

THE IMPACT OF POPULATION PATTERNS AND CASH-CROPPING ON URBAN MIGRATION IN THE NEW HEBRIDES*

JOEL BONNEMAISON

At the present time important changes in migratory movements are affecting most Pacific Islands. On their particular scale, the New Hebrides provide an interesting example. In recent years migration to work in the urban areas has continued even after the sudden growth of Vila which took place in 1971 and 1972¹. On the other hand, the earlier circular migration (see Bedford 1972) which predominated until recently is beginning to be increasingly overwhelmed by a "wild" or uncontrolled migration (see Bonnemaïson 1974, 1975) of a new type, much more individualistic. The end result of this new type of migration is the transformation of temporary movement for work purposes into a more permanent migratory movement, apart from when economic conditions in towns are unfavourable.²

What are the underlying reasons for this migratory movement? The first explanation that springs to mind is a link between migration flows and economic factors. In this context, the recent large-scale migration would be most likely to affect islands with high population density and limited local resources. However, a close study of the different

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¹ In May 1967, the total urban population of Vila and Luganville (Santo) was 10 302 or 13.2% of the total population of the New Hebrides. In October 1972, the Condominium Bureau of Statistics conducted an urban census which indicated that the combined population of Vila and Luganville had risen to 16 407. The average annual growth rates of the population of Vila and Santo between 1967 and 1972 were 12.4% and 10.2% respectively.

² This paper was written after a survey in Vila during 1973 when the urban migration had shown a great increase. Now, at the beginning of 1977, it must be stated that there is a tendency for it to decrease. Many construction firms have had to close down or else dismiss a proportion of their staff. A number of migrants, probably between 10 and 20%, have had to return to their islands because of lack of work in Vila; they are thus repeating the pattern of circular migration. Nevertheless, the root of the problem such as was apparent in 1973-74 does not seem to have been fundamentally changed.

island settings from which the migration comes shows that an explanation based on the lack of economic resources at the point of departure is inadequate in most cases. To depart, to leave one's island and one's village for the town with the intention of settling there permanently, is an act which depends on individual psychology. It is also a form of response by a social group to a whole series of problems related to the group's own cultural tradition, its distance from the urban centre, and often also the size and configuration of the island space, in the literal sense.

In fact, experience shows that even if the same processes of acculturation, of the development of a plantation economy or of growth in the demographic burden cause the same problems, they do not systematically give rise to the same migratory reflexes in all island settings. In some islands strong migratory currents develop and grow which the island society can no longer keep under control; in others, where social cohesion has remained strong, the migratory flow stays at a reasonable level in relation both to the number of departures and to length of stay. Certain island "situations", then, show themselves to be more favourable than others to the development of migration to town and to the progressive transformation of circular migration into "wild migration" of the rural exodus type.

In another paper⁴ I noted that circular migration of the traditional type is linked with a stage at which the number of migrants is relatively limited; for example, when they do not make up more than 10% of the total resident population of the island. Over this numerical threshold, traditional migration is really overwhelmed; it becomes "wild" or uncontrolled—in other words, without rules—and evolves towards migration of the rural exodus type, such as is seen in the large towns of the Asian or African Third World. In the latter case, the migrants settle permanently in town and break with the traditional world from which they come.

My purpose is to try to explain the "upstream" aspect of the movement, that is, the point of origin and the changes which have affected island society and agrarian systems. This may be considered as an investigation of the situations which are favourable for urban migration within the particular setting of an oceanic archipelago.

POPULATION PATTERNS IN THE GROUP

One of the main characteristics of the New Hebrides is that they fit very unevenly into the external economic structure, and that they consist of a dozen large islands and fifty to sixty very heterogenous small islands or islets.

⁴ Bonnemaïson (1974).

1 Types of Islands, Population Densities, and Area: Some Examples

	Area (km ²)	Population 1967	Density/km ²
<i>Islets and small islands</i>			
Merig	0.45	56	120
Lamen	0.60	314	520
Ahamb	0.69	168	240
Wala	0.70	265	380
Atchin	0.75	731	970
Uripiv	0.86	279	320
Mataso	1.0	136	136
Makura	1.3	164	130
Vao	1.3	816	630
Mere-Lava	4.0	812	200
Tongariki	6.0	355	60
Emau	7.5	655	87
Mota-Lava	24.0	816	34
Paama	33.0	1 947	59
Emae	32.0	547	17
Tongoa	42.0	2 251	53
<i>Large islands</i>			
Vanua-Lava	310	695	2.2
Gaua	338	432	1.3
Aoba	400	5 971	14.9
Pentecost	439	6 801	15.5
Epi	444	1 718	3.6
Tanna	550	10 746	19.5
Ambrym	665	4 246	6.4
Erromango	975	602	0.6
Malikolo	2 024	7 866	3.8
Santo	3 947	11 879	3.0

Sources: Macarthur and Yaxley (1967).

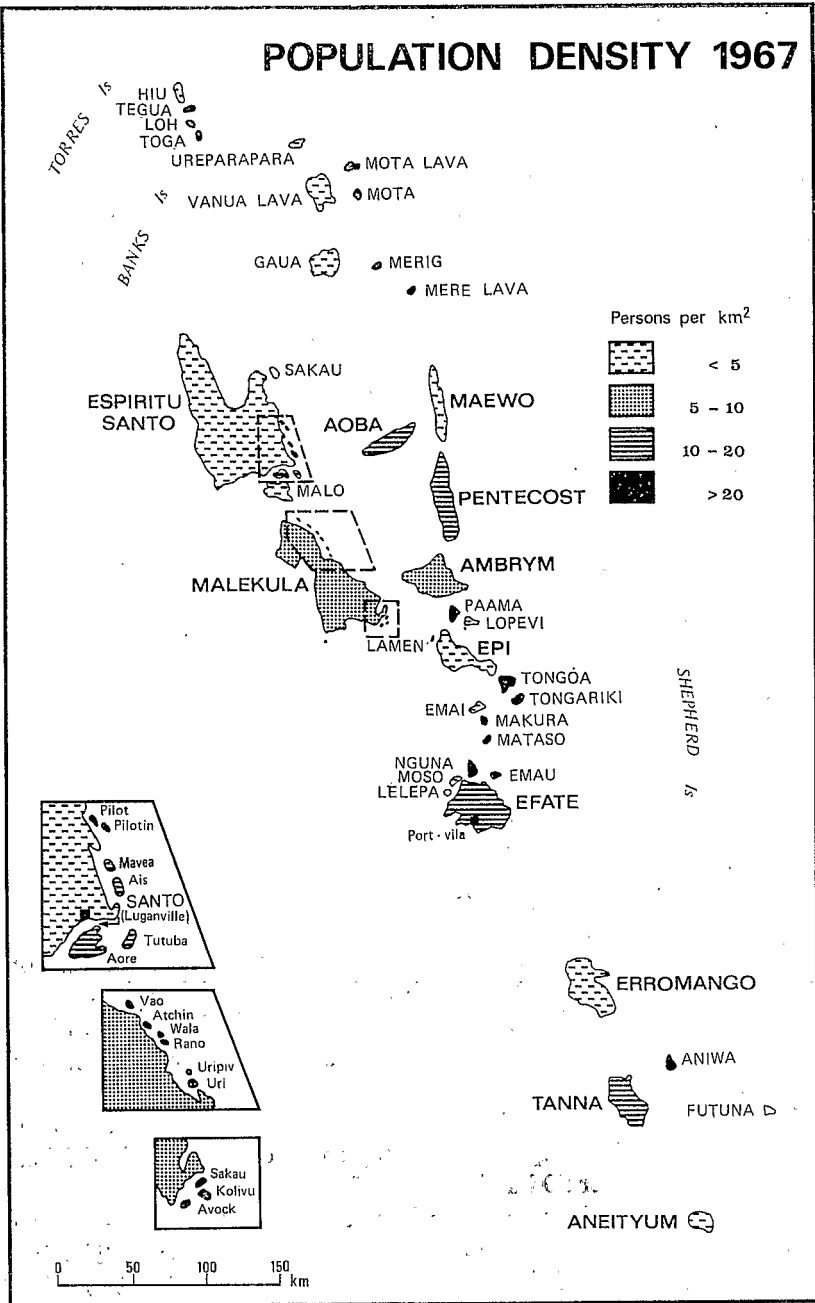
A map of population distribution in the New Hebrides shows one initial factor (see Table 1 and Fig. 1).

It is the smallest islands—in fact the islets—which have the highest population density rates, and, inversely, the large islands which have the lowest rates.

There is no "large island" with a density of over 20 inhabitants/km²; inversely, there are comparatively many small or medium-sized islands with densities of over 50 inhabitants/km².

The highest densities are found on the tiny islets—a few tens of hectares in size—which lie off the shore of large islands. The islets of North Malekula are the best examples of this: Atchin (970 inhabitants/km²), Vao (630), and Wala (380). These lie alongside an island which is one of the most extensive and most fertile of the group, but which has a population density of only 3.8 inhabitants/km².

NEW HEBRIDES



There are many examples of this kind in the group. However, it must be recognized that, in most instances, the inhabitants of the islets have only their place of habitat on the islet; cultivated land and plantations are situated on the neighbouring large island, and this has been so for a long time.

The situation is different on the small or medium-sized islands, whose area varies from four to several tens of square kilometres, and whose populations do not have property rights on a large island. The island of Mere-Lava, in the Banks group, is certainly the most surprising example of this. The island consists of a volcanic cone which sweeps up in an unbroken line to a height of 833 m. On this island there are no coastal plateaus or extensive platforms; the planting of coconut plantations is difficult and quickly restricted by the altitude; gardens have to cling to steep slopes which require special preparation. Nevertheless, this island of 4 km² has a population of over 800, which means a density of 200 inhabitants/km².

This situation seems all the more surprising as near these small or medium-sized islands are large underpopulated islands: Mere-Lava is half-way between the islands of Gaua and Vanua-Lava in the north-west and Maewo in the south-east—"large islands" where the density does not exceed five inhabitants/km². Similarly, the relative overpopulation of the Shepherds and Paama Island contrasts with the underpopulated state of Epi Island and the interior of Efate.

In these conditions, the distribution of groups of people in this archipelago of often fertile lands seems on the whole to be the result of history and local politics, considerations of safety, alliances, or the search for pleasant and healthy sites. With this in view, it appears that small islands were systematically selected as privileged places of habitat. They were better able to be defended and had the advantage of being healthier: ventilation limits the number of mosquitos and the endemic nature of malaria.

In the traditional civilization, economic affairs did not particularly imply the search for large areas of land, as is increasingly the case today. The natural fertility of volcanic soils, often covered with layers of lava or ash, the hot, humid climate, the prolific nature of the plants cultivated (yams, taros, bananas) limited the need for land, even in the context of long-rotation agriculture. Furthermore, "wealth" was counted by the numbers of pigs owned (which wandered freely among the houses) rather than being related to the area of land over which families and villages possessed ownership rights.

In addition, the existing population contrasts were increased on the arrival of the Europeans. For nearly half a century the survival of New Hebridean population groups seems to have depended on their degree of isolation: the fewer contacts they had with the outside world, the more likely they were to escape epidemics. Also, on the windy islands

in certain "leeward" areas, with a drier 'micro-climate, the impact of epidemics was rapidly circumscribed because of the greater resistance of the inhabitants.

In most cases it was the coastal dwellers of the large islands who suffered the heaviest losses in epidemics. There are numerous examples of whole regions which were almost "emptied" on the costs of Epi, Maewo, Efate, Aneityum, Erromanga, or Santo⁵. On the other hand, the little islands or islets which often served as bases for the first Christian missionaries underwent a significant increase in population, as they welcomed and cared for some of the inhabitants of the large islands who had survived the annihilation of their own villages. In other cases the missionaries exerted pressure on recent converts to group themselves together near the missions. This happened, for example, on the islets off north and south Malekula⁶ and in other areas, notably on Lamenu Island off north-east Epi and on Nguna north of Efate island.

The present very diverse population distribution of the group is therefore rooted in the traditional New Hebridean culture and, in particular, historical circumstances. But these patches of high population, these *mondes pleines* or "full worlds", contrasting with the fertile areas that had little or no population, indicate that the concept of overpopulation was not felt to be of any major importance in the traditional culture. Indeed, internal wars were rarely motivated by the desire to conquer fresh lands. Far more important were affairs of stolen or unpaid pigs, adultery, or unkept promises.

An analysis of the present situation indicates that, with the appearance of a new social and economic context, the nature of the relationship between men and the land has undergone deep-seated changes. Land and the need for land, and disputes over land tenure, have become a major fact of life in the village communities of the group. In the same way, the appearance of important migratory trends in the islands indicates that with the development of the plantation economy a phenomenon of relative overpopulation has arisen in most island settings.

MIGRATION FLOWS AND POPULATION DENSITY

By adding up, for each of the islands in the group, the number of migrants at Port-Vila or Luganville in 1967, a net migration coefficient is obtained (see Table 2) which may be compared with the total of the population living on the island of origin (percentage of migrants in relation to the resident population).

⁵ On problems of depopulation in the New Hebrides, see Macarthur (1974), who argues that depopulation in the New Hebrides was in the past very often overestimated, particularly in mission documents.

⁶ In addition, the missions of Wala and Bethel welcomed the survivors from the wars between the Big Nambas and their neighbours, the Tirak people.

2 Types of Islands, Population Densities, Migration Rates, and Percentage of Migration Growth Rate Between 1967 and 1972: Some Examples

	Density/km ² 1967 (No.)	Migration rates 1967 (%)	Migration growth rate 1967-72 (in Port-Vila) (%)
<i>Small islands</i>			
Makura	130	57.7	26
Paama	59	37.0	17
Tongoa	53	18.5	41
Nguna	32	15.7	91
Emae	18	17.7	54
<i>Large islands</i>			
Tanna	19.5	4.5	54
Pentecost	15.5	7.5	82
Aoba	14.9	5.7	228
Ambrym	6.5	15.5	30
Epi	4.2	6.1	114
Malikolo	3.8	5.5	133

Sources: Census 1967, 1972.

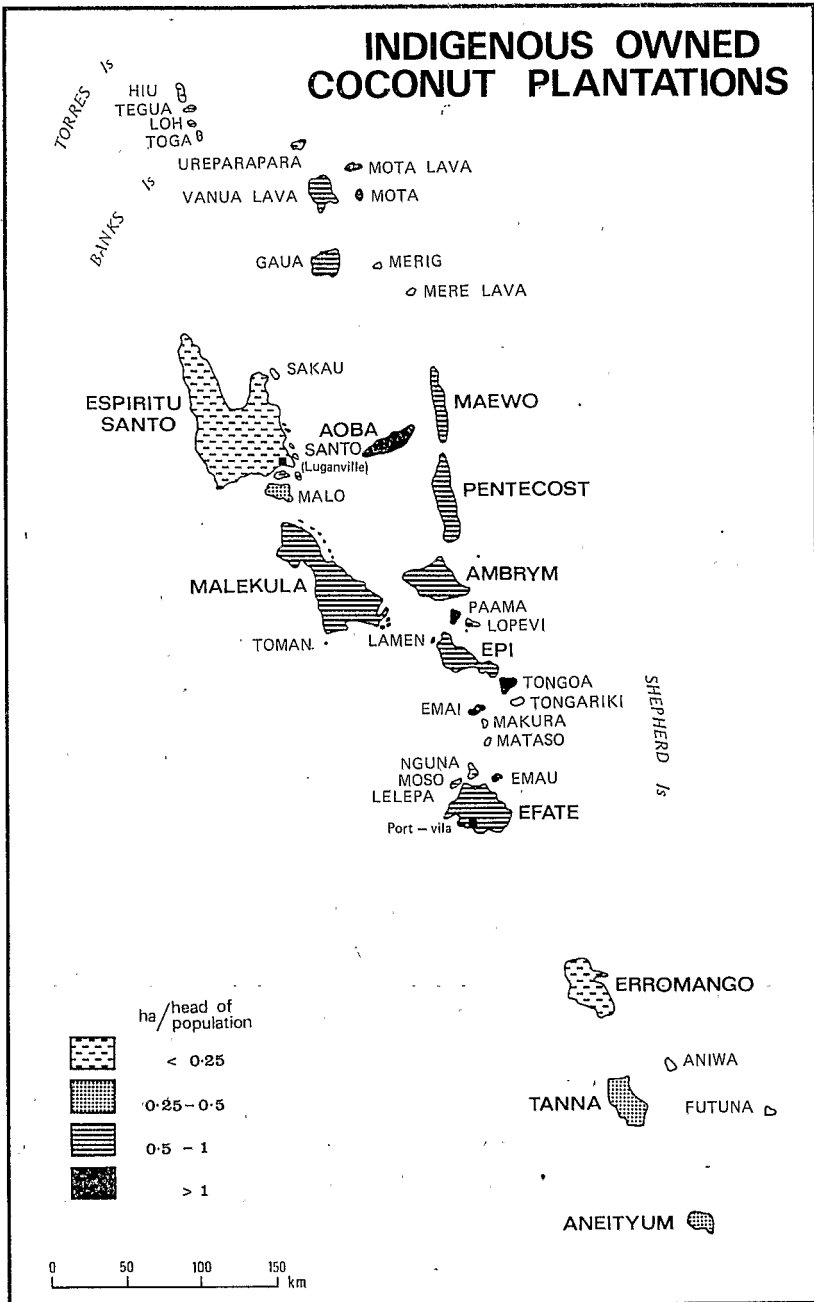
For small islands, the coefficient of migrants increases in direct proportion to the population density. For Paama Island, the Shepherds, the islets off North Vate, small or medium-sized islands with high densities, the number of islanders at Port-Vila or Luganville always exceeds 10% of the total resident population. In the case of Paama, this rate reaches 37%, and 58% in the case of Makura, which is the maximum reached.

On the other hand, in so far as large islands are concerned, the migration figures are much lower—between 4 and 7% in most cases.⁷

The variation of migration coefficients expressed in terms of population density could lead us to conclude that the number of migrants coming from each island depends essentially on the pressure of population in relation to the space available, and that consequently the main incentive for migration would be an economic factor. There would be "rural overpopulation" when the economic resources of a given island failed to increase and became inadequate to meet the needs of a population which was, moreover, constantly expanding.

⁷ Ambrym, with a migration rate of 15%, is the only exception. But this high rate is partly the result of the movement of certain villages from the south-eastern part of the island which were menaced by volcanic eruption in 1951 and resettled at Mele-Maat on the outskirts of Vila. This is not, therefore, a case of the spontaneous type of migration which is studied here.

NEW HEBRIDES



But this standard and rather simplified statement needs to be considered carefully. At least for the New Hebrides, it depends on a notion of economic resources which is not simple. Within the framework of the traditional society there is in fact enough land available to feed the resident population, even on the smallest islands. The cases of Mere-Lava, Mataso or Makura are obviously extreme situations, but there again, except for the occurrence of devastating cyclones, the essential food problems can be solved within the framework of traditional intensive horticulture.

In reality, rural overpopulation occurs only when, traditional society having disintegrated, gardening loses intensity while new needs are felt as a result of contact with the outside world: imported food, clothes, household utensils, education expenses, etc. "Overpopulation"—and therefore the resulting migratory drift—is associated with a certain degree of economic evolution and the change from one kind of rural society to another. In other words, it is the result of a certain level of "development" and of acquisition of cultural change. This statement deserves some explanation.

SMALL "FULL WORLDS" AND LARGE
"SPARSELY-POPULATED" WORLDS:
THE IMPACT OF CASH-CROPPING

It is known that in the New Hebrides what is called "rural development" depends essentially on the extension of plantation agriculture for commercial purposes. Coconut plantations and copra production are for the time being the only financial resources of the rural communities.

In attempting to give an explanation on a purely economic basis, one would be entitled to expect a population to be less inclined to emigrate if the new resources it had on the spot were important; that is, if the coconut plantations owned by the native population were extensive. It is, however, almost the opposite phenomenon that occurs (see Table 3 and Fig. 2).

In 1967, before the world copra market began to fall, emigration scarcely seemed to be related to a simple economic cause. If three islands of the group which have the highest migration coefficient in relation to the total resident population—Paama, Tongoa and Emae—are considered, a triple conjunction of facts is apparent. These islands are in fact of small or medium size (33, 42, and 32 km², respectively); they have population densities well above the average; and it is also on these islands that indigenous coconut plantations, in relation to the number of inhabitants, are largest (more than 1 ha per head of population). Similar conclusions can be drawn for the group of small islands lying north of Efate (Nguna, Pele, Emau, Leleppa), especially since many of their inhabitants also have coconut plantations on the mainland of Efate, which further increases the degree to which they are involved in the plantation economy.

3 Involvement in Plantation Economy and Intensity of Migration: Some Examples

	Density/km ² (No.)	Migration rates in 1967 (%)	Involvement index in ha*
<i>Small islands</i>			
Paama	59	37	1.17
Tongoa	53	18.5	1.20
Emae	18	17.5	1.28
Nguna	32	15.7	0.80†
Makura	130	57.7	n.a.
<i>Large islands</i>			
Pentecost	15	7.5	0.60
Epi	4	6.1	0.80
Aoba	15	5.7	1.12
Malekula	4	5.5	0.56
Tanna	20	4.5	0.42

Sources: Census 1967 and Manciot (1970).

* The index = $\frac{\text{Area of indigenous-owned coconut plantations}}{1967 \text{ population}}$

† In reality, the people of Nguna have a higher involvement index. They own coconut plantations on the nearby mainland of Efate and the total is probably more than 1 ha of plantation per head of population.

On the other hand, on certain large islands—Tanna, Malekula, Pentecost, Epi, Santo—the relatively low migration figure seems to be in direct relation to a more moderate development of indigenous coconut plantations (less than 0.8 ha per inhabitant).

In 1967, only Aoba Island was a special case. Aoba combines a high degree of involvement in the plantation economy (1.12 ha per head of population) and a relatively low migration rate (5.7% of migrants compared with the locally resident population). However, in this case, two facts must be remembered. In 1967 the migration of West Aobans (from Ndui Ndui and Vilakalaka) was strictly controlled by a strongly cohesive society which organized temporary team migrations for Santo Société Portuaire (Ports Company). At the present time these teams provide the majority of the dockers who load and unload overseas ships.

However, in 1972 there was a sudden increase in the number of Aoban migrants who had settled in town: the figure rose from 5.7% in 1967 to 10% of the total resident population in 1972. This tends to show that the temporary migration controlled by the traditional authorities did not provide a sufficient safety-valve when the price of copra fell in 1971-72. On Aoba (especially the western part), an

island society deeply involved in the mechanisms of the money economy is increasingly becoming a society with a high rate of migration.⁸

Thus in most cases it is from the small or medium-sized islands which are most heavily populated and most closely integrated in the plantation economy that the largest number of departures for urban areas takes place. It is as though the most "developed" rural communities were the least able to retain their inhabitants.

An earlier paper, "Espaces et paysages agraires dans le Nord des Nouvelles-Hébrides" (Bonnemaison, 1974), studied the effects of the development of plantation agriculture in certain northern islands of the New Hebrides; Aoba and Maewo were the main areas of research. The following conclusions were reached:

(1) Plantation agriculture is, in itself, a strong factor of imbalance in the island societies. On the one hand, it entails "disintensification" of methods of traditional gardening and a general reduction of areas devoted to this⁹. On the other hand, it upsets the cultural cohesion of island societies and tends increasingly to replace traditional power with a new power and new models associated with the diffusion of money and the consumption of imported goods.

(2) The degree of evolution is very uneven, depending on the island or even the intra-island region concerned (example: East and West Aoba, North and Central Pentecost). In outline, we can say that *high population densities tend to speed up the dynamics of evolution*. This leads to accentuated imbalances within the "full worlds" (population density higher than 30/km²) and, on the other hand, to a much slower evolution in the islands where the population is scantier (less than 20 inhabitants/km²).

(3) This difference in speed of evolution is shown in different types of migratory behaviour. The imbalances created by this evolution are in fact a source of relative overpopulation which creates movement to the urban area. This in turn leads to larger migratory flows from the small or medium-sized islands with high population densities and heavy involvement in the plantation economy, and low emigration rates from the large islands.

When a rural society passes quickly from a "peasant" stage to a "planter" stage, it in fact reduces the size of the areas devoted to gardening and "disintensifies" its cultivation methods, but it offers work and money only to a much more limited number of people. In addition, the development of the plantation economy often entails a division of the lands which were the traditional common heritage of the

⁸ Allen (1968) and Bonnemaison (1974).

⁹ Brookfield (1972).

lineages. This emergence of individual property rights leads to a division of land ownership which often becomes a new source of inequalities. This process is still further accentuated by the fact that the traditional land tenure system was originally sufficiently flexible to allow land to be redistributed in each generation according to demographic needs. In certain cases (particularly on Tanna) the policy of the missionaries, the extension of coconut plantations and the resulting sharing-out of lands led to a fixing of rights over land which prevented the traditional redistribution from being carried out. In fact, the new model of production is profitable only to those people who have sufficiently large plantations (at least 15 or 20 ha) of coconut. For the others, the loss of opportunity is made still more serious by the collapse of gardening and the emergence of new economic requirements so that either temporary or permanent migration becomes a necessity.

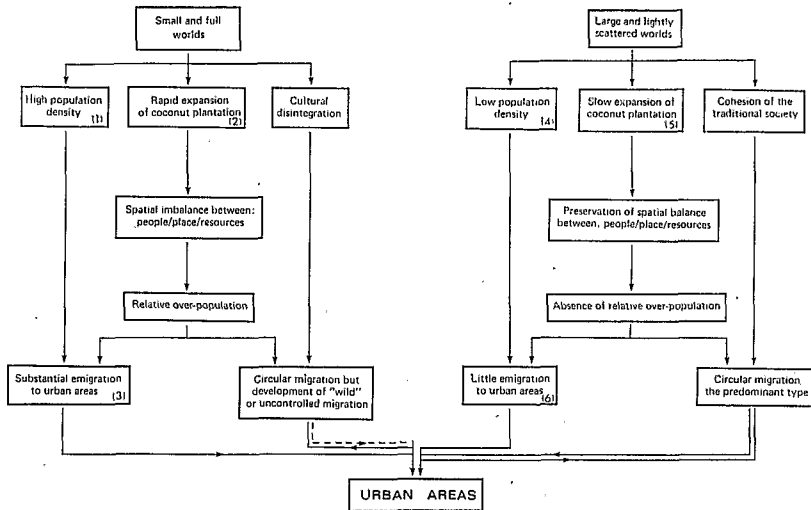
This phenomenon is especially marked on the small islands. It seems that the lack of space available in fact aggravates the dependence on the plantation economy and brings out once more the processes involved in the giving up of intensive gardening. In addition, disintegration of traditional culture has on these small islands often been more pronounced than elsewhere.

On the small central islands of the archipelago, the work of Presbyterian missions has, for example, led to the "breaking down" of traditional social structures and to the surveillance of local leaders by a theocratic type of authority. As a result, the peasant societies which were already "uprooted" in so far as their own culture was concerned have become even more unstable, in so far as their land is concerned. Their only recourse is to change: in the past by moving towards commercial plantations, and now by mass migration towards Port-Vila, Santo, or, when it is possible, to Noumea.

On the big islands, the increase of plantation agriculture has not had such destructive effects. The migration coefficient is, when compared with the number of people remaining on the island, much smaller. It has been possible to maintain gardening and develop grazing. Better diversification of local resources lessens dependence on the copra economy. Moreover—and this is very important—because lower densities allow rural societies on large islands to preserve the spatial foundation which their internal cohesion requires, the cultural patterns and the forms of social and spatial organization remain closer than on the small islands or islets.

Furthermore, the continuation of a "man-bush" world, sometimes pagan and often extremely isolated, reinforces still further the status of cultural stability on the big islands. On Malekula, Pentecost, Santo, Ambrym and Tanna, migration is mainly undertaken by the coastal populations which are heavily involved in the plantation economy:

MODELS OF WILD & CIRCULAR MIGRATION



THREE

- (1) more than 30 persons/km².
- (2) more than one hectare of locally-owned coconut palms per head of population.
- (3) migration rate more than 15% of the resident population.
- (4) less than 20 persons/km².
- (5) between 0.4 and 0.8 hectares of locally-owned coconut palms per head of population.
- (6) migration rates less than 10% of the resident population.

whole segments of the population have only limited and sporadic contact with the outside world.

This attempt at explanation may be summed up as shown in Fig. 3: a suggested model. Naturally, this is only schematic. In addition, it takes no account of the distance factor. In fact, the islanders near the urban areas show more tendency to migrate than do the more distant ones. Also, the attractive power of Vila seems to be greater than that of Santo, and this was the case well before 1972.

On the other hand, it should be noted that the increasingly rapid acceleration of migration from the large islands (see Table 2) shows that they are progressively undergoing the same phenomenon of relative overpopulation. The fall of copra prices in 1971-72 and the sudden growth of Vila seem in this respect to have played a "revelational" role and to have ushered in a situation favourable to migration in most islands of the group. However, the rise in copra prices in 1973 does not appear to have given rise to movements of return to the islands to any noticeable degree.

However, this model does give a general explanatory plan and provides a basis for discussion. The "economic growth" induced by the

increase of plantations for commercial purposes causes the lack of balance between people and the space available and creates "relative overpopulation" which is more or less marked according to the size of the islands. In this way may be explained the considerable number of departures from small or medium-sized islands of high density which are firmly integrated into the plantation economy, and, inversely, the lower migration rate for large islands where the space available reduces the disproportion. Spatial dimensions thus appear indispensable for an understanding of the drift: the small or medium-sized island functions like a real "threshold" from which the drift is intensified and accelerates its own changes.

In conclusion, the migratory flow seems to be related to the stage of internal change attained by a given island rather than to an absence of resources—a purely relative concept in a group of islands where the various population groups are unevenly involved in the external economy. It is the degree of integration into the market economy and the external cultural world that creates relative overpopulation and thence migratory movement.

The new intensity of migration and the progressive transformation of the circular cycle into an "uncontrolled migration" are, in the New Hebrides, much more symptoms of rural and cultural uneasiness than the results of an irresistible attraction to city life. They indicate also that the preservation of peasant communities, of which there are many on small and medium-sized islands in Oceania, seems to be increasingly compromised when they evolve and take their place in the cultural and economic structures of the outside world.

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