability of cheap labour, and it was only natural that they wished to benefit in the same way. This caused a withdrawal of local labour, and stimulated fresh waves of labour migration from areas where the cash economy was little developed (e.g. from the Southern to the Eastern Highlands). Also, the modernizing farmers started to compete with the Australians who controlled the marketing. This became another source of profit since there were wide margins between prices paid to direct small producers and the selling prices of intermediaries.

Some rich farmers have re-invested their profits in expanded production; others have tended to branch off into trucking, trading, shopping or other not directly productive activities. Sometimes they set up their own business, or otherwise try to associate with an Australian partner, paying for the share in the business out of future profits. The tendency toward speculative business (e.g. trade, bars, real estate, money lending) is probably due to the fact that Papua New Guineans could see where large profits were most easily made. As keen businessmen, they seized their opportunities.

This speculative trend reflects the nature of a satellite economy (Brookfield: 129). The mercantilist trade orientation coupled to the export orientation of the economy blocks the growth of autonomous industry, which is also hindered by the influx of a wide range of consumer goods, of which many could well be produced locally. Imports of food, clothing and household goods account for almost 60 per cent of the Consumer Price Index weights. Imports of food alone

absorb almost 43 per cent of the average family budget in the urban centres (Lam: 5-6). The import of food and of conspicuous consumer items increases constantly, and supermarkets in Port Moresby are filled with the same highly conspicuous consumer goods as those in Sidney or in the Asian metropolises. The modern shops in the small coastal island and highland towns are also well stocked (Annex 1).

The introduction of commercial advertising by the National Broadcasting Corporation, an autonomous statutory body, exposes the Papua New Guineans to the same aggressive pressures as in the industrialized countries, and inculcates in people permanent dissatisfaction, in the function of profit making. The original educational function of the of the radio in the first years after Independence tends to be pushed aside. A Government Committee on Television has advised against commercials, in view of the negative effects on the people's lifestyle. Some prominent political leaders, however, were given cassette television as a strategic gift by foreign business. They have become enthusiastic about it, and as sales pressure by foreign firms develops, it may not be long before television, after serving initially as an educational instrument, will also become a major tool of incorporation into the hegemonic commercial culture of industrialized countries. That would add a powerful drug to the instrumentarium with which to change the mentality of the Papua New Guineans and to make them receptive to foreign goods. The reliance on films which glorify sex and violence also induces alienation. Such films make the daily life and culture of Papua New Guinea seem boring and inferior, and fiction takes the place of reality. This may seem a paternalistic view point since the people of Papua New Guinea, like other peoples, have the 'right to choose their own culture'. If, however, such films are seen as a cultural instrument which prepares the ground for a process of denationalization and for incorporation into the dominant world economy, which excludes self-reliance and own identity, then a government with any sense of responsibility should protect its people so that they can form their consciousness and identity in line with the country's needs.

Christmas sales, organized along western lines, serve to compensate for the limited purchases during the rest of the year. People are made to feel unhappy and underprivileged unless they can accumulate the same amount of goods as people with higher incomes. The Government has taken a number of progressive measures against this tendency, including a ban on the use of bottles for baby-feeding in reaction to the many victims in other parts of the world caused by the campaigns by Nestlé and other firms. It is not yet known whether the Nestlé film *Hungry Angels* which was used by the Health Department, has been taken out of circulation. With regard to protein foods, the argument that locally-grown foodstuffs would be protein deficient (Lam: 5) can hardly stand up, as there is a great variety of indigenous protein-rich foods. Unfortunately, however, the use of several of these has declined, as they have been substituted by 'prestigious' foreign vegetables (e.g. cabbages). Also, most of the fish catch in Papua New Guinean waters is now taken by foreign firms back to their own countries.

It is a regrettable fact that peasant producers who derive a minimum income from their sales and whose food situation is precarious, are induced to spend that income on beer. As a result, they may well go hungry, as has been experienced in parts of the Highlands. This also applies to workers in the urban areas who sometimes leave their wives and children to starve. The tradition and reputation of Australians as great beer drinkers has certainly had its effects. The pressure for profit making by the trading houses and by members of the establishment who become their partners, however, plays an even more decisive role in imposing on imitative life style which maximizes expenditure on conspicuous consumption, a life style which comes to be seen as the essence of Independence.

It has been argued that, as long as people remain linked to the pre-capitalist economy, reflexes to prefer immediate consumption over productive accumulation will remain strong (Arrighi and Saul: 15). Also, when confronted with the new

norms of the profit-oriented mode of production which requires them to work hard, while reward is limited, this reflex may be heightened. Conspicuous consumption is also enhanced by politicians who seek support, and by big men who establish business groups of which they themselves become the main beneficiaries. Both need to balance their profits with the meeting of their traditional obligations, thus ensuring political support. The strength of the pressures with which they have to cope will determine whether or not they are successful.

##### 5. THE DIALECTICS OF CLASS AND STATE FORMATION

The international contradictions within a society whose class structure is in the primary phase of development are determined decisively by the way the State deals with the relations within and between communities. Until the end of World War II little attention had been given to village agricultural development. Development had been restricted mainly to forcing villagers to supply cheap labour and to carry out government-designed production plans. This started to change when a labour government was voted into power in Australia which promised the people of Papua New Guinea 'a new deal' and the promotion of mixed farming by a small-holding peasantry. From 1951 onwards, however, a shift was made from food crops to plantation crops, inspired by a new Australian government which promoted and backed a policy of expatriate plantations in concentrated areas. The promotion of small-scale peasantry was seen as complementary to such a policy. The growth of an absentee landlord class was opposed, not so much because of its potential monopolization of resources at the expense of the Papua New Guineans as because it would compete with productive expatriate planters for land and cheap labour. Conflict arose, nevertheless, due to the rapid growth of small coffee cultivators. The extension service was then ordered to reduce coffee-growing by Papua New Guineans, but the process had acquired a momentum of its

own and the Administration was unable to control the size of holdings, for which it originally had set minimum standards, or the distribution of seeds and seedlings. Cattle were then also introduced. As coffee and cattle are both sold individually, the extension service concentrated on the so-called 'progressive' farmers, an approach which inevitably accelerated the formation of a rural elite and the selection of areas which would secure maximum returns. A first requirement for this was the individualization of landholdings and consequently the enclosure of land. The acquisition of a leasehold title thus became preconditional for a 'successful farmer'. The intellectual basis for this strategy of economic growth was worked out in the early 1960s, inspired by Rostow's 'take-off' theory. It was recommended that the government should seek to cultivate a small class of elite farmers (McKillop: 32), an approach strongly supported by the first mission of the World Bank in 1964, which advocated rapid growth in agriculture and livestock in the areas of greatest potential as well as the encouragement of foreign investment. The mission's recommendations led to a new plantation approach in which foreign companies established nuclear estates with centralized processing facilities around which individual farmers were settled. This caused serious problems as the original inhabitants tended to become marginalized, and imported settlers came to see themselves as inferior to the highly-efficient foreign-run central estate.

Cattle projects, in particular, created strong pressure for land appropriation. In the earlier colonial periods, communal herding and the integration of cattle into the subsistence economy had been promoted, but cattle-farming now became a separate business. Australian criteria were applied which determined minima for amounts of land and numbers of breeders. The larger the tracts of land held by applicants, the greater their chance of obtaining credit. The restriction

of credit to individual applicants encouraged the privatization of clan lands. Also, by being invited to rely on external credit, rich farmers were able to free themselves of their exclusive reliance for labour and capital formation on their kinsmen, and loosened their traditional bonds and obligations. Papua New Guinea society thus became gradually transformed from a relatively egalitarian tribal society into one in which small groups of landlords and entrepreneurs, with a significant degree of power over resources, labour and inputs, came to be surrounded by a mass of semi-subsistence cultivators with very small incomes. A mutual interest developed between the extension service which could prove its merit by the demonstrated advance in economic growth, and the rich farmers who, in order to advance, pressed for favoured treatment. With the modernization of the political structure, rich farmers and politicians at various levels have been able to secure preferential access to government resources such as credit, inputs and extension support. Through the local government councils and subsequently through the area authorities they have also seized a significant share of central government rural development grants, which were intended for the building of infrastructure, and were allocated originally to promote the export economy. Projects selected for grants tended to be those which favoured the local establishments from which provincial and national political representatives emerged. Thus, self-reliance came to be interpreted by many applicant groups, dominated by the educated elite, as 'help your own group to government grants' (McKillop: 18).

The heavy casualty rate among Members of Parliament during the 1977 election may well have been due to the people's protest against use by the elite of these grants (only 36 of 102 sitting MPs were returned and only 9 of 18 ministers) (Colebatch: 29). The transfer of grant distribution to Provincial governments may well facilitate their monopolisation by the stronger representatives, and may well increase political competition. It may also lead to a rise in the political consciousness of the people. In future, however, pressure to

utilize the State as an instrument for private advance is likely to be determined increasingly by the relative affluence of the winning candidates, which would further consolidate the political elite. The 1977 election campaign, which was based on multiple promises of improvements for the masses, was characterized by the cultivation of patron/client relations rather than on promotion of ideological commitment and political mass mobilization. To support their campaigns for the 1977 elections political parties relied on their business wings to generate funds, usually from real estate ventures. The leading party spent more than 200,000 kina, largely financed by expatriate business interests and by a mortgage on party-owned real estate (Hegarty: 10). This indicates a form of politics which is organized by elites who see the voters as instrumental to their own acquisition of power.

The Public Administration has so far not confronted the growing power of the emerging rural elite and business entrepreneurs, who have significant power in the local councils and provincial and national assemblies. To consolidate their favoured access to the State's resources the rural elite require the intervention and help of the educated indigenous elite who control the Public Administration and its services. This educated elite will increasingly come into conflict with its formal goal: promoting the Eight Aims, if it continues to support the rich peasants and business entrepreneurs, a process which will cause it to lose credibility among the masses.

The Government's White paper on National Development Strategy calls for a 'policy to promote rural production, primarily based on community forms of land ownership; land ownership systems must evolve from the customary base' (p. 23). It announces a National Land Bill which will prevent land speculation and possible conflict between a landowning class and the dispossessed rural poor. Such speculation and conflicts cannot be reduced, much less eliminated, by legislation, however, since they result directly from the growth policy

pursued by the Department of Agriculture, now called the Department of Primary Industries (DPI). Pursuit by the rural elite of new norms which make their business profitable is in direct violation of those which protect the customary social arrangements. If they want to 'progress', however, they have to repudiate the pre-existing norms which provided social security for the majority. Their capacity to do so will depend on the power they can organize (Alawi: 36). The pursuit of communal forms of land ownership indeed seems incompatible with an economic policy, that is determined primarily by free market forces and by profit considerations. The former can only be pursued if the interests of the rural majority are given priority. A change in the present trend of land use could only be realized on the basis of a socialist-inspired programme of political mass mobilization and organization. Unless such mobilization is set into motion, wealth and poverty are bound to increase simultaneously.

It has been argued that, as a result of the growth of export agriculture, inherently unstable in view of the vagaries of the world market, and of the severe neglect of the development of food agriculture, 'development' in Papua New Guinea would reach its 'terminal' point (Howlet). Such a view is contradicted by the experiences of other dependent societies which have undergone a similar but much earlier growth of wealth and poverty. It seems that the evolution of the class structure has no terminal point. As prevailing opportunities for profit-making become exhausted, new opportunities will be sought. The process of converting all 'unproductive land', i.e. land which is not used for the production of profit, into 'efficiently used land' is as yet in its first stage but is rapidly growing and will cause a scarcity of land for food production.

People may not be willing to sell their labour cheaply. It will become cheaper to the extent that more people will be forced onto the labour market, who will have to secure food from reduced resources so that a process of involution will set in (Wertheim: 56). With increasing labour, less productivity will be achieved. Without improved agricultural practices, the soil will deteriorate. Such a process accelerates as customary barriers to reproduction break down and the men's and women's houses, which still exist in parts of the Highlands, will disappear. As man and wife start to live as a couple in the same house, the norm of delayed intercourse is given up. In combination with the growth of poverty which reinforces the function of reproduction as a function for production, this will induce a rise in the birthrate. The rich have children because they can afford them, but the poor need them as labour to keep themselves alive. Thus, population growth on a declining land-surface also intensifies the process of involution. As falling yields result in a decline in food the quality of labour is further reduced, and will further aggravate poverty. Traditional agricultural practices were quite suitable under conditions of low density. In fact, they were most rational as they resulted in maximum returns with a minimum labour input. Their transformation appears now to be urgent. The scope for such a transformation, however, is extremely limited when land is alienated progressively by a rural elite for commercial agriculture. The resources of the State then tend to become devoted increasingly to the support of commercial agriculture which, by nature, is concentrated on short-term gains. Costs become externalized and the maintenance and enrichment of soil productivity is perceived as an expense. Thus, soil deterioration tends to be caused both by the expansion of commercial agriculture by the elite and by the impoverishment of the majority of subsistence cultivators.

It has been argued that population growth is conditional to agricultural growth (Boserup 1965). This is so at a low level of development of productive forces, as without the

availability of labour, capital formation is not possible. The evolution of a class structure requires a certain density of population. Without it, the private appropriation of land cannot lead to wealth (Amin 1974: 366), at least as long as labour is the dominant production factor. Under such conditions, however, agricultural stagnation is bound to become concomitant to agricultural growth which relies on further destruction of the subsistence economy and on ever cheaper labour supply. As a consequence, a peasant who consumes only what he himself produces, is seen as a parasite. He is tolerated only 'if he produces his own labour power and offers it on the market by cultivating produce for export or selling his services on the labour market. This toleration lasts only as long as the land he occupies does not acquire speculative value' (Meillassoux 1974: 32).

Land use is therefore not a technical but a political-social issue and is shaped by the mode of production and socio-political organization that becomes dominant at a certain point in time.

It is understandable that the rural elites restrict the need for 'rationalization' of land use to the takeover of expatriate plantations, and that they try to exclude from reform the alienation of that customary land to which they would themselves be beneficiaries. Five to six hundred expatriate plantations will now gradually be taken over by the rural elite through development corporations or the business wings of local councils or provincial governments, with the formal objective of generating income for those authorities. It is not improbable that the conditions of labour exploitation which characterized the development of the expatriate plantations, worked by a labour force of some 35,000 labourers, will be reproduced. Democratization of the management of these plantations is an urgent necessity so that the labour force, drawn from the surrounding subsistence areas, can count on fair earnings for the improvement of their own production and livelihood.

It has been observed that the co-existence in the pre-independence period of large estates owned by foreigners and a mass of smallholdings held by the 'indigenous', provided the 'classical precondition for social crisis' (Crocombe and Hide 1971: 323). Foreign ownership may be removed, but if production relations are not substantially modified the crisis conditions will persist. Conflict is likely to develop if the colonial productive structure is not transformed at its roots. Where royalties from investment (e.g. timber concessions) come in, clan groups should be given priority over local government councils, unless it is clear that such councils are genuinely democratic bodies.

No production campaign has perhaps had more far-reaching implications for the alienation of customary land and the creation of wealth and poverty than cattle promotion. In many areas of the country large tracts of land have been taken out of actual or potential food production. As we have seen, cattle production was intended originally for export, with the support of the World Bank. As world prices fell, it was promoted to serve the internal market, but high prices meant that it served the high income groups, at least where cattle entered the commercial circuit. In the areas where customary forms of exchange still predominated, cattle entered the traditional circuit of ceremonial exchange as 'big pigs'. The meat is then consumed only on special occasions and does not serve to improve nutrition. Cattle promotion has been accepted eagerly, being seen by the big men as providing status and prestige. Moreover, these big men/rich farmers have become the principal clientele of the extension service

As pressure for cattle mounted, more and more land was appropriated and enclosed. As a rule this was the best land, and the effect on food production became serious. One cattle farm might displace 50 to 100 subsistence farmers. Over-grazing is not uncommon and cannot be controlled by the

Department of Agriculture, so strong is the pressure for profit or prestige or both. Erosion is the inevitable result. If the enclosed land does not carry too many cattle and the ranch is held as a status symbol, erosion will not occur, but the displaced people will suffer lower yields with greater labour input on poorer lands. Such people are likely to become emigrants, like their earlier English predecessors described by Thomas More in his *Utopia*. At the same time, the displacement of families onto lesser fertile land will reduce the fertility of that land also. Erosion occurs particularly easily on hilly land where the small farmers are forced to cultivate on the slopes. The practice of terracing, which involves intensive capital formation, is unknown in Papua New Guinea, as it was not necessary under conditions of subsistence agriculture. A double process of erosion thus results. The proposal that ranches should be established only on land that is absolutely unsuitable for cultivation (Dumont : 17) is a rational one, but would meet with violent opposition by modern entrepreneurs and traditional big men. Such an urgently needed change can only be part of a wider process of social and political transformation. The change from all cattle being for the few to all people having a few animals, can only come about with a change in the social structure. Meanwhile it may be more appropriate to promote small animals (e.g. chickens, ducks, goats). The orientation of the extension service is questionable. Although it has been demonstrated conclusively by serious investigation that chicken production is a losing proposition, if based on imported foods, the practice is still continued in Papua New Guinea. As a consequence, self-reliant cheap practices of chicken production are gradually being eliminated.

Surveys carried out over the past years confirm that slight attention is paid by the agricultural extension service to improving agricultural practices by the peasant majority. One investigation in 1973 reports that 80 per cent of the national extension staff believed that their organization

decided on promotions on the basis of ability to handle internal administrative procedures rather than on the agricultural development of the area or on the reaction of the villagers. This suggests a growing bureaucratization as the service expands. By 1974 it had been calculated that extension officers spent 40 per cent of their time devoted to various aspects of supervised credit almost exclusively with individual farmers and 60 per cent of it with cattle owners who comprised only 0.25 per cent of the population. Of their total time they spent 46 per cent on administration, 48 per cent on the distribution of material services and only 5 per cent on direct educational work (McKillop n.d.b: 10-14). The farmers contacted were large, wealthy 'progressive' farmers, large cash growers and expatriate planters (McKillop: n.d.a:2). As in other areas of the world, the 'diffusion theory' provided the rationale for such an approach. It was assumed that somehow, sometime, the benefits would trickle down from the big to the small. Another justification was that only projects that are 'bankable' justify credit. In practice, this means that a farmer initially will need a certain minimum resource endowment in land, funds, trees or animals to be eligible for a loan, automatically excluding the mass of small peasants.

Entrance and success in commercial agriculture leads to elite formation by the fact that from the start it has relied on the support of Australian agri-business. As a result, inputs are expensive and only those who can offer own assets as collateral can get credit. In this process, progressive farming has come to be equated with the use of imported equipment such as tractors. The Young Pela Didiman (a young farmers organization promoted by a private mission which organizes a training programme) introduced the first buffaloes into the Wagey Valley in 1972 and propagated them as 'Our Papua New Guinea tractor'. The reaction voiced by the agricultural extension officers was that this move would severely impede progress and would promote backwardness.

The use of organic fertilizer, by which poor soils can progressively be enriched with no other cost than labour and proper rotation, has little scope in the practice of rural officers who automatically include imported fertilizers in the credit package. Chicken consumption of concentrates which, as we have seen, is a losing proposition, tends in fact to become more expensive than consumption by the majority of people. Only the high income groups expatriates and local elites, will purchase these chickens. The Ministry of Agriculture, however, continues to rely on Australian chicken-starter. This can only be explained by close links between the Australian companies and the higher government officials. The Ministry depends on weekly visits by an Australian expert to service a losing chicken company (PNG Table Birds) in which the government has an interest. This seems a costly proposition, but it reveals the extent to which Papua New Guinea's dependence on Australia induces artificial and wasteful forms of economic organization.

This approach is also deeply ingrained in the orientation of the Agricultural Colleges, which have always focused on export and commercial agriculture and have devoted little attention to food production. Rather than relying on large grants from the government, they should be entirely self-supporting and students should live on their own produced food. At present Vudal, the oldest and most prestigious agricultural college in Papua New Guinea, uses around 90 per cent of its land for cattle breeding. New students are given a new piece of land and do not learn to practice rotation, while the tractor is used for all kinds of chores. Even for subsistence crops reliance is on imported inputs. Thus, students are not trained to help peasants to develop self-reliance. The same orientation characterizes the Agricultural College in the Highlands. By learning standardized production techniques, students are not helped to respond to local needs and variations, much less to work with and to train community cadres. There is an urgent need for a radically new approach:

integrating theory and practice; academic learning with living and working with the people; starting from the peasant's experience, needs and practices rather than from the requirements of agro-industry and of the rural elite. The recent move by government to reform university training and to make more advanced training dependent on the performance of students during a year of practice, is a good start. Also, the admission of girls to the Agricultural Colleges is a breakthrough. After all, women are the main food producers. The introduction of an excellent and unconventional rural life improvement programme with the support of FAO, in which food production and human nutrition, community health, family resource management and rural life development extension, are taught in an integrated way, is also a major advance. This approach is being introduced by women, but as yet they are considered to be inferior in a man-dominated society (Still & Shea 1976). The risk is great that the programme will be converted into a conventional home-economics programme revealing the marginal role into which the women are brought by the transition towards a capitalist mode of production. The low prestige of food production vis-à-vis commercial production, results from the dominance of men in the sphere of power, politics, exchange and hence accumulation. The dependency of the women of the small cultivators is aggravated by the shift from food towards commercial production. It is likely that women may eventually be excluded from the production process which formerly secured them the basis of their value and position. The scope for this new programme therefore depends on the transformation of the newly dominant capitalist mode of production which is bound to give priority to growth and profit over livelihood and quality of life.

A similar approach to that of the agricultural extension service prevails in the extension service of the Office of Business Development (OBD), which tends to concentrate on the formation of an urban elite. It also helps the rural elite, however, when it invests its profits from agriculture

in urban-based ventures in real estate, trade, transport, shops. The OBD operates mainly on request. In fact, it frequently ends up by providing support to the 'dynamic' entrepreneurs who know the way and who have the connections to approve their requests for credit. The service provides loans to individual entrepreneurs or to corporate business groups which bring together members of the rural, political and educated elite. A significant part of the loans it recommends go into unproductive forms of investment which do not broaden the productive base but which are profitable. Small agricultural producers are not familiar with the principles of 'efficient business management' and consequently are bypassed. They are used, however, insofar as they serve as cheap producers of items for trade. Corporate enterprises are then formed to purchase their produce cheaply (e.g. artifacts, baskets, mats) or as labour for processing. Labour value is thus transferred from the poor to the rich. It may be asked whether present United Nations support for such operations is legitimate. For example in Goroka in the Eastern Highlands a small team of the International Labour Office helped a powerful corporation and a group of women who are the wives of the shareholders of the Corporation. The co-operation is undeniably successful from the point of view of business, but it tends to reproduce the colonial structure of monopoly. Similarly, an officer of the International Labour Office has helped a group of political leaders and rich entrepreneurs in Mendi in the Southern Highlands to set up an investment corporation. The primary business of the corporation is to purchase and sell baskets made by people in the surrounding villages. The decision to set up the corporation was taken after a few visits to villages during which the advantages of 'setting up an own business' were explained to the villagers. They proved not interested and wanted only to sell their baskets. Indeed, to organize a business with several village groups would be a complex and time-consuming task. As time was pressing for the ILO expert, the organization of the corporation was thought to be the best solution.

The consequence will be, however, that insofar as the business is not yet monopolized - almost all businesses in town are controlled either by a Protestant mission or by an Australian businessman/ex-member of Parliament/ex-colonial administrator - it will be seized by the new corporate group which also will make preferential claims to bank loans. In such a way, the direct producers are bound to become wage labourers for the corporation.

Another form of transfer of wealth from the small to the rich, and from rural to urban areas, is realized through the Savings and Loan Societies. As a rule the boards of these Societies are dominated by the rural elite. Being the principal form of collection of savings in the country, these societies frequently allocate their funds to unproductive forms of investment, such as houses, real estate, trade shares, a bank building, trucks and trade. Funds acquired through export production are thus not used for broad-based economic development but for elite formation. With inflation, the small savers are the losers. The Savings and Loans Societies in the Eastern Highlands is an example of the rapid advance of these societies: savings rose from 60,000 in 1972 to 900,000 kina in 1975. The societies thus became major promoters of skewed growth and inequality.

If co-operation is offered in preparing projects, the link between production and commercialization must be well-examined, well-planned and organized. Otherwise, the labour of the direct producers will serve mainly the rich who acquire control over local, national and international marketing. Examples are the breeding of crayfish and crocodiles for the export of their skins, to which FAO provides technical co-operation. The government and UNDP would do well to take the planning of this link into account. United Nations Guidelines for project analysis, however, are based on orthodox economics. The basic assumption of equilibrium in this type of economics does not permit any discussion of the nature and structure of society (Robinson 1977: 23). Hence, a UN Resident Representative officially has no other business than to subscribe

to projects which, intentionally or unintentionally, will help the elite. This cannot be the purpose of the United Nations which, however, does not operate in a vacuum: it either advocates and sustains development to the benefit of the majority, or it promotes elite formation.

From the above analysis it seems that, from colonial days, the state has played a strategic rôle in supporting the transformation towards a profit-oriented society based on individualist pursuits. It is difficult to impute the growth of the observed contradictions solely or largely to 'natural spontaneous' forces that exist within the societies of Papua New Guinea. During the prolonged period from 1913 of 1940 cash and export crops were grown communally on land bought by the government. Members of various groups around these plantations were forced to do compulsory labour, being supervised by the local policemen who applied heavy sanctions. Half the proceeds went to pay for administration and education, the other went to the producers (Crocombe 1971: 177). This will not have helped people to acquire much of a taste for communal production.

Local government councils were set up as a law-and-order alternative to the numerous spontaneous people's movements, clan associations and community movements which pursued intergrated broad-based self-development, challenging the organizations set up by the colonial administration. The councils served to thwart genuine community initiatives such as the Mataungan Association; the Kabisawala Movement; the movement on Manu island for the re-orientation and re-organization of Local Councils; the Erap farming organization; the movement of the M'buke and Langandrova associations, both originating in the Paliu movement; and more recently, the Boura association and the Olobus experiment (Fitzpatrick and Southwood 1976: Semana 1975).

Most of these movements contained a challenge to dominant forms of colonial organization and thinking, and emerged from the desperate need for new autonomous forms of political, and

economic and social organizations which were suited to the self-development of the Papua New Guineans. They were designed to make creative use of traditional forms of organization and values, while at the same time trying to transform them. There is ample evidence that community initiatives towards economic ventures were from their inception countered by various regulations. Their introduction prepared the ground for a takeover of initiative and management by the Administration. Withdrawal from or apathy towards co-operative action, was often inspired by the fact that the people perceived co-operation as meaning the Australians telling them what to do. Subsequent attempts by people to create their own smaller units, in line with their traditional groupings, were then thwarted (Fitzpatrick & Southwood 1976: 16). Until the early 1960s, in fact, the New Guinea Companies Act prohibited the incorporation of a company for most purposes, unless two-thirds of the members were 'British subjects'. Another regulation made it illegal to participate in profit-oriented group activities, if more than twenty people were involved and if the group had no legal status. A similar prohibition, which existed until recently, although not strictly enforced, prevented groups from obtaining credit. Late in 1971, business development officers were reminded by the Secretary of Law that they would commit a serious offence of conspiracy under the criminal code if they were to co-operate with such forbidden groups. Although the Companies Act of 1974 and dispositions upon Independence created scope for initiative by community groups and associations, many restrictions on group ventures remain (Ibidem: 18). Meanwhile, private corporate groups have received all support. It is therefore not surprising that the belief in Papua New Guinea in 'an own way' is receding in spite of the original thinking and political commitment of a small group of intellectuals who fully understand the effects of neo-colonial growth in their society. 'The Australian way', has with the support and protection of the State served its function by creating the proper conditions for a self-fulfilling prophecy. Through

its strong support for the 'freedom of enterprise' for the few the new State has prevented and discouraged the development of initiative and enterprise by the many.

#### 6. CONTRADICTIONS AND THE SEARCH FOR A NEW DEVELOPMENT APPROACH

Systematic encouragement by the State of people's organizations, in which people productively and democratically involve themselves on the basis of self-managed production, distribution and consumption organizations, would require a break with the approach followed hitherto by the Public Administration and particularly by the extension services. Systematic support of self-motivation, self-mobilization and self-organization of the rural and urban majorities of 'small people' would mean giving up a 'big men' focussed policy. This would seem to be the only way by which to secure a broad-based overall advance in development and to improve the livelihood of the people. The increase of marginalization demands such a basic re-orientation which would need a broad movement against all forms of monopolization and oligopolization of resources and opportunities. It would also need ideological, educational, scientific and technological practices in line with and supporting it, rather than opposing and thwarting it. In the organization and growth of community-based and inspired groups, new leaders would emerge to represent and serve the common people in a new way, different to the style of the big men or of the new elite based on the promotion of patron/client relationships. This would require the systematic training of community-rooted and democratically-elected cadres. Initially, such training should concentrate on social and economic issues and problems, and only then on technical matters. Moreover, any government-supported project should be rooted in the initiative and organization of the people's groups and associations and their own cadres, requiring a 'receptive structure' in terms of social organization which will evolve and be transformed in the course of practice.

New cadres will also be needed. Projects that are initiated or pushed from above or outside by officers who have neither roots in, nor accountability towards, the communities and their groups and associations, will benefit only a small elite.

Such a new approach is difficult and slow, however, requiring patience, strong commitment and confidence in the people, skill in conflict solution, sensitivity to people's feelings and flexibility. Above all, it needs support in confronting and overcoming the deeply encrusted colonial legacy in the governmental institutions and the public service elite. Such a process of transformation, in fact, requires a cultural revolution, a movement to reduce the privilege and hegemony of the new indigenous ruling class, i.e. the political, public service, educated, trading and rural elites, and to promote the social, economic and political power of the masses. In that sense, a new conception and practice of democracy is needed. Formal democracy, based on delegated authority, is unlikely to be capable of providing the majority of people with an adequate share of the benefits of development and with the chance of influencing their own fate. Insofar as it does not allow man to develop his potential to the best advantage, it has become obsolete (Unesco 1973). This also has profound implications for an educational strategy, which should not only train people of all ages to control their natural environment and to develop the productive forces, but also to become conscious of and to learn how to control the social forces which shape the relationship on whose basis people think and act.

The fellowship-workers of the Village Development Task Force, set up after Independence in 1975, were perhaps close to community cadres, but they represented only a very small (20) group. The outcome of any community project, however well-conceived and prepared, is in the final analysis determined by the wider forces which operate on the local community; in that sense, the rôle of the fellowship-workers who do not operate as political cadres in the sense above described, limits their field of action. Perhaps this is the price

continued privileged support. There are indeed indications that its orientation has changed from that of a politically-inspired organization to that of a task force in a more restricted social sense. Its initial attempt to pressurize the bureaucracy and to politicize its rôle was not accepted. The fact that it engaged in much philosophy and too little down-to-earth work in the early stages made its position precarious. The separation of social from political action, however, may well invalidate its mobilizing transformational rôle, as will the allocation of outside funds. Allocation was contemplated from a European Common Market Fund, so that modest allowances could be paid to 80 more fellowship-workers. Reliance on such outside aid is likely to undermine the transformational potential of the workers, who could only become genuine community cadres if and when they were supported by the communities whose productive organization they were supposed to develop and to whom they should primarily be accountable. Firm support by the European Common Market for UNCTAD's intergrated commodity proposals and the proposals by Third World countries in the North-South dialogue would help Papua New Guinea to finance its own development so that it does not need to rely on this type of foreign aid.

The Administration has now entirely geared itself towards a project approach which will ensure that no funds will be spent unless well argued specific projects are presented. Waste should thus be avoided. The danger in this approach is that action by ministerial fieldstaff becomes geared to the requirements of the budget while urgent political and social transformations essential for the survival orientation of such projects become relegated to the background. Such transformations determine the outcome of projects in terms of benefits to the various interest groups. This project approach manifests the tendency that projects will be measured only in terms of short-run rationality and efficiency. It is relatively easy for an educated person or for a pressure group which relies on an educated person to write up a project, to secure funds. Also, the requirement of a specific time horizon and the fixing of expenditure to a definite time period,

may induce fund spending merely to justify the project. Premature spending may destroy people's self-reliance and willingness to engage in capital formation to raise their own livelihood. In that sense, this type of project has the clear purpose of accelerating capitalist modernization.

An extreme example of this trend is that of the director of a vocational school in the East Sepik, who insisted that he had never been able to visit the surrounding villages but would now be able to do so thanks to the Landrover cruiser expected from the Asian Development Bank. How do the boys who study at the centre and who are from the surrounding villages ever arrive there?

If the outcome of specific projects depends so much on the nature and structure of the social environment, this will have major implications for the project approach. If the 'bankable' criterion approach is rigorously followed, it almost automatically excludes a community approach. Projects prepared by community groups may on the surface appear confused. A great deal of patient groundwork by community cadres is necessary to promote rational propositions upon critical discussion. Only small initial inputs may be desirable. Community projects can only grow as people's consciousness and ability of management grow from small and provisional towards more complex and permanent forms of organization. There must be room for trial and error: mistakes are unavoidable, as are conflicts. The question is how such conflicts can be used to advance the movement of groups or associations through projects to improving their own livelihood.

Preconditional to the self-motivation by people to join collectively in production work seems to be security of tenure. As land values rise as a result of modernization, conflicting claims are likely to develop (Crocombe 1971: 178). An interesting example of an innovative approach to this problem is offered by the Kainantu Council. Over a period of several years in Kainantu area, community group councils were gradually formed on the basis of self-identification. This required a

change in the arbitrary boundaries of the older administrative wards in which the local council had been divided so as to encourage self-organization of the groups on the basis of language and cultural identity. A total of 35 community areas were formed, each with 200 to 3,000 people. In that way, also, 'cultural minorities' could have their own self-government. There were 141 villages. Each area chose its own leaders, not by ballot box but on the basis of customary consensus. An executive committee of six leaders was elected by the leaders of the 35 group councils. The decision was taken to shift gradually away from centralized taxation. Under the old set-up, taxes had been used for works decided upon by the local council. In the new approach, self-taxation for projects, to be decided upon by each community group was introduced. In 1974 20% of all local taxes were returned to the groups, in 1975 60% and in 1976, 100%; from then on, self-collection was introduced. This was possible because the local council had acquired some plantations of expatriates under favourable conditions. The proceeds of these plantations were used to organize a mechanical shop to repair the council's immobilized car park, to improve road connections, to help groups in organizing small water-catchments and medical aid posts. A key project was the organization of a bulk shop in the centre of Kainantu where the community groups could bring their products and could purchase small capital goods and consumer goods. The bulk store has managed to break the monopoly of the expatriate businesses by offering a wide range of useful items for much lower prices. Moreover, it pays the community groups a higher price for their produce than do the merchants. The profits go into each group's own saving account. In addition to all this, each community group has its own village court and only relies for major problems on the magistrates in the centre. A systematic programme has also been undertaken for the training of community cadres.

This project seems a serious attempt to link productive involvement by the majority of the people with social transformation, in an organized step-by-step way. Achievement so far has not removed the forces of monopoly and oligopoly and serious distortions persist in productive and consumption patterns. There has been a sharp increase of cattle projects.

Also, a sharp rise in sales of beer through the bulk store. But a determined effort has been made to involve the people and the ground has been laid for genuine community projects. In the Kainantu area a distinct middle peasantry appears to be growing, closely connected to the community group councils (Good 1977: 33), indicating an evolution in the social structure that is qualitatively different to the polarization in other areas.

The administrative re-organization of the local council in Kainantu met stiff resistance from the centre. That this was overcome may be attributed to the vision of the experienced Minister of Finance who had worked in the area for many years. The manager of the development authority of the Council is also a major asset. Although authoritarian in style, he is respected for his total devotion, integrity, sense of justice and managerial talent.

It would appear that in Kainantu the ground for self-management has been prepared. But this is not a process that lasts one day or one year. This is an example of an attempt to break with the colonial approach. The promoters therefore have to cope with the hostility of those who have grown rich through that approach and try to continue to do so.

Papua New Guinea shows a great variety in the structures and organizations of groupings and in the balance between co-operation, mutual aid practices and individual activities both in production and in distribution. This is because groupings in different areas have been unevenly affected by modernization. Pre-conceived formulae are therefore out of the question and approaches have to develop from practice. In other words, sound theory can only grow out of experience, so that it can serve again to advance practice (Kuitenbrower 1976: 33).

Much creative work is being undertaken in Papua New Guinea on suitable village science and technology in numerous institutions and by individual volunteers, stimulated by the social planning unit of the Central Planning Office and by the Office of Village Development. The outcome of this work, however, will be closely connected with the evolution of the

specific terms of social organization which will become predominant.

Closer examination of the 'Eight Aims' which serve as guidelines for government policy reveals that diverse and even opposite interpretations are possible. To supporters of co-operative organizations they may serve as a starting point for communal indigenously-inspired forms of organization. Promoters of free enterprise and individual initiative would refer to the emphasis on control by nationals and the promotion of small-scale business. Compared with multinational business, national business has remained very small, but big and small are relative concepts. The ambiguity in the formulation of the Aims reflects the contradictory nature of Papua New Guinea values. In the words of the ex-Prime Minister Somare: 'many of our societies place high value on both individualistic entrepreneurial activity and communalistic sharing'. He added that he had 'constantly directed that institutions promoting Papua New Guinea business activities should concentrate their efforts on supporting representative communal groups rather than individuals' (Fitzpatrick & Southwood 1976: 7). As a rule the Eight Aims are utilized by the new elite as an argument for the promotion of individual business. As such, they evoke the image of a society in which there is fair competition among equals, and instruments of production are rudimentary and small-scale. Such a situation would characterize societies composed of small peasant farmers and artisan-producers. There would be no conflict between capital and labour and fair competition would preclude monopolization. When ownership becomes concentrated, however, those who lose their property or rights to make use of property, enter into a state of dependency on those who control land and capital. The basis for concentration, monopolization, and for wealth with poverty is then laid and the free market mechanism induces further concentration and inequality (Dobb 1973). In that sense, the Eight Aims may

be viewed as ideologically representing the first stage of a profit-oriented mode of production. In actual fact, Papua New Guinea's dominant mode of production, which is the driving force in shaping social relations, is that of a profit-oriented mode of production in its most advanced stage. Laws may well be introduced to protect and promote the practices of the customary pre-market mode of production, but such laws do not respond to the nature of dominant social relations and the concomitant power structure and are unlikely to have the intended effect (Miaille 1978).

The promotion of science and technology can at no time be dissociated from the question: what kind of society is being pursued and promoted in practice? Their use is shaped decisively by the specific terms of social organization which become dominant. As long as the market and distribution mechanisms essential to the dominant world economy continue to dominate the economy of Papua New Guinea, the pursuit of 'appropriate' science and technology can only give the mass of marginal producers small tools with which to stay alive, and will help to check pressure on high income groups for a redistribution of opportunities and income. To evade the 'technological compulsions' imposed by the dominant mode of production, Papua New Guinea needs to develop not only political but economic, social and cultural self-reliance. Scientific and technological independence cannot evolve without a movement towards economic, social and cultural independence.

The mix of capital and labour-intensive approaches in the modern sector in the context of dependence is determined by which approach is the more profitable. Exploitation of labour on coffee-plantations in the Highlands, for example, may well go together with a most sophisticated labour-saving processing factory with an expatriate manager who earns more than 25,000 kina per annum. This requires the corporation and its shareholders to be able to dictate prices to small producers by controlling transport and marketing.

As long as the construction business is controlled by expatriates - an example of Papua New Guinean production relations as an element of Australian or international production relations - there will be little scope for the application of indigenous science and technology.

While in principle there is a wide range of options in the mix of capital and labour (e.g. construction, agriculture, husbandry, transport, marketing, health, education, infrastructure), these options in fact are determined by the prevailing and evolving class and income structure (Kuitenbrouwer 1975).

Imports of conspicuous consumer goods and inputs for investment by higher income groups and government tend to be not only exchange - but also capital-intensive. The expensive government premises at Waigani, which were a gift from the Australian government, are a glaring illustration of this. But most government offices inland are constructed with imported materials. Even when the materials are locally produced, there is no possibility for alternative forms of production, utilizing local resources, as long as Australian standards are respected. Why does Papua New Guinea continue to import white sugar for urban markets when in most parts of New Guinea communal groups could, with some support, organize sugar production and run their own small mills, producing more healthy and tasty brown sugar? Is it necessary to wait for international aid to construct some foreign mills that will rely on a hired labour force, send their profits out of the country and deprive thousands of small people from earning an income on the basis of self-management? Why does Papua New Guinea have Australian bakeries for which white flour has to be imported? Why not promote the production of high-protein soya and oats which grow well in the country? Tortillas of soya and biscuits of oats are far more healthy food than white bread, and can easily be prepared with the use of a simple mill and a locally-made oven made from an abandoned

oil drum. These have actually been introduced in some villages. Only when such imports are barred will national production and national producers have a chance and will there be scope for a process towards an economy developing 'from within', based on the growth of internal exchange.

Any discussion with advocates of modernization rapidly reaches the question of who bears the cost and who benefits? It is often argued that the promotion of small-scale village technology represents a drawback: it would lead only to shared poverty, as it prevents a rise in productivity. That is a focal argument for multinational agri-business. People, it is argued, would be barred from enjoying the fruits of progress. As one writer puts it: 'The use of agricultural equipment in the countryside is still very limited in most developing countries. It is therefore surprising that some people accuse agricultural mechanization of being one of the main causes of the rural exodus; to hear them, one cannot help feeling they would even forbid the introduction of the sickle because it might lead to a revolution. These mechanization techniques put the rural people directly in contact with urban and industrial civilization presented under their most attractive aspects' (Bichat 1977).

It is not clear whether the author is a teacher at an agricultural college, an international expert or a representative of agri-business. His view, however, faithfully reflects that of the promoters of modernization who disregard the social consequences of the use of science and technology. Simplified versions of recent studies by the United Nations Research Institute on Social Development (UNRISD) on the Green Revolution and those by the International Labour Office on Poverty and Landlessness in Rural Asia should be recommended as obligatory study material in all high schools and colleges, in particular agricultural schools. Such studies help one to appreciate the devastating effects of modernization without prior or concomitant socio-political transformation.

Due to their ideological orientation, however, international agencies may help to prevent the growth of indigenous science and technology. The 'delivery' concept which underlies the World Bank's conception of the development of services tends to undermine the promotion of self-reliant activity, even in the field of science and technology. This is demonstrated by a government request for World Bank aid to the Southeast Highlands. The original proposal stressed local self-reliance, but to be acceptable to the World Bank, it had to be re-written in terms of the 'delivery' concept. By prescribing standardized terms for services, the government imposes urban elite criteria (e.g. agriculture, construction, environmental sanitation) and prevents the use of local materials. Thereby it helps both to restrict the demand for labour and the scope for self-development. Also, close links between agri- and other multinational business and international agencies, cause the latter to prepare the ground for, and contribute to, uncritical modernization and hence polarization (George 1976: 214-66).

The South Pacific Foundation which is the 'appropriate technology' branch of the Village Development Task Force, helps people to do things for themselves 'at a pace and in a manner they can control', and posits the urgent need for a central stimulus and exchange instrument. The fact that the Foundation does not mention 'Papua New Guinea' in its name shows the political delicacy of its position and the constraints under which it has to operate vis-à-vis the private sector. By giving its support to indigenous initiative, it could help to ensure that tools and small equipment needed by the villagers are produced within the country. Such tools and equipment, e.g. spades, axes, ploughs, grinders, cutters, crushers, small mills, extractors are essential for enhancing the productivity, income and quality of rural life, and the government should cease its practice of importing them duty-free.

An interesting example of planned indigenous production is that of ploughs for the Highlands. For several years the Yangpela Didiman Centre experimented with ploughs imported from the Philippines (together with the buffaloes). The blades of these ploughs cut too deep, however, and do not suit the variations in soil in the Highlands. After a long search, an Austrian mountain plough with adjustable blades was found to be suitable. An Austrian blacksmith volunteer will now teach the villagers to make these ploughs from old springs and other discarded steel. Another example is that of the wooden wheelbarrow which each young man who comes to the centre makes for himself and takes home, and which have become very popular.

Few countries in the world have more 'appropriate technology experts' for rural development per caput than Papua New Guinea, as is reported in the rural development handbook for Papua New Guinea. The Swedish Dag Hammarskjold Foundation, which supported a workshop on appropriate technology in Papua New Guinea, has published a report on the workshop for a price which unfortunately makes it only available to high income people or governments. As the prices of labour and tools and the need for a creative use of leisure time continue to rise in industrialized countries, the report may perhaps be a welcome guide there.

Another area which tends to be looked at as a problem in isolation is that of food and nutrition, touched upon above in connection with export/cash/subsistence production, life styles and consumer patterns. The evolution in this field is closely related to the changing pattern in socio-economic organization, labour requirements and the related change in hegemonic values.

A great deal has been achieved over recent years in Papua New Guinea to improve attention for nutrition by training a supervisory and provincial nutrition staff.

In co-operation with the various extension services a variety of groups and schools are served with information and demonstrations. Also, the staff persuade people of the need to improve food production and consumption. The Department of Primary Industries has promised to alter its biased focus and to give more attention to food production. The planning office will appoint a nutrition specialist who will screen each project on its nutrition aspects. Protein-calorie malnutrition and anaemia have become severe and widespread, and hunger is becoming prevalent. In a relatively short time, food and nutrition have become political issues. Up to 1977 the Government had followed the policy of not accepting foreign-donated food. Malnutrition and hunger can easily be dramatized by the opposition ('Thousands Are Starved to Death', Post-courier, Port Moresby, 2.12.1977). To avoid the accusation that it lets people starve, the Government, against its will, may be forced to arrange for 'free food' for children and nursing mothers. Even if it would not formally press such a request the World Food Programme would be happy to enter the stage as it did in the Gilbert Islands and Western Samoa. Such aid would tend to stifle local creativity and initiative. The transport costs would have to be borne by the Government, and might well make the aid more expensive than if the Government purchased food locally. Apart from undermining self-reliant food production, such a programme would also induce new wants and tastes which could not be met locally, opening the way for increased imports.

The tendency to impute the growing food and malnutrition problem in Papua New Guinea to land shortage and over-population (Barnett) is widespread. The need to limit population growth is not infrequently seen as a major solution to such problems. Such a view tends to bypass a critical analysis of the ways in which land and labour are utilized. As we have seen, food and cash production have become competitive. A family which devotes most of its time to its coffee plants tends to end up with little food unless the wife continues her traditional ways.

But the trend is that the growth of exchange will cause people to cease to be self-supporting.

Anthropologists and economists see an obstacle to development in the apparent lack of concern for intensive labour in pre-capitalist social formations, particularly those in which hunting, fruit gathering and wild plant collection have been dominant, speaking of a state of 'subsistence affluence' (Huber n.d: 7). People lived directly from nature and only occasionally relied on setting the 'development of productive forces' into motion through shifting cultivation. They lived well, in their own view. Intensive gardening was unnecessary to the extent that lands were ample, and fruits and leaves, nuts, and the collection of small animals and insects, provided a relatively rich and diversified food intake. Gardening would tie people down and would limit the rich pattern of social interaction, involving expeditions, joint work meetings, discussions and ceremonial exchanges, which gave sense to life (Ibidem: 13). Labour was not a commodity but provided the basis for sustenance and for the celebration of life. If a cash-economy was to develop, this independence and self-reliance would be broken up and people would be forced to labour for the state or the plantation-owner, to pay taxes and to buy consumer goods. It may well be posited that self-provisioning in food is a bar to the development of a market in which food is brought in from outside. With men being drawn away for labour, the growing of food, a man's job, started to deteriorate. The forced production of cash and export crops also caused food production to disintegrate as labour shifted from food to market crops. Once the monetary economy grew and consumer goods were brought in, an additional impetus was given to a shift in land and labour use.

Apart from the shifts in demand for labour caused by the incorporation into the market economy, attention to food production has been undermined by several other sources of demand which should be looked at in their accumulative effect.

Since the beginning of 'development', clan and village people have been drawn into a variety of activities designed to 'educate' them, to teach them 'discipline' and to prepare them for 'development'. Thus, the men were forced to do public works. The missions, in exchange for providing people with the Bible, relied on surrounding communities to build up the mission, to improve and clean premises, to work in gardens and plantations for small rewards, the balance being saved up for heaven. When local councils started, they also relied on the cheap labour of the population for public works. The Agricultural Services instituted their 'day belong didiman day' and people were asked to devote a day to cash cropping. These and other 'days' in a variety of ways are still maintained as sources of cheap labour and detract people from giving proper attention to their own gardens and home compounds. In a way, these 'days' may be regarded as the persistence of a colonial mode of production, and are likely to continue to create resentment. This may not be directly expressed, but in a disguised form as apathy and indolence, a silent form of protest. It is a popular argument that works are good and give the small people a chance to earn some income. There is, however, evidence that attempts to raise levels of income in rural areas through public work programmes are by themselves unlikely to bring about a significant reduction in poverty (measured by norms of food intake), in the absence of growth in production and reduced inequalities in rural areas. Increased rural demand for food may merely bring about a rise in the price of available supplies, the real incomes of the people may even decline. There is evidence that only under special conditions do public works contribute effectively to raising the conditions of small people: co-operation in the production of, and sharing in productive assets; and an increase of the supply of essential consumer goods (ILO 1977: 19-99). But such projects do not form part of the works programmed for the 'days'. The building of roads etc. tends to favour the richer people in the community

(e.g. well-to-do farmers, merchants), and may also help the task of the public administration. In earlier days, this consisted basically of control work and tax collection by a local government representative, the kiap. At present this is the responsibility of the extension services. If these services concentrate on businessmen, big men and rich farmers, however, then the small men labour against their own interests, particularly if shifts in land use occur as a result of the road. Commercial agriculture displaces food production and real estate speculation threatens to dislodge the people from the land of their ancestors.

Production and consumption are not determined by aggregates of individual preferences and tastes but the latter are shaped by the evolving class and income structure, which also shapes resource allocation. Banks have to secure profit for their shareholders or to repay their loans. They cannot afford to concentrate on food production to meet basic needs (the World Bank allots about 50 per cent of its agricultural projects to the financing of cattle raising; Baytelman 1977: 12). It seems that planning for food production and the elimination of malnutrition is not possible in a dependent unplanned 'free' market society in which the basic patterns of investment, allocation of resources and motivational forces are not determined by people's basic needs but by those of capital and private interest in its various forms (Moore Lappé:Collins 1977). A basic needs strategy cannot avoid to face the power and income structure as basic determinants of production and consumption. Special food and nutritional programmes cannot balance out, nor make up for, the forces which threaten the sustenance of the majority of small people. A change in the power and income structure is essential if significant improvement is to be achieved.

It is argued that the heavy reliance in Papua New Guinea on mono-production of staples such as taro, caucau (sweet potato), yams and sago are a major cause of malnutrition in

view of their low calories and proteins. Also, as small children have small stomachs, they do not consume enough in view of the bulky nature of these roots, and diversification is needed. Rather than solutions from outside, there is a need to look 'from within'. Nutrition is not a problem of supply. A rich variety of shrubs and leaves which are high in protein grow in Papua New Guinea. Foreign vegetables were imported to improve the diet without knowledge or appreciation of the quality of indigenous resources. Thus, cabbages were introduced, which in nutritional value cannot compare with many local shrubs and plants. The introduction of such vegetables has helped to give the people an inferiority-complex vis-à-vis their own greens. Shrubs do not look 'beautiful', according to expatriate criteria. Also the eating of frogs and small insects, which has been part of the children's games and which takes care of proteins, is looked upon, by expatriate standards, as 'not done', except perhaps in emergency. The growing restriction on children's mobility by imported schools with their treadmill-schedules and socialization into alien values have also been factors in changing the consumption pattern. By the time children are ready for 'work' but cannot find it in the form of wage work, they have come to despise the customary forms of making a living and are difficult to convince that there is any good in their own traditional culture.

Even if reliance on nutritional resources in the immediate surroundings were restricted, there are potential resources available at the national level. But these are exported. Thus fish in Papua New Guinean waters not only goes to Australia but also by Japanese fleets to Japan, although it could be processed in Papua New Guinea. This would add some income to the modest dues which are now paid by Japan. Only a few jobs would be provided but fish on the internal market will remain scarce and expensive and much of it is imported in cans. Palm oil is produced on the Hoskins Unilever plantations which were set up with World

Bank support, but it is all exported. Only imported palm oil is available on the Papua New Guinea market. Unilever had made arrangements as a result of which the distribution of seedlings from the Hoskins plantations is illegal. It is not clear whether this is in order to prevent disease or because of profit considerations. A small amount of this oil was exceptionally made available for an experiment with children in Enga province and proved to be remarkably effective as an energy booster. Reliance on locally-grown protein sources in the village seems best, however.

But even if it is assumed that supplies of adequate nutrition is no problem, people's basic perception of nutrition may remain fundamentally different from the foreign one, as their whole conception of health and life is different. Insofar as the dominant values of their pre-capitalist modes of production still prevail, nutrition may only be perceived as a problem when it starts to interfere with what people are normally expected to do. Deprivation of well-being and breakdown in health is not perceived as having natural causes but as an outcome of wrong or offensive deeds which have to be redressed (*vis-à-vis* the ancestors, kin, the clan and others), so that relationship will be brought in balance again by offerings, exchanges, compensation or sorcery.

Only as production forces and control over the natural and social environment increase will a change in interpretation of reality occur. Meanwhile, a systematic educational campaign with simple slogans, which relates disease and malnutrition to its real natural and social causes, is necessary. Pointing out the social causes of malnutrition unavoidably gives a campaign a political ideological perspective, and makes nutrition and health cadres socio-political cadres. They work effectively to the extent that they relate the symptoms of disease and malnutrition to the underlying determinants in the changing society. The restricted

clinical-orientation of medical cadres discourages them from working from such a perspective and may seriously limit their impact. They have been taught to deal with symptoms by way of a short-term rehabilitation approach which leaves the processes intact which produce and reproduce disease and malnutrition. Also, the lack of accountability by the field workers and medical aids vis-à-vis the local community to which they 'deliver' the message from outside without being part of that community, discourages genuine concern and a more integrated approach. A basic reorientation away from medical specialization and bureaucratic management towards community health by community cadres and towards a training which is kept close to concrete reality, continuously combining theory and practice, is urgently needed.

Such an approach requires a break-away from the forces, even in the medical field, in the dominant world economy of today, which turn health into an object of profit. As a result, health care becomes more and more costly and is available in adequate forms only to the higher income groups. The rise of a foreign-trained medical establishment tends to stress curative over preventive medicine and becomes a major obstacle to health improvement.

Development planning as a political process requires democratic involvement by development cadres in the life of the community and also the democratic involvement of the community in government planning. Planning as a managerial technical exercise is no substitute for this, however sophisticated its nature. The conception of development 'from within and below' rejects the assumption that a bureaucratic and technocratic elite can bring about development. It is rooted in the premise that only the people can do this by developing community power, guided by development cadres from a national movement and by people's cadres from within the communities. Education as a movement for social, intellectual and technological transformation needs to be inspired by a broader movement which carries and promotes

a new development ideology, used by the cadres from outside and from within the village to liberate the people's transformational potential. The creation of local institutions run by and for the people and controlled by them instead of by government 'extensions' for state penetration and control, is essential. In practice, this requires that the political leaders and development cadres use the mass method whereby the needs, problems and views of the people are summed up and used to support them in working out solutions. The advantages of this political method are that it prevents rule by fiat and elitist pretensions. It involves the whole population in active discussion and explicit commitment to policies. Also, it is a process of education by which the people gradually overcome their inarticulateness, their suspicion of change, their ignorance of modern technical and organizational possibilities, their narrow family and clan outlook, the extreme shortness of their economic perspectives, their ignorance of comparable situations elsewhere, and their suspicion of government (Selden 1971: 275).

In such an approach, the transformational processes in which the people are involved become their basic educational experience from which their more specific need for training in management and organization, production and social development arises.

#### 7. SOME INNOVATING EXPERIMENTS IN RURAL DEVELOPMENT<sup>1</sup>

An interesting example of an innovative search for the preparation of community cadres is that of the Yangpela Didiman organization close to Banz in the Wagey Valley in the Western Highlands. For a number of years an Agricultural College with a 3-year programme leading up to a certificate was the centre of activity of a Lutheran Mission. In 1969, the orientation of the College was changed. It was felt that it was producing an elite group of trained agriculturalists

who were too far above the people to help them. From then on, students started to work in the villages around the Centre and a start was made with training community leaders who would work with village groups. In 1975 there were 200 of these groups in Papua New Guinea with 5,000 members (UPNG 1975: 147), involving young and old in the learning of new production practices and in work on social development with the community. The Agricultural College was closed in 1974 as it was felt that it was not possible to overcome the contradiction between career-training and elite formation and the need for people's self-development. The training of community cadres has changed gradually. From 1975 to 1977, a programme has been organized for a total of 300 participants, at first for young bachelors in their early twenties. Then it was realized that they were too isolated to have any significant influence on returning home, even though they had been selected in consultation with the community, and it was decided to select couples in their mid-twenties who were well-rooted in the community. Women always stay behind and there is strong pressure to keep girls at home so that they are not 'lost' to their lineage by outside marriage or work. In a society like Papua New Guinea in which reproduction has always been the foundation of production, relations between men and women are the primary expression of inequality. Control over women is a privileged instrument in the maintenance of social inequality (Balandier 1974: 57-106). The joint training of wives and husbands is therefore of a revolutionary character. Apart from the 10-month programme, the Yangpela Didiman organizes various short courses and seminars for particular groups (e.g. teachers, health workers) on special subjects (e.g. keeping pigs, chickens, growing vegetables), so that they can help in starting community projects.

The fact that almost half the Yangpela Didiman members are women shows that women's emancipation, food production and home improvement are given special attention. This basic

ideology of the Yangpela Didiman approach emphasizes the improvement of life above anything else. It also includes an attempt to make the village an attractive place to live in (e.g. the organization of a community centre, recreation). Emphasis is not on 'bankable' projects but on food production and cash production to improve livelihood. At the start of the programme, trainees undergo a short period of intense manual labour. Those who have come only for career purposes then tend to give up, and are thus prevented from dragging down those with genuine interest. Theory is learned from practice. Each couple gets the management of a one-acre farm which is assumed to produce more than enough for one family (corn, sorghum, sweet potato, soya, oats, vegetables and fruit). The chickens and pigs are fed from this one-acre plot. Total production is enough to cover home consumption and the purchase of a range of basic goods. Soil fertility is maintained and raised by rotation, and each third crop will be a legume or soya. The area on which the centre is located has rather poor soils. The fertility of the gardens, where for more than ten years crops have been planted without interruption has improved, thanks to this rotation. Participants also learn to master the techniques of contour farming and terracing to counter the erosion of slopes, resulting from the increase in intensive land use. Bamboo-roofed greenhouses give proper sun protection. The accumulated experience with innovative practices in this centre give credibility to the view that even in Chimbu-province, which is judged as an area of critical land shortage in view of its high density of population, there would be no problem in feeding all its people if such techniques were systematically applied. As long as priority emphasis by agricultural extension services and banks is put on export agriculture, however, the scope for genuine village development and improvement will remain limited. According to the highly experienced German adviser to the centre, there is a close connection between the growth of export agriculture and the scope of community work. In his

view: 'community work only becomes possible when the coffee price goes down'. A growing number of small coffee-growers in the valley, who neglect food-production and waste their money on beer and unnecessary consumption items, appear to go hungry.

In 1973, the centre introduced buffaloes. It started advocating the use of the buffalo as the 'tractor of Papua New Guinea', much to the ire of the agricultural extension service officers in the area who viewed it as an attempt to keep the country backward. But farmers like them and the demand is rapidly growing, particularly since the sharp increases in oil prices. Yet as the Ministry of Agriculture relentlessly pushes mechanization and the rich farmers have plenty of money, the buffalo may end up as the poor peasant's tractor only. The centre has some tractors but they are not used for most of the agricultural work. Also in a nearby catholic high school, the girls who every week work in the surrounding village, also learn to work with the buffalo. The Philippine ploughs came with the buffaloes. However, they do not turn the soil sufficiently over. This is necessary for covering the legumes when rotation is applied. After an intensive search, it was found that a very suitable plough would be an Austrian mountain plough with a blade of 8/10 inches which can be adjusted to different levels. A village blacksmith is coming from Austria to train local blacksmiths. There is plenty of raw material: steel scrap (old car-springs and bushknives). All participants make their own big wheelbarrow from wood and discarded rubber-tyres. The search is now for a good extractor of oil from soya and sunflowers which grow well in the Highlands. Other simple equipment is introduced upon return by the cadres to their village, in co-operation with other groups and centres working on village technology (e.g. ovens to make tortillas from oats, corn and soya and chicken food, cutlers, handmills, crushers, grinders and presses). Marmalade (made out of guava) and peanut butter also diversify the diet.

This attempt to promote self-reliance contrasts with the approach of institutions such as the World Bank and the Asian Development Bank which automatically provide a variety of imported equipment in the aid package (e.g. for vocational schools and training-colleges). It is particularly serious as far as more simple equipment is concerned, as learning has to proceed step-by-step from simple to more complex. Craftsmen can learn only by doing.

An original way has been developed to combine pig raising with crop-rotation. Pigs have always had a major part of the traditional crop (sweet potato), making it possible both to raise pigs and to improve the diet. On a bamboo-fenced area of 400 square metres, ten strips are set out. After five pigs have grazed off the sweet potato, the waste is turned under and soya is planted. The pigs are moved successively to the next strips and each time, after they are shifted on, soya is planted. At the end, the pigs are ready for sale (1,000 kina) or for consumption and the family has a high-quality food supply. Labour requirements are very light. Pig waste can also be used to raise fish in the pond, constituting another enrichment of the diet.

It seems preferable to leave production individual, as this corresponds to custom, but capital formation activities of terracing and pond making are done collectively. Joint production would have clear advantages. Since the leadership-structure in production-innovation in the community is very fragile, however, it is considered more suitable to reduce the risk by relying on individual production, while at the same time encouraging mutual aid. Thus, the road for continuing innovation is kept open. Such prudence seems advisable, as the margins of operation of new leaders trained at the centre in the more traditional communities are small.

Although they work with the formal approval of the traditional chiefs, they can easily be challenged since their work inherently challenges the power structure. But mistakes are unavoidable. In the operations of the centre it is striking that the deficiencies and mistakes in the work over the years have been continuously recognized, carefully analysed, and that the accumulated experience has served as the starting-point for a new approach. There is a genuine attempt to arrive at theory from practice, and to use theory to modify and to further practice. Not all trainees become genuine community cadres but a good proportion do. The major limitation on their work on their return to their villages lies rather in the global forces that pull the community apart. Their work can bear fruit in the long run only if it is supported by a determined political movement for self-reliant village development, based on a fundamental alteration of government policies. Only then will the cadres be able to mobilize the young to make their village a good place in which to live. The centre, initiated by a protestant mission, over the years more than once had to drop pre-conceived ideas and views and to adopt new approaches which are more 'from within'. The conditions of the people change, causing their needs and demands to change also. Openness, flexibility and a sense of experiment are therefore vital.

Another fine example of a new approach is that of the Bagi resource and agricultural development centre in the Gavien settlement scheme in East Sepik Province in the rain forest area, started in 1973. Its promoter was a Dutch priest who had worked in the area for 16 years. He decided to give up his traditional task and to share the life of the settlers, helping them to develop their settlement into a communal home. An Australian girl who, after graduation came to Papua New Guinea on an exchange programme, decided to stay when confronted with the challenge of working with the settlers in making the new community. From its inception,

a close relationship grew between the established settlers and the Centre, based on the joint discussion of problems, exchange of ideas, information, mutual aid, and practical co-operation. The Bagi centre has gradually grown into a multi-purpose centre of learning at the service of the settlers and their families. A group of about 20 young men and women live at the Centre, learning and working together. Half of them are children from a poor neighbouring area, the so-called Grass Country. The others are children of settler families. They have been selected because of their high motivation, their aptitude in rural development and agricultural work, and their interest in working with the settlers (de Ruyter 1977: 2). There are no formal requirements for entrance. They are trained to serve as cadres and rural development leaders with their kin in their community. The duration of their stay varies, depending on their family situation and plans, ranging from six months to several years. Some soon leave as they realize that the Centre does not help them to find wage employment and to make a career in town. During their stay at the Centre, the others acquire a wide knowledge in the theory and practice of food production and farming, appropriate to the environment. Together with the Australian volunteer, the boys and girls have developed a garden of 4 ha. with a wide variety of crops. Some are staple and vegetable gardens. The Centre has made intensive use of scientific research accumulated over the years by specialists on tropical agriculture and nutrition in Papua New Guinea and elsewhere. Special attention is given to highly nutritious leaves and beans. Other gardens are reserved for fruits which are now beginning to bear and yet others to the production of condiments (Annex 2). Production is based exclusively on organic methods of land preparation and fertilization and on systematic control, rotation, contour farming, ridging, crop covering. Weeding is facilitated by systematic mulching and composting. As a result, soils are not only maintained

but improve in quality. As a consequence also production and productivity is enhanced. The use of sturdy hoes, a revolutionary improvement over the traditional digging stick, has greatly facilitated proper soil preparation and treatment. With intensified production the application of such methods is crucial to the protection and enhancement of the environment. These are essential in view of the fragility of the ecological balance in the tropical lowlands. Also, the decision to leave trees in between the gardens not only preserves the beauty of the landscape but also favours production. Costly cash inputs are dispensed with.

Settlers visit the Centre at any time to discuss their problems and plans and to look around. Invariably they take some planting materials away with them. From 6 a.m. to 12 noon, with a break for breakfast, all cadres/trainees work in the community gardens to produce their own food and to plant material for the settlement. The surplus is sold on the market. After lunch and a rest, each work on their own garden in which they are encouraged to experiment in the way they prefer. Each trainee keeps a record of plant development. At the end of each month they review in the group the good and weak points of the garden, and discuss how to advance. The rest of the afternoon and evening is spent in and around the community house on work with tools, handicrafts, study (there is an excellent small library with books on rural life improvement and village technology with illustrations) and games. The climate of sharing and democracy in the group is striking. All labour and the fruits thereof are shared, as well as knowledge, experience and new skills. Yet there is a balance between communal living and individual initiative and work. A priöristic conception and dogmatism are lacking. The community house is not only beautifully decorated with a large wall-painting depicting rich community life, but also with self-made posters. There is a big blackboard on which views and comments are written,

designs are drafted and drawings are made. Apart from goats, the Centre also engages in duck and poultry rearing, but food production has clear priority over animal raising, and small over big animals.

The young men and women train for life in the settlement or their home-community. No-one needs to be a drop-out; on returning home or starting a family, they will know the value of self-reliance as they have learned to practice it.

Not only in food production but also in the development of a wide range of other forms of production the Centre's leaders show their faith in self-reliance. Only simple but improved hand tools are used in agriculture. There is a range of simple processing equipment (e.g. sorghum thresher, presses, scrapers, grinders, hand-crushers). Flour for bread is still imported to be baked in the Centre's locally-made oven. Soya should take its place. Food preparation for jams, fruit juices, condiment preparation, sweet potatoes storage, fish smoking, the preparation of lemon, grass, tea and sugar are all learned by the trainees. A small sugar plantation is being developed.

Construction is largely with local material. Construction poles are put in a preserver, an old canoe, doubling their duration. All furniture is made locally. The toilets are Asian style, simple but clean. The wastage of a rice mill in nearby Angoram town is used for floor covering in the duck house and then as fertilizer. A sago weaving loom, found abandoned at an old mission, serves the wife of a settler to weave mats and house-walls. Fine sisal bags are made. There is beautiful screen printing and highly artistic Sepik designs are printed on cheaply bought T-shirts. Mattresses and pillows are made with the material of the kapok tree, clothes are self-made. What is not needed by the community is sold on the market. Thus, some of the group go to the market in Angoram each week to sell surplus food, condiments, fruits and the highly popular T-shirts. There is a problem, however, in that a range of products which they can put on

the market is also available as imports in the super-market in Wewak the capital of the Province (e.g. ginger, tumeric, chillies, mattresses). Local production and exchange will only have scope for expansion if imports are strictly controlled, and high-income groups made to accept local production, even if of less quality, over imports. Judgements on quality, rather than having a material basis, tend to be determined by sales pressure and the need to imitate expatriates.

The Centre has gradually developed its resource and promotional function. The trainees regularly work with the settlers in their food gardens and help them with home construction and improvement. They also show them how to intercrop foodcrops with the rubber trees. The Centre takes an active part in the struggle by the settlers to give appropriate attention to their own food production. In doing so, it had to oppose the agricultural extension service which demanded that the settlers give priority to their work on the rubber plantation for which the settlement was set up with funds of the Asian Development Bank.

The Bagi Centre experiment shatters the conventional assumptions that divide the world between educated and non-educated. It reveals the emptiness of class-inspired prejudice and also the perspectives which can open up if and when young people, once they are given genuine scope for self-development, seize their opportunity. Like the Yangpela Didiman Centre at Banz, the Bagi centre shows the way to a new structure of social relations, a new way of life. It is designed to release the dormant creative and productive faculties in young people which wait to be awakened. This approach stands in sharp contrast to an institutionalized system of education which drills people to respond to the requirements of a world of interests which is not theirs. An experiment as that of the Bagi centre is based on the belief that, of all things in the

world, people are the most precious and have to be cared for and trusted. This requires not only deep commitment, but step-by-step careful planning and hard labour, based on constant critical assessment, joint analysis, and discussion.

It is through such processes, conceived as common to both cadres and trainees, that curiosity and scientific interest is raised. A genuine learning process is set in motion in which knowledge and experience, always partial and relative to particular human experiences, becomes transformed and enriched, so that theory serves to advance practice and practice serves to modify and re-orient theory. But are the educators willing to be educated? And under what conditions?

#### 8. SOME FINAL REFLECTIONS

Socialization and education are not autonomous processes but are directed by those forces which, at a certain stage of a society's development represent hegemonic interests and are reflected in the State's policies. It would be unrealistic to assume that the approaches discussed above could be reproduced easily or expanded. Rather, they should be viewed as courageous attempts to go against the stream. Both the growing incorporation of Papua New Guinea in the dominant world economic order as well as the pressures which stem from the evolution of its internal production relations, increasingly geared to supporting a pattern of capitalist economic growth, block the multiplication of such approaches. The change in government in 1978 will only enhance and intensify prevailing tendencies.

The World Bank and the Asian Development Bank play an important role in the destruction of self-reliance and self-provisioning capacity insofar as they help to create, as ideological and practical instruments of the ruling class on a world wide scale, an economic structure and organization which proletarianizes a hitherto self-supporting

rural population. As result, the population tends to lose control over the production process and thereby over food security (Kuitenbrouwer 1978: 76-112; Payer 1979; Moore & Collins 1977; Wihtol 1979).

As it stands, the dominant forms of socialization and education correspond to, and support the growth of, the 'modern sector', i.e. the growth of a profit-oriented mode of production. Insofar as this process inevitably entails the development of increasingly uneven or unbalanced growth, it is urgent that the government expands innovative approaches to socialization and production. The pressures for capitalist modernization both from outside and from within, however, are very vigorous. An attempt to expand an innovative approach would be staunchly opposed by the emerging national bourgeoisie and its representatives who control the State apparatus. At most, therefore, such new approaches give a glimpse of the potential for an original road which Papua New Guinea could be capable of initiating, once forces of protest against the marginalizing consequences of capitalist modernization have become strong and articulate. In that sense, both in their intellectual conception and practice, the above projects anticipate a new original mode of production. In a way, these new experimental approaches are inspired by a utopian vision, but this is engendered by the very crisis created by the marginalisation which threatens the majority of the population. The very nature of Papua New Guinea as a nation composed of multiple peoples who only recently have become free of direct colonial rule, is likely to make this process of liberation and emancipation a slow one.

A new role by the State would require the formation of new development cadres who would work directly with the people through their own groupings and organizations and their own cadres. As has been noted, however, any form of autoumous community initiative or organization, to the extent that these directly or indirectly impeded the process of

colonial incorporation and capitalist modernization, have been repressed in the past. A renewed vitality of autonomous people's organizations is central to the struggle for a new society in Papua New Guinea in which power, income and opportunities will be distributed more evenly and support to the capacity of self-provisioning and self-management will become the heart of the activity of government.

**NOTE**

- 1 For a more extensive discussion of the relations and contradictions between educational and capitalist modernization, see Kuitenbrouwer 1978.

## ANNEX 1

*Dominant Consumption Pattern in a Highland Town*

Dominant consumption pattern in Mendi town, capital of the Southern Highlands.

*A sample of Items in two food groceries (owned by the same expatriate):*

- Nestle Lagtogen, instant milk formula
- Spray dried whole eggs
- Coffee mate-non-dairy creamer
- Irish whiskey flavoured fruit cakes (canned)
- Hungarian apricots, plums and paprika
- Family napkins, Kleenex tissues
- A variety of sweets
- Sunshine milk, instant full cream powder milk
- International roast, instant coffee
- Tang, instant breakfast drink
- Milo
- White sugar
- Cereal/flaked wheat biscuits
- A variety of baby foods
- Cooking oils
- Deserts-coconut sweetened, peaches
- Canned beans
- Dripping, beef fat
- Canned canelloni paste
- Children multivitamins
- A variety of canned fruits and crackers and cookies
- Saint Emilion (one bottle 7.10 kina, in the nearest bigger town 4 kina)
- Drugs from Eastern Europe
- Hairtonics, hairlotions, shampoos from Hong Kong (New Moon, the finest hairdressing, made in the British Empire), Taiwan and the People's Republic of China.

*A sample of items in a chemist shop*

- Shampoos
- Tender care baby powder (Colgate Bombay)
- Baby talcum powder (made in China)
- Baby talcum powder (Johnson and Johnson), fragrant and refreshing, perspiration absorbent
- Hairsprays
- Hairdressing for men
- Extra-dry anti-perspirant
- Super-effective deodrant
- Instant colour foam
- Savon douche avec cordelière, Pierre Cardin
- Beauty bubble bath
- Wild strawberry foam bath
- Toilet paper in yellow and pink (People's Republic of China, cheaper than other brands)

*A sample from one of the shops of the United Church of Papua New Guinea*

(This church is reviewing the possibility of setting-up five new retail outlets in Mendi food clothing, electrical appliances, wood from missions's saw mill, tools and hardware small tractors, gardening equipment, medical instruments):

- Electrical juice extractors
- Electrical coffee percolators
- Automatic toasters
- Automatic hairclippers
- Sunlamps (Philips)
- Vacuum cleaners
- Electrical ovens
- Electrical clocks
- Electrical ventilators
- Hair dyes
- Seiko watches (Buy every year a new one for 60 kina)
- Expensive tape recorders, record players and transistors (the shop has also sold video tape recorders).

All items in the above shops without exception are imported.

## ANNEX 2

*Diversification of Food Production**Crop varieties:*

Bagi has experimented very extensively with a wide variety of crops and crop agronomy. Indeed the keystone to Bagi Agricultural Centre lies in the success with which they have discovered in a scientific fashion how to improve subsistence cropping without any imported inputs. A most outstanding and far reaching achievement by a group of people who have no formal agricultural qualifications.

The crops used by the Bagi Agricultural Centre are the following:

<i>Fruits</i>	<i>Green vegetables and Staples</i>	<i>Condiments</i>
Coconuts, Grape- fruits, Pineapples, Pawpaw, Bananas, Jack Fruit, Five Corner, Soursop, Avocado, Red Guava, Yellow Guava, Cus- tard Apple, Pomello Sour Muli, Sweet Muli, Lime, Law Lau Mango, Philipins, Rambutans, Oil Palm, Betal Nut, Passion Fruit, Granodilla, Rosella.	Kaukau, Taro Hong Kong, Yam, Peanuts, Mung Beans, Wing Beans, Snake Beans, Cow Pea, Pigeon Pea, Calliloo, Aibika, Confrey, Kango, Pumpkin, Snake gourd, Mustard greens, Ockra, Capsicum, Tomato, Bhagi creeping spinach.	Mint, Pepper, Lemon Grass, Ginger, Tumeric, Lombo, Vanilla, Chilli.

(J. T. Tyler, Senion In-service Lecturer, Wewak, Position Paper no. 5, the Asian Development Bank Education Sub-project. The Bagi Agricultural Centre, a model for develop-ment).

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