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An Inquiry into Limited Membership in Jamaican Peasant Communities

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AN INQUIRY INTO LIMITED MEMBERSHIP IN JAMAICAN PEASANT COMMUNITIES

by

Kathleen J. Adams

A Thesis
Submitted to the
Faculty of the School of Graduate Studies in partial fulfillment of the
Degree of Master of Arts

Western Michigan University
Kalamazoo, Michigan
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masters thesis

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</table>
Past research concerning Jamaican peasant communities has been involved with the effects of population growth or some aspect of it. This past research would have been more profitable in terms of disclosing causal relationships had it been approached in the frame of reference of human population units adapting through socio-cultural systems. All of the researchers, e.g., Clarke, Cohen, and Cumper, have recorded techno-environmental and techno-economic arrangements in the various Jamaican peasant communities. However, none among them has explicitly recognized that population pressure may cause changes in the socio-cultural system due to an over-taxed economic base.

For example, Clarke (1953,1966) devotes her attention to structural reorganization resulting from population pressure. However, she disregards an ecological approach in favor of culture area interests.

Cohen (1955,1956) purports to have two goals, viz., to identify the retention of cultural elements of African heritage and to delineate the manner in which the atomistic modal personality he observes in a particular Jamaican peasant community is a functional component of the socio-cultural system. Cohen observes the manner in which population pressure has affected the inheritance of land.
in this particular peasant community, but he disregards any causal implications this may have with respect to culture change. The delineation of changing cultural adaptation in response to population dynamics would help to illuminate the functional significance of modal personality and the syncretistic integration of African cultural elements.

Cumper's goal (1958) is to inquire into the relationship between family structure and the availability of labor in the national economy of Jamaica. Such a goal would certainly be furthered by encompassing the issue of cultural adaptation in response to population change. Cumper makes the a priori assumption that equilibrium persists in all Jamaican peasant communities.

In sum, ecological studies focused on population change and its ramifications in Jamaican peasant communities remain to be done. A major goal of this preliminary inquiry into membership in Jamaican peasant communities is to point out a direction for research on human population ecology. It is hoped that this research strategy will contribute to the development of a systematic body of theory pertaining to human population dynamics.
INTRODUCTION

What happens when population size extends beyond the carrying capacity of the socio-cultural system? Such population growth creates an adaptive crisis which must be resolved if the socio-cultural group is to survive. Problems of a population overburden must certainly have occurred in the past. However, anthropologists generally have not been concerned with the mechanisms by which they were resolved. The contemporary crisis level of overpopulation in many areas of the world has startled some social scientists, among them anthropologists, into an awareness of population dynamics.

What are the natural mechanisms by which the problem of overpopulation is obviated? One might look at any of the developing nations experiencing overpopulation to see.

There are several reasons why Jamaican peasant communities are a useful field for the exploration of the consequences of population pressure. First, as an island, the geographic boundaries of the ecological zone - the rural area of Jamaica available to peasant communities - are identifiable. Secondly, the appearance and proliferation of peasant communities in this zone are relatively recent and are historically recorded. Thirdly, as a peasant community has an economy that is typically close
to subsistence, this type of socio-cultural system is especially sensitive to population overburden. Further, there are available historical and ethnographic data which make inquiry into ecological saturation and its consequences possible.

To guide this inquiry a theory is necessary concerning population size in relation to techno-environmental and techno-economic parameters: the human species as a whole experiences no effective population control in relation to the limiting factors of the supportive socio-cultural system. In other words, there is an inherent population dynamic which disregards adaptive viability. Propelled by expanding population, a socio-cultural system will produce a daughter system in order to relieve the population overburden. Through this process of fission an expansion will occur until the ecological zone has been saturated. At this point fission is no longer possible due to lack of space and adaptive changes will occur within the socio-cultural system. In this inquiry, the concept of adaptive radiation is employed in the specific reference of a particular type of socio-cultural system, sometimes called a part system, i.e., the peasant community, expanding in a geographically identifiable zone, the available rural area of Jamaica.

When fission is no longer possible, there are three alternatives. The first involves a reorganization of the
ecological adaptation to expand carrying capacity.
Secondly, channels may be instituted to export excess individuals to other socio-cultural systems where they can be absorbed. Thirdly, in the absence of either of the two above changes, starvation will reduce the population overburden.

It is not suggested that population expansion is the sole cause of all culture changes. Certainly not. Such variables as historical circumstances, technological innovations, and advancements in cultural evolution may intervene to expand carrying capacity before population size becomes an overburden. However, this merely postpones the confrontation between population size and system efficiency. The population dynamic which disregards adaptive viability is still inherent.

Patterns of behavior may not effectively limit population size; however, the degree of population pressure that will be tolerated differs according to the adaptive strategies attractive to the community. Borrowed from game theory, the concept of minimax directs attention to net gain in relation to potential loss and potential gain (Alland 1967:212-215). Adaptive strategies under the press of overpopulation are devised not only to maximally reduce the population excess but to minimally jeopardize such values as the security derived from the solidarity of kin groups.
From the formulation of a theory, one must then proceed to a method of inquiry. The method of conceptualizing cultural dynamics used in this inquiry is borrowed from Vogt (1960) who identifies two sorts of culture change. One is a cyclical process of responses to seasonal and generational vicissitudes. This change involved in cultural perpetuation and transmission will here be referred to as cultural replication (Fortes 1962:1).

The process of cultural replication involves recruiting individuals for functional adulthood in the socio-cultural group. A usual source for the recruitment process, and the one pertinent to this inquiry, is the reproductive capabilities of the socio-cultural group. A turnover in management occurs as succeeding generations mature and seek effective control of productive and reproductive resources (Fortes 1962:4-6). If there are not enough means of production to accommodate all of the population, in the process of cultural replication, some individuals will emerge as cultural heirs invested with the right to use and dispose of productive and reproductive resources. Besides the cultural heirs, other individuals will be allowed only marginal viability in the socio-cultural system, and still others will be expelled as surplus individuals. Some who foresee broader economic opportunity may choose to abandon a birthright in their socio-cultural system.
The other sort of culture change identified by Vogt is of a directional nature. The socio-cultural system responds to internal pressures (overpopulation) or external pressures (acculturation) and in so doing alters the cycle of cultural replication. This inquiry will be directed to the identification of either of these types of change in four Jamaican peasant communities.

Applied to the Jamaican example, the hypothesis is that peasant communities have multiplied to fill all available rural areas and that the population has continued to expand beyond ecological saturation. If so, adaptive changes will be evident to preserve cultural replication or there will be evidence of change in the cycle of cultural replication.
HISTORY OF THE JAMAICAN PEASANTRY

The historical record does provide information on the expanse of the ecological zone available to Jamaican peasants, the emergence of the Jamaican peasantry, and the saturation of this ecological zone. The history of the Jamaican peasantry is outlined below for this analysis.

The closed, corporate peasant community characterized by limited productive capabilities (Wolf 1957; Foster 1965) arose in relationship to the preindustrial city (Sjoberg 1955). Many of the Negro peasant communities of Jamaica may never have been of this ideal corporate sort, as the establishment of the Jamaican peasantry is a consequence of a different kind of historical circumstances. Negro peasant communities on which this inquiry is centered have a mutual Africal cultural heritage and a mutual antecedent experience of slavery. The post emancipation (1834-1838) land acquisition by ex-slaves resulted in communities which can be recognized as peasant in nature. The ex-slaves employed crude farming methods on usually small parcels of land and were aggregated into settled communities dependent on and yet culturally distinct from urban centers. Other subsistence situations available to the ex-slaves were as wage laborers on plantations or in an urban context. Among the peasants, both temporary and permanent
migration for wage work occurred. Thus, even from their inception, Jamaican peasant communities need not have been economically self-sufficient but may have been partially dependent on ancillary sources of subsistence available through wage labor. From the first, the process of cultural replication in Jamaican peasant communities may have incorporated such sources of subsistence.

A system of provision ground used by estate managers to feed slaves was a prelude to a peasantry. The allocation of parcels of land on which to grow provisions served to acquaint the slaves with agricultural techniques and experience in marketing surpluses. Thus, at emancipation ex-slaves were familiar with a desirable alternative to work on the estates (Curtin 1955:112). Land for settlement was acquired by purchase, lease, or squatting.

Large tracts of unoccupied land and plantations ruined by the lack of a labor force were broken up into plots of about an acre or so for sale or rent. Squatting was endemic on the back lands of properties, on Crown lands, and on properties unattended by absentee landlords. The number of small freeholders greatly proliferated as the former slave could be a settler for relatively little cash outlay. Fertile land was available for two to ten pounds per acre (Curtin 1955:110; Hall 1959:20). An additional two to six pounds for clearing and three pounds for surveying would yield a crop value of thirty pounds per
acre per year (Curtin 1955:110). In 1840, 883 plots of five to ten acres each and 938 plots of ten to 19 acres each were individually owned. In demonstration of the increase, in 1845, 20,724 plots of five to nine acres each and 2,112 plots of ten to 19 acres each were individually held (Hall 1959:162). By 1865 there were about 50,000 "small properties" (Curtin 1955:111).

Although there were other influences such as the Sugar Duties Act of 1846 which restricted the operation of sugar estates, the lack of a labor force was a significant influence which led to a decline in the number of sugar estates. The following chart indicates the magnitude of the decline in sugar estates after emancipation, 1834-1838.

<table>
<thead>
<tr>
<th>Year</th>
<th>1772</th>
<th>1791</th>
<th>1804</th>
<th>1834</th>
<th>1844</th>
<th>1848</th>
<th>1854</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugar Estates</td>
<td>775</td>
<td>767</td>
<td>859</td>
<td>646</td>
<td>644</td>
<td>508</td>
<td>330</td>
</tr>
</tbody>
</table>

The number of coffee plantations and cattle ranches also severely declined after emancipation with the increase in peasant farmers (Curtin 1955:106-107).

Data are not available on fluctuations in acreage in sugar estates, coffee plantations, and cattle ranches, nor is there information on the extent of the area devoted to peasant communities. However, ecological saturation of the peasant zone is indirectly indicated by the effects resulting from population pressure. By 1911 there was no
more unexploited area of the island available for peasant communities.

After this date the process of settlement can be regarded as complete, and the economy expands through an intensification of the use of the land already settled and the growth of an urban concentration in Kingston. (Cumper 1956:275)

By way of corroboration, the population data recorded by parish allow an indication of the increase in population size continuing after 1911. Tables 1 and 2 present data on population increase in the Jamaican parishes. Population data on the peasant sector alone do not exist.

Jamaica, 146 miles at greatest length and 51 miles at greatest width, has an area of 4,411 square miles. Otterbein (1964:35) estimates a rural population density of 230 people per square mile from the 1943 census which indicates a rural population of 1,013,000. Palmer estimates the total population to be 1,890,000 at the end of 1967; this would be 400 people per square mile (1968:1). However, Palmer cautions against such simple calculations and explains that pressure on productive land resources is greater than the population density indicates, as less than half of the land in Jamaica is cultivable. With the 1967 estimate, there would be over 1,000 people per square mile of agricultural land, including pasture lands, and nearly 2,000 per square mile of land under cultivation. Further, approximately 75% of the farms in Jamaica are less than five acres and comprise less than 10% of the arable land.
<table>
<thead>
<tr>
<th>Parish</th>
<th>1832</th>
<th>1844</th>
<th>1861</th>
<th>1871</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kingston</td>
<td>5.3</td>
<td>32.9</td>
<td>27.4</td>
<td>34.3</td>
</tr>
<tr>
<td>St. Andrew</td>
<td>6.0</td>
<td>6.9</td>
<td>7.9</td>
<td></td>
</tr>
<tr>
<td>Port Royal</td>
<td>13.5</td>
<td>19.0</td>
<td>23.5</td>
<td></td>
</tr>
<tr>
<td>St. Thomas in the East</td>
<td>23.3</td>
<td>25.3</td>
<td>26.2</td>
<td></td>
</tr>
<tr>
<td>St. David</td>
<td>7.4</td>
<td>6.6</td>
<td>6.5</td>
<td></td>
</tr>
<tr>
<td>Portland</td>
<td>7.3</td>
<td>8.5</td>
<td>8.5</td>
<td></td>
</tr>
<tr>
<td>St. George</td>
<td>11.5</td>
<td>8.8</td>
<td>9.1</td>
<td></td>
</tr>
<tr>
<td>St. Mary</td>
<td>23.5</td>
<td>15.7</td>
<td>17.1</td>
<td>35.6</td>
</tr>
<tr>
<td>Matecalfe</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Ann</td>
<td>24.6</td>
<td>25.8</td>
<td>36.3</td>
<td>39.6</td>
</tr>
<tr>
<td>Trelawny</td>
<td>25.3</td>
<td>27.0</td>
<td>27.1</td>
<td></td>
</tr>
<tr>
<td>St. James</td>
<td>22.0</td>
<td>25.5</td>
<td>26.9</td>
<td></td>
</tr>
<tr>
<td>Hanover</td>
<td>21.8</td>
<td>21.6</td>
<td>23.5</td>
<td></td>
</tr>
<tr>
<td>Westmoreland</td>
<td>19.6</td>
<td>24.6</td>
<td>33.8</td>
<td>40.8</td>
</tr>
<tr>
<td>St. Elizabeth</td>
<td>18.4</td>
<td>25.1</td>
<td>37.8</td>
<td>45.2</td>
</tr>
<tr>
<td>Manchester</td>
<td>19.3</td>
<td>22.1</td>
<td>32.7</td>
<td>38.9</td>
</tr>
<tr>
<td>Clarendon</td>
<td>16.2</td>
<td>17.4</td>
<td>24.7</td>
<td>42.8</td>
</tr>
<tr>
<td>Vere</td>
<td>8.0</td>
<td>8.5</td>
<td>10.1</td>
<td></td>
</tr>
<tr>
<td>St. Catherine</td>
<td>7.5</td>
<td>12.8</td>
<td>12.7</td>
<td></td>
</tr>
<tr>
<td>St. John</td>
<td>6.0</td>
<td>8.2</td>
<td>9.3</td>
<td></td>
</tr>
<tr>
<td>St. Dorothy</td>
<td>5.1</td>
<td>5.3</td>
<td>5.4</td>
<td></td>
</tr>
<tr>
<td>St. Thomas in the Vale</td>
<td>10.8</td>
<td>15.7</td>
<td>19.0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>302.6</td>
<td>377.4</td>
<td>441.3</td>
<td>506.2</td>
</tr>
</tbody>
</table>

*slaves only

The estimate of total population for 1834 is 371.0.

(Roberts 1957:51;
Ifill 1964:85;
Eisner 1966:127, 182)
### Table 2

**Population Growth in Jamaican Parishes 1881-1960**

<table>
<thead>
<tr>
<th>Parish</th>
<th>1881</th>
<th>1891</th>
<th>1911</th>
<th>1921</th>
<th>1943</th>
<th>1960</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kingston</td>
<td>38.6</td>
<td>48.5</td>
<td>59.7</td>
<td>63.7</td>
<td>110.1</td>
<td>123.4</td>
</tr>
<tr>
<td>St. Andrew</td>
<td>35.0</td>
<td>37.9</td>
<td>52.8</td>
<td>54.6</td>
<td>128.2</td>
<td>296.0</td>
</tr>
<tr>
<td>St. Thomas</td>
<td>33.9</td>
<td>32.2</td>
<td>39.3</td>
<td>42.5</td>
<td>60.7</td>
<td>68.7</td>
</tr>
<tr>
<td>Portland</td>
<td>28.9</td>
<td>32.0</td>
<td>49.4</td>
<td>49.0</td>
<td>60.7</td>
<td>64.5</td>
</tr>
<tr>
<td>St. Mary</td>
<td>39.7</td>
<td>42.7</td>
<td>73.0</td>
<td>71.4</td>
<td>90.9</td>
<td>94.2</td>
</tr>
<tr>
<td>St. Ann</td>
<td>46.6</td>
<td>54.1</td>
<td>70.6</td>
<td>70.9</td>
<td>96.2</td>
<td>114.4</td>
</tr>
<tr>
<td>Trelawny</td>
<td>32.1</td>
<td>31.0</td>
<td>35.5</td>
<td>34.6</td>
<td>47.5</td>
<td>56.0</td>
</tr>
<tr>
<td>St. James</td>
<td>33.6</td>
<td>35.0</td>
<td>41.4</td>
<td>41.9</td>
<td>63.5</td>
<td>83.0</td>
</tr>
<tr>
<td>Hanover</td>
<td>29.6</td>
<td>32.1</td>
<td>37.4</td>
<td>38.1</td>
<td>51.7</td>
<td>53.9</td>
</tr>
<tr>
<td>Westmoreland</td>
<td>49.0</td>
<td>53.4</td>
<td>66.4</td>
<td>68.9</td>
<td>90.1</td>
<td>109.6</td>
</tr>
<tr>
<td>St. Elizabeth</td>
<td>54.4</td>
<td>62.3</td>
<td>78.7</td>
<td>79.3</td>
<td>100.2</td>
<td>116.7</td>
</tr>
<tr>
<td>Manchester</td>
<td>48.5</td>
<td>55.5</td>
<td>65.2</td>
<td>63.9</td>
<td>92.8</td>
<td>111.8</td>
</tr>
<tr>
<td>Clarendon</td>
<td>49.8</td>
<td>57.1</td>
<td>73.9</td>
<td>82.6</td>
<td>123.5</td>
<td>164.0</td>
</tr>
<tr>
<td>St. Catherine</td>
<td>61.1</td>
<td>65.5</td>
<td>88.1</td>
<td>96.6</td>
<td>121.0</td>
<td>154.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>580.8</td>
<td>639.5</td>
<td>831.4</td>
<td>858.1</td>
<td>1237.1</td>
<td>1609.8</td>
</tr>
</tbody>
</table>

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Palmer explains that the increase in population has aggravated poverty in the rural areas and quickened the flow of rural people to urban areas where unemployment is increasing (1968:4). There are no indications that the Jamaican population explosion, supported by a food deficit national economy, is flagging.

Radiation of peasant communities into the Jamaican rural area began at emancipation (1834-1838) and continued until ecological saturation was attained about 1911, when (Cumper 1956:275) all available land had been settled. Relief by fission of the peasant community was no longer possible. Population growth has continued. According to the theory there are three alternatives: 1) expansion of the carrying capacity, 2) migration, and 3) malnutrition and starvation. There are no data concerning the last possibility. The alternative of migration, either to the plantations or the urban centers or off the island, has occurred.

There are no specific data on migration from the peasant sector. But it may be reflected in the migration statistics for Jamaica as a whole. From 1881 to 1890, net departures totaled 23,791; these emigrants were mainly attracted to work on the Panama canal (Eisner 1966:149). Between 1891 and 1910, net departures were 43,438, with the Panama canal project and banana estates in Costa Rica as the destination of most of these emigrants. The sugar
industry boom in Cuba attracted most of the 77,071 emigrants between 1911 and 1920 (Eisner 1966:150). Net migration to the United Kingdom between 1939 and 1950 included 2,300 people and between 1953 and 1962 rose to 162,000 people (Palmer 1968:5). The labor force increased at an average annual rate of about 4% between 1943 and 1950, but the inability of the Jamaican economy to expand fast enough to prevent unemployment from rising spurred the large scale migration to the United Kingdom in the 1950's (Palmer 1968:4). More than a third of these migrants were skilled workers. The British Commonwealth Act of 1962 restricted the net emigration to the United Kingdom to 15,000 between 1963 and 1965, and this contributed to the rate of population increase in Jamaica.

For the first alternative, expansion of the carrying capacity, inquiry must turn to the ethnographic data in order to identify population pressure and its ramifications.
STRUCTURAL CHANGE IN JAMAICAN PEASANT COMMUNITIES

There exist two attempts to define structurally directional culture change in Jamaican peasant communities. Clarke presents a model of culture change from which Otterbein derives another. Both Clarke and Otterbein are concerned with structural changes that result from population pressure; however, neither explicitly recognizes an inherent population dynamic or in any other way seeks to explain the population expansion.

Clarke selected contrasting research centers: Moca, a peasant community; Sugar Town, a proletariat community dependent on a sugar factory; and a middle class farming community (1966). However, instead of comparing variables in the disparate community environments, Clarke's goal is to abstract characteristics of family organization common to all Jamaica. Clarke's model is of value in guiding further inquiry into the cyclical and generational processes of the redistribution of productive resources in Jamaican peasant communities.

In her inquiry into productive arrangements, Clarke identifies three types of land; family land, bought land, and rented land. Family land was acquired before or at emancipation by ancestors who left the land to all future children to be used by them as a group. This had the effect
of establishing descent groups whose membership is bilaterally reckoned as in the case of ramages. However, a ramage is based on primogeniture; individuals are ranked on their position in descent from an ancestor at the apex of the clan. These bilateral descent groups lack this distinction. All members have equal rights of usufruct to the inalienable land. Otterbein (1964), who identifies ramages in Clarke's discussion, fails to note the difference between a bilateral descent group and a ramage. This conceptual equivocation has led Otterbein to a consideration of spurious data in his analysis of directional culture change in Jamaica. However, Otterbein correctly identifies the primary purpose of either a bilateral descent group or ramage as a corporate land holding kin group.

To continue with Clarke's model of culture change, parcels of land acquired at emancipation were usually quite small, a few acres or so, and with generations of use fertility has greatly declined. Thus, occupation or use by some kin group members is impossible or unattractive. Although joint inheritance of inalienable land is acknowledged, the right of individual use is practiced. Nonresident kin may be sent coconuts or bread fruit or other food stuffs when they are harvested, as a token recognition of their offsprings' perpetual right to use of the land. As an ideal, the right to use is not lost by nonexercise. However, it is very rare for a second generation nonresident kinsman
to attempt to reclaim right of use. Only under acute duress of unsure employment, aggravated by population pressure, would such a nonresident kinsman seek to validate the use of family land. In such a case, this potential source of security is often a delusion, since the resident kinsmen, themselves under the pressure of overpopulation in the rural area, will rarely recognize his right of use. Under the press of overpopulation in relation to limited productive resources, the exclusion of one or another line of descent is a perpetual source of family disputes.

Bought land is not subject to the restrictions of joint inheritance of the right of use. The purchaser is free to dispose of the land by sale, gift, or will. A child who has given special care to an aged parent may alone inherit bought land. However, parents often comply with the expectations of inheritance of equal rights of use by all the children, and bought land acquires in the second or third generation the characteristics of family land. This has the effect of starting a new bilateral descent group. To liquidate a debt, a family member may be allowed to sell a piece of this secondarily derived family land; however, he and his heirs relinquish all further rights to the land.

The legal code of Jamaica conflicts with the traditional system of usufruct. Without title or conveyance, legal ownership of land may be established by undisputed possession. 

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for twelve years. Further, the law recognizes the eldest legitimate son as the rightful heir (Clarke 1966:38-39). The traditional process for the redistribution of rights to land use has operated in most cases through the expectation of the people involved, without land titles or certified wills. Increasingly, the younger generation may attempt to enforce the legal code. Disputes are common within a kin group whose members fear that those members who are allowed exclusive right of usage may try to convert this through twelve years of residence to the legal right of ownership. These disputes are often temporarily mollified by allowing a family member to lease the land and collect the rent. A source of income is generated to prevent the alienation of the land by nonpayment of taxes, and the members who are receiving the balance of this income are prevented from establishing legal ownership of the land.

The fortuitous means of paring off lines of descent are augmented in some communities by establishing inheritance "by the name" or "through the blood" (Clarke 1966:62). Rules of inheritance "by the name" include all of a man's children regardless of who the mother may be. Inheritance "through the blood" includes all of a woman's children regardless of their paternity. In the case of patrilineal descent, the spouse is in no circumstances the man's heir. If he has no children, the land will pass to his sisters.
and brothers and brothers' descendants, although a spouse has the right to live in a family house on family land until her death. Conversely, in the case of matrilineal inheritance, the woman's children jointly inherit land to which their father (or fathers) and their mother's brothers' descendants have no claim.

A common characteristic with the variations of land inheritance presented by Clarke is the association of kinship solidarity with brittle conjugal unions. Except among the ancestors who acquired land at emancipation and when new kin groups are founded by newly established family land, conjugal unions do not affect inheritance. The spouses both retain their various land interests. If a conjugal union is dissolved, as they often are, there is rarely the problem of dividing land owned jointly by the conjugal pair.

From Clarke's discussion, Otterbein identifies change from bilateral descent groups to ambilineal descent groups (it has already been explained why these descent groups are not rammages, as Otterbein proposes). In ambilocal residence a couple will choose to live with the kin group that holds the most land, and this decision may or may not be reversible. Otterbein assumes that ambilocal residence is identical with ambilineal descent. In such a case, some individuals of the descent group are related through their mother and some through their father, but not both
(Otterbein 1964:30-31). However, this is not revealed in Clarke's discussion. The conjugal pair do not seek filiation with either the man's or woman's family. Regardless of his conjugal state, each person as an individual retains his various land interests according to the pattern presented by Clarke.

Clarke does not use residence as an index of descent, as does Otterbein. On the contrary, she notes pressures that distribute parents and offspring in several households. If a man allows a spouse to bring children of a previous union to the home, he is legally responsible for the support of these children while they are under age. Consequently, the woman's previous children, often born while she is still residing with her family of orientation, are usually cared for by a maternal relative. Also, a woman will seldom allow the presence of the man's previous children as she is fearful of the financial drain in the perpetuation of the man's previous relationships. However, if the current union is childless, previous children may be cherished. Due to these several factors, children who grow up as siblings may have many different sources of inheritance.

In summary, Clarke identifies the change from a bilateral descent group to a unilineal descent group as the result of overpopulation. In some instances, matrilineages become the corporate land holding unit; in others, patrilineages. Clarke notes that brittle conjugal
unions are associated with strong kinship relations, an important distinction that Otterbein fails to consider. It is also evident from Clarke's data that a conjugal union does not call for a reorganization in the control of productive resources. However, Clarke does not consider the factors which contribute to the brittle conjugal union nor the concomitant emphasis on kinship solidarity, as her interest is a description of structural change.

Clarke focuses on changes in the redistribution of the resources of production—land—in relation to social organization. These variables are necessary for a delineation of the ecosystem of the particular peasant communities. Also, these techno-environmental and techno-economic variables provide an index of changes caused by population pressure. However, the distinctions in the ecological adaptations in her different research centers are never considered, as Clarke's purpose is to abstract patterns of social organization common to all Jamaica. It will later be evident that considerable disparities from her model in peasant communities which were not included in her research brings into question the attainment of her goal.

Clarke arrives at her model of culture change through an empirical, inductive methodology. In the manner of post factum generalizations, Clarke extracts common characteristics of structural organization in her three research
centers. She then projects this model to represent all of Jamaica.

In contrast, a major goal of this inquiry is the promotion of an ecological approach and a deductive methodology. The search for pervading cultural commonalities is not the concern. Rather, emphasis is on identifying population pressure and the adaptive strategies that arise to ameliorate it in a particular type of socio-cultural system, the peasant community. It is recognized that the structures that fulfill requisite functions may differ in specific peasant communities. Inquiry is guided by the theory that human population size is not responsive to the carrying capacity of the supportive socio-cultural systems. In the next sections, the presence of an inherent population growth and its ramifications are empirically explored in four Jamaican peasant communities.
EDITH CLARKE ON MOCA

The next two sections of this paper concern the insight that can be derived from Clarke's data on the changing pattern of redistribution of productive resources in a peasant community and a former peasant community.² Both Moca and Sugar Town have a community history reaching back to emancipation, and the initial ideal of family land supporting a bilateral kin group can be assumed.

Moca is a peasant community of 412 people organized into 119 households (Clarke 1966:22). The problem of overpopulation is acute, and poverty is extreme. Saturation of the carrying capacity of the socio-cultural system is apparent.

The households are in one or two room wattle and thatch houses on family land. Land holdings are under five acres, and there is no source of additional land in the community. To add to their resources, some people are able to rent land which may be many miles away from Moca or seek sporadic day labor on surrounding large properties. Also, fishing and herding cattle on waste lands add to subsistence (Clarke 1953:84).

The community is highly endogamous. Everyone is related except for one or two people who have moved into the community and are still referred to as strangers.
Also, Clarke reports that "only a few of the younger folks move out" (1966:25). So, most individuals produced by the socio-cultural group are incorporated as adults into the peasant community.

Descent and inheritance of the right to use family land is "by the name," patrilineal. All of a man's children by any woman jointly inherit the use of family land. A child, even when illegitimate, inherits from its father and never from its mother, regardless of residence. The family land just carries these large patrilineal kin groups who cling together for mutual support. To sanction the corporateness of the kin group, a stress is placed on the maintenance of conjugal unions and on the fulfillment of parental, conjugal, and kinship responsibilities. However, there is no emphasis on Christian marriage as most people lack the economic security felt necessary. Only 35% of the couples are married (Clarke 1966:90). The causal factors involved in these phenomena cannot be outlined here. Central to this inquiry, it is evident that the peasant community of Moca experiences population pressure and has manifested a strategy to cope with it.

Moca is close to the ideal closed socio-cultural system of the corporate peasant community. There are apparently no extensive opportunities for wage labor or land acquisition to disrupt the limited amount of productive resources. A balance in the distribution of the fixed productive resources.
must be re-established for each generation to accommodate the maximum number of people at the mutual sacrifice of the extreme poverty level of subsistence. Careful redistribution of the land, also depreciating through overuse, is essential for survival, and managerial roles in this process are fulfilled by men.

Rather than a cyclical process of cultural replication, Clarke endorses the assumption that in Moca the build-up of population pressure and the exhaustion of the fertility of the land rendered the ideal of mutual subsistence for bilateral kinsmen no subsistence at all. Burdened beyond its carrying capacity, the socio-cultural system of Moca has been adaptively switched from bilateral kin groups to patrilineages as the land holding unit in order to gain some relief from overtaxed resources. In other words, an individual no longer has such diffuse claims to family land as results from bilateral kin group organization. However, the continuing decrease in the productivity of the land and the continuing increase in population size have eroded this initial relief.

The assumption continues that there has been in the nature of directional culture change a strain to expand the efficiency of the carrying capacity of the socio-cultural system at the cost of depreciating the level of subsistence. Clarke gives no indication of why the poverty level of subsistence offered in the community is more attractive to the
inhabitants than wage work opportunities outside the community. In reference to minimax, it is evident that the decision has been made to maximize population density in order to minimize some unspecified variables. Included, perhaps, is anxiety associated with geographic and cultural distance of wage labor opportunities. Statements which explain the causal relationships among variables that determine the nature of directional culture change must await more sensitive research into the peasant adaptation in Jamaica.
EDITH CLARKE ON SUGAR TOWN

In Moca, the carrying capacity has been stretched by internal reorganization of the ecological adaptation. By way of contrast, Sugar Town is an example of a former peasant community that has been transformed by the establishment of a sugar factory. In original form Sugar Town was similar to Moca (Clarke 1953: 84). The population, now a proletariat dependent on the sugar factory, has expanded beyond the limit that could be supported by Sugar Town as a peasant community. The 1,191 inhabitants are organized into 433 households. A seasonal influx of laborers, 170 men and women, and those who come in daily from other villages to their jobs, 315, change the complexion of the community for the seven month cane season (Clarke 1966:22). The earnings of the members of the community employed by the sugar factory fluctuate from relatively high to subsistence level during the off months of the year. Members of the old families of the remnant peasant community will not work for the sugar factory but seek a living as tradesmen, barbers, butchers, tailors, or landlords (Clarke 1953:84).

There is a scarcity of housing. Some households are in estate barracks, consisting of one room units with outside kitchens, and others in one and two room wattle and
thatch shacks on family land. In Sugar Town, family land is extensively devoted to houses built to accommodate family members and to rent to migrants. Except for small yard gardens, family land has no agricultural value.

There is no land to buy in Sugar Town, and family land, more often than not, is controlled and occupied by women. Inheritance is "through the blood" and includes all of a woman's children regardless of their paternity.

Clarke reports that among the laborers of Sugar Town there is a tendency to feel impotent in the face of forces beyond the individual's control. Increasingly, there are fewer jobs than men seeking employment. Clarke notes the association of economic insecurity and a relatively low rate of marriage, 26% of the couples (1966:90). As was the case with data on Moca, causation among the variables of domestic organization cannot be delineated here. However, adaptive strategies on the part of individuals faced with economic insecurity appear to play a part in the following examples.

Temporary, quasi-conjugal relations may arise due to a woman's insecure economic position; it is impossible for a single woman to keep herself and her children on her earnings. Frequently, during the seven months of mass employment, she may enter into a temporary housekeeping relationship with a male laborer, a local man or a migrant. The man does not allow the woman to have her children in the household or to send money to them from the allowance.
he gives her to run the household. However, the woman does benefit by receiving her own living expenses and usually furtively sends household money to the maternal relative who is caring for her children. Also, the woman, relieved from taking care of her children, is able to undertake employment in the sugar factory. This fortuitous union will usually break up if the woman becomes pregnant, or it may lead to a common-law union if the husband gains regular employment.

Also, a woman with her own home may have a spouse who is nonresident. She may send meals to his home or place of work and wash his clothes in exchange for financial aid. The woman can terminate this relationship at will and easily re-establish it with another man. This nonresident relationship is attractive to a man without house or a bit of land which are considered valuable assets in the equal partnership of a common-law union and essential for the higher status of marriage.

Such examples as the above underscore the need for research into the relationships between domestic organization and the allocation of managerial roles in productive arrangements.

Because of the existence of family land, generally controlled by women and inherited matrilineally, Sugar Town represents a socio-cultural system in which the distribution of productive resources is to some degree internally
controlled. The population is predominantly, but not exclusively, a proletariat. The only productive resources held by members of the old families of the core community are the exhausted plots of family land crowded with house sites. Most of the land is owned by the sugar company. The opportunities for wage labor associated with the increasing economic dominance of the sugar company have almost dissolved the integrity of the community. The managerial roles in the generational redistribution of land have greatly diminished in importance for the community's survival and have been given over to women. The major source of subsistence is seasonal wage work for the sugar company, and there exist no rights of job security which can be deeded to children.

There has been an encroachment by the larger extra-island industrial society upon the ecological zone of Jamaican peasant communities. Sugar Town is an example of the superimposition of a new industrial community upon a peasant village. While for the most part not joining the proletariat, the members of the old families of Sugar Town maximize the opportunities of their situation by renting house space to laborers and by becoming specialists supported by the laborers.

Thus, Sugar Town and Moca represent contrasting changes due to overpopulation. As Clarke assumes, both communities were established before or at emancipation and were
Initially organized on the ideal of the bilateral kin group as the corporate land holding unit. Both communities experienced population pressure, but their historical circumstances were different.

The autonomy of the ecological adaptation of Sugar Town has been eroded by the presence of the sugar factory. The process involved is one of an increasing reliance on wage labor opportunities provided by the sugar factory until, over time, the population size has expanded beyond the carrying capacity of the former ecological adaptation of the peasant community. Both internal population growth and migration to the community contribute to population pressure in relation to the new economic niche of Sugar Town. The sugar company effectively controls productive resources, and matrilineages, replacing bilateral kin groups, fulfill predominantly child rearing functions.

In contrast, the productive resources of Moca have not been overwhelmed by a more expansive socio-cultural system, and only internal changes have resulted from a population overburden. In Moca, bilateral kin groups have changed to patrilineages, and the control of productive resources has remained an essential function of the corporate kin group.

From Clarke's data, population pressure and its consequences have been identified in two Jamaican peasant communities. In the following sections, two other peasant
communities will be considered. However, neither the bilateral corporate kin group which Clarke identifies as common in the initial organization in Jamaican peasant communities nor the later changes to patrilineal or matrilineal corporate, land holding kin groups appears in these next examples. To reiterate, the structural organization in Jamaican peasant communities is a matter to be researched in reference to the ecological adaptation of each socio-cultural system.
Rocky Roads is a village in the central mountains of Jamaica. A population of 277 people in 57 households is included in the one and a half mile diameter area of the community (Cohen 1955:123; Cohen 1956:667). As peasant farmers of mixed crops, the inhabitants are dependent on a weekly cash market about ten miles away.

Individual competition is the hallmark of the economic activity in the community. In marked contrast to the two peasant communities previously considered here, there is no corporate kin group which owns land and which oversees the individual's right of lifelong use without the right to alienate the land. Although 80% of the families are related (Cohen 1955:128), there is no ideal pattern of economic cooperation among kin. The individual's highly competitive goal is the amassing of money and land. Although Cohen estimates that 80% of the population is existing above a subsistence level and only 3% of the adults are indigent (Cohen 1955:123), there is a high level of anxiety over economic welfare.

An individual feels himself stymied in his goal of land acquisition by wealthy persons of the community who will not release their large aggregates of land. One widow with no dependents owns 200 acres which were accumulated by default.
of payment at the local general store. Another man with one dependent owns 40 acres (Cohen 1955:125). As their only recourse, jealous neighbors may use sorcery to cause sickness or crop failure which will be an economic drain on the wealthy landowner who may, in such a case, be forced to sell some of his holdings in order to meet medical and/or subsistence costs.

One individual's acquisition of land, of which there is never enough for the demand, has a seesaw effect on the economic position of other members of the community. Due to the fixed amount of land, one individual's prosperity can only be at the risk of the economic welfare of the rest of the community.

Both Wolf (1957) and Foster (1965) have noted the limited economic base of corporate peasant communities. In contrast to the Mexican and Central American ethnographic examples examined by Wolf and Foster, in Rocky Roads there is no mechanism of community censure to compel individuals to rent or sell land, nor are there religious associations to level the economic standing of community members by converting excess wealth into prestige.

Perhaps Rocky Roads does not have economic leveling mechanisms because there is another adaptive solution. Again, minimax serves to focus inquiry. It is not essential to maximize the population carrying capacity as individuals rejected from the community are able to find a livelihood.
outside of the community. Being economically squeezed out of Rocky Roads is not fatal to the individual. The elimination of population involves a generational process of economically displacing specific categories of people. This process is best viewed in relation to family organization and inheritance of land.

Marriage grants full adult status to the couple but does not unite the households of orientation. The ideal family type is the nuclear family composed of the married couple and their children. There are 11 such families in Rocky Roads, and in these cases family interrelationships are clear. The man is the head of the household; the mother is in an intermediary position between him and the children. The father provides food for the family and frequently grants a small weekly allowance to the wife or gives money to her piecemeal for specific expenditures; however, if the wife earns enough, she must provide the household budget.

Paternal authority is reflected in the three types of land. The first type is land which the husband inherited from his parents or purchased before marriage. This land is his exclusive property which his wife never cultivates. The second type is land which the wife received from her parents or purchased before marriage. She may not sell or dispose of this land without her husband's consent, and the husband may not sell the produce from this land without the wife's consent. The third type of land is that bought after
marriage. This land is nominally jointly owned, but the husband after providing for the family sells the produce which he has cultivated from both the first and third types of land. The wife cultivates pieces of the second and third types of land not used by the husband and is free to sell the produce.

There is a great deal of secrecy and competition between spouses concerning cash income. Husbands and wives competitively sell land to each other and pilfer money from each other, although this is defined as stealing and condemned.

As children prepare to become adult members of the community, girls learn household chores, and at age ten boys are taken with their fathers to the field where they imitate fieldwork. At age fourteen a boy is given a portion of land to cultivate which corresponds roughly to the amount he will inherit. The boy owns what his land produces but must contribute a third to a half of his income toward the cost of food. He thereby gains some measure of autonomy. Mature daughters are allowed to retain all of their wages but remain under parental authority until marriage.

In about 75% of the families, the wife survives her husband (Cohen 1956:676). Upon the death of the husband, the widow inherits all of the land which her sons work for her. Upon her death the land is ideally equally distributed to all of the legitimate children. However, sons receive larger shares than daughters and poorer sons or favorite
sons receive larger shares than other sons. No will is contested although there is an awareness that wills not witnessed or certified, as is usually the case, are not binding in a court of law.

The phenomenon of illegitimacy, children born outside an established family of procreation, complicates the ideal pattern of land transmission. A little more than 62% of the annual baptisms are of illegitimate children (Cohen 1956:668). This high rate is related to early sexual familiarity and late age of marriage, which for males usually occurs in the late twenties and early thirties, for females, 22 to 27 (Cohen 1956:668).

Marriage is usually deferred until the man has acquired sufficient land to provide for a family. There is no renting of land in Rocky Roads, and a house can only be built on land that is purchased or inherited. Children from pre-marital liaisons become legitimate if the mother and father later marry. However, a husband rarely allows a wife's previous children to live in his house. Although almost all men voluntarily support their illegitimate children with about a third of the sum needed for subsistence until the child is fourteen (Cohen 1955:135), the care of illegitimate children is usually assigned to the maternal grandparents.

There are 26 three generation families each consisting of a married man and woman, their children and their daughters' illegitimate children (Cohen 1956:670). These
grandchildren are an added economic burden and are a source of friction and resentment between parents and daughters. Cohen explains, "In view of increasing pressure on the land in Jamaica in general and in Rocky Roads in particular, it is not surprising that this resentment is increasing" (1956:669). Some parents insist that unwed daughters seek employment which will enable them to contribute to the support of their illegitimate children. As the girls are only trained for household work and there are rarely more than six such jobs available in Rocky Roads, these girls must leave the community.

There are three categories of inheritance for these illegitimate children. The first category concerns those children whose mothers have married but continue to be cared for by the maternal grandparents. These children inherit directly from the grandparents depending on the extent of the land holdings.

If these grandchildren fail to inherit they are generally forced to leave the community during adolescence to seek employment. Illegitimate males in this category inherit more than do their mothers, but less than their mother's brothers: illegitimate females in this category inherit little, if at all. (Cohen 1956:669)

Illegitimate children, raised by grandparents who die before the children's mother marries, inherit directly from their mother. As women generally inherit less than men, these children inherit relatively little.

If a woman independently owns land, she may bring her
previous illegitimate children with her to the new house-
hold. However, the husband who is not the biological father
of the children will usually refuse to support them after
the age of fourteen. At this time, an illegitimate male
may receive an adequate inheritance, marry, and participate
in the transmission of the culture to the next generation.
If the family's land holdings are not extensive, an ille-
gitimate status will restrict a male's inheritance. He may
then be forced to defer marriage until he can buy land, or
he may leave the community entirely.

There is another category of illegitimate children.
These are the offspring of the matriarchal family consisting
of an unmarried woman, her illegitimate children and her
daughters' illegitimate children. Of the remaining house-
holds in Rocky Roads, 15 consist of individual people (Cohen
1956:667) and five are of the matriarchal type (Cohen 1956:
679). At the age of ten the boys of these families learn
to cultivate from their mother or grandmother, but it is
not essential that they learn these skills as the males of
the second and third generations leave Rocky Roads during
adolescence to seek employment. At the death of the matri-
arch, the family breaks up as the land is inherited by the
daughters who in time become matriarchs of three generation
families. If a daughter is not living, her female offspring
will receive her inheritance.

To summarize the situation in Rocky Roads, land is not
held in perpetuity by a corporate kin group. Rather, land is individually owned and individually inherited. In the process of cultural replication, there is a recurrent core of economically impotent individuals, illegitimate children who inherit little or no land. Many of these individuals are pared off from the community. Cohen suggests that the atomistic modal personality he observes in Rocky Roads serves to reduce the cultural value placed on kinship solidarity; therefore, economically impotent individuals can be expelled from the socio-cultural system without inordinate anxiety.

To support the hypothesis being empirically explored in this inquiry, Cohen indicates that increasing land pressure as a result of increasing population is a factor in the process of directional culture change in Rocky Roads as well as in all Jamaica; however, he presents essentially synchronic data. He centers his concern with land transmission on male heirs and omits a discussion of what role female owned land plays in the selection of marriage partners. He also omits a discussion of what factors lead to the beginning of the culturally marginal matriarchal family - data that would be a very sensitive index of directional culture change. The consequences of a population overburden can be identified from Cohen's synchronic perspective; however, Cohen gives no indication of the directional culture change that led up to the socio-cultural system he describes.
GEORGE E. CUMPER ON PORTER'S MOUNTAIN

Cumper presents an alternate pattern of the generational redistribution of land in a Jamaican peasant community, Porter's Mountain. Cumper "examined superficially" five other districts in the hills of western Jamaica and concludes, "This system of relationships [the one he finds in Porter's Mountain] we may call for convenience the Jamaican peasant system" (1958:92). Below it will be clear that the process of cultural replication presented by Cumper is not in conformity with the previously reviewed data on Jamaican peasant communities. However, Cumper's data do allow a perspective on the consequences of population pressure in one Jamaican peasant community.

From the 1943 census data, Cumper selects and surveys a sample of 127 families. From the sample, Cumper estimates that 60% of the population of Porter's Mountain were in households based on legal marriage, 20% in common-law households, and 20% in households headed by a woman. A negligible proportion of the households were composed of a single man (1958:94). Unfortunately, Cumper gives no indication of the total size of the population.

Continuous subdivision since emancipation has resulted in small farms of ten acres or less. There is very little rented land within the community, and no houses are rented.
Many inhabitants rent land on a large absentee owned property outside of the community. In addition to agriculture, a man may be a part-time specialist employed as a shopkeeper, carpenter, mason, tailor, or butcher. A woman often seeks to supplement the family income by selling produce at a public market.

Migration from the community is high. Cumper compares the sample of families with the general population distribution for the parish of Westmoreland which is itself affected by migration. In relation to the expected population composition, Porter's Mountain has a deficiency of 18% in the age group 10-19, 29% in the age group 30-39, and 20% at older ages (Cumper 1958:84). Many of the people who leave go to Kingston. Also, there is extensive seasonal migration for wage labor on an adjacent sugar estate.

Cumper assumes that Porter's Mountain does not depart too far from a closed and stable community. Thus, from a synchronic slice of statistics on age groups within the community, Cumper constructs a process of cultural replication which he assumes to represent accurately Porter's Mountain for any point in time.

A first child is likely to be born while its mother is still in her parental home. The mother may have had a casual liaison with the father or established a more permanent relationship which leads to a common-law or Christian marriage. Relatively soon after the birth of a
first child, the mother is usually established in her family of procreation. If her spouse will not accept her children from previous unions, these children will usually stay with the mother's parents. Cumper suggests that there may be a process of eliminating the children of broken unions from the community.

She (the mother) may, of course, change her marital partner when passing from the single to the common-law category, from the common-law to the married or from the single to the married; but the low frequency of stepchildren and "adoptions" suggest that the modal situation is one in which the father of the woman's first child becomes her permanent spouse. This is not a conclusive argument, however, since the children of a broken union may pass out of the community. (1958:88-89)

If there is a process for eliminating these children, this would be unique to the peasant communities reviewed here in which only adolescents or adults are expelled. Unfortunately, Cumper gives no information on what this process of eliminating children from the community might be. This example underscores the deficiencies in relying on a statistical survey not elaborated with observation and interviews with the inhabitants of the community.

At age fourteen children finish elementary school. A small minority of boys will go on to a higher education and will probably remove themselves from the socio-cultural system of the peasant community. Some boys become apprentices in a skilled trade, but most continue to work on the family's land.
A man's prerequisites for marriage, or for a common-law union which is often the prelude to marriage, include a house on his own land and ideally a farm of several acres to ensure future economic stability. Land in the community is available through gift or inheritance. If a father gives his son land, however, it will not weaken the father's authority as the gift is not a formal transfer. If the father is unable or unwilling to give the son land, the son may have to wait to establish an independent family until the senescence or death of the father. Even then, "intervening rights of the widow or other kin" (Cohen 1958:89) may prevent the son's effective control of the family's land. Cumper does not mention who these other kin are or what is the nature of their rights to the family's land.

Many young adults leave the community. While she is culturally restrained from doing wage work in the community, a girl in her twenties may migrate, usually to Kingston, for work as a domestic. In his early twenties, a young man seeks to acquire the economic prerequisites for establishing an independent family. He may be granted the use of a piece of his father's land to build a house in which to live alone. Within the community, he may seek wage labor in order to accumulate the cost of Christian marriage and to rent land outside the community. Also, he may leave the community temporarily, usually to work.
on the adjacent sugar estate in crop time, or permanently by migration to another district or to Kingston.

For the young man who remains a part of the socio-cultural system of the community, it is usual for him to support himself by employment outside the community while he remains a member of his parental family. At about age 35 a man will establish his family of procreation but will continue to seek outside wage labor to expand and improve his farm in the community. In his fourties, a man will establish himself as a mature and economically secure member of the community. From this point on, he will work only on his own land holdings. When he retires well into his sixties, his eldest son will be of age to establish his family of procreation.

Due to generally greater longevity, the wife may outlive her husband. In such a case, she may continue in her present household with herself as head, or she may join the household of a married son or daughter.

Which will happen depends at least partly on whether there is a son or male relative available, unmarried and of working age, who can join or remain in the household and make it viable. (Cumper 1958:92)

Thus, it is learned that although a household may be headed by a woman, it cannot be perpetuated without a working mature male. As is evident in this example, the designation of roles according to age and sex in the organization of work affects the composition of domestic units. Certainly
more research is needed into the functions of productive organization fulfilled through systems of kinship and residence in peasant communities. Attention to the ecological adaptation and the redistribution of the control of productive resources in cultural replication can serve as a frame of reference for such inquiry.

For Porter's Mountain, Cumper describes a process of cultural replication in which individuals are spun off while the socio-cultural system of the community is cyclically perpetuated. Cumper assumes that Porter's Mountain is stable and approaches his research in such a way that his data cannot reveal answers to questions of directional culture change within the community. From a statistical survey derived from the 1943 census, Cumper constructs the modal life cycle, perhaps ignoring nonmodal patterns which may point to directional culture change.

Porter's Mountain is not close to the model of a closed, corporate peasant community, as Cumper assumes. It is necessary for almost every male who seeks to become a cultural heir in the community to support himself and his family, in part, for a number of years by temporary migration for wage labor. It is evident that Porter's Mountain is to a great extent dependent on the opportunities for wage labor to support a population which is larger than could be sustained by the land resources of the community. Some balance has been attained between retaining individuals
as members beyond the capacity of the productive resources of the community and a dependence on wage labor as an ancillary means of subsistence. Whether or not the larger industrial society has an accelerating impact on the already less than total economic self-sufficiency of the community cannot be determined from Cumper's data.

Whatever the case, Cumper is not justified in assuming that all peasant communities in Jamaica are internally stable, nor is he justified in assuming that the cyclical cultural replication he identifies in Porter's Mountain is common to all Jamaican peasant communities. It is apparent that the process of cultural replication in Porter's Mountain is not analogous to this process in Moca, Sugar Town, or Rocky Roads. As does Clarke, Cumper identifies a particular type of social organization and uses this to characterize a culture area. However, different structural elements may fulfill different functional requisites in similar socio-cultural systems, peasant communities, in close geographic proximity, even though these socio-cultural systems may be responding to the same problem of overpopulation. The population pressure in relation to the carrying capacity of the ecological adaptation and the industrial penetration into Jamaican peasant communities must be accounted for in any attempt to identify patterns of cyclical and directional culture change.
CONCLUSION

From the data on Jamaica herein explored, an inherent expansion in population size that disregards the limiting factors of the peasant socio-cultural systems is evident. Also, there exist ethnographic accounts of adaptive strategies to cope with a population overburden in four peasant communities. The structural organization in the different peasant communities is dissimilar, but discloses the common function of ameliorating an over-taxed carrying capacity of the socio-cultural system.

With respect to the ethnographic examples, Moca appears to be close to the ideal corporate peasant community in which the limited amount of land held by the community is effectively controlled by members of the community. In Rocky Roads, the process of cultural replication is accompanied by the paring off of economically impotent individuals. Porter's Mountain is an example of economic dependence on the industrial society while retaining control of the primary means of production that support the community. In Sugar Town there is little of the peasant community left. There remain in the community only vestigial managerial roles in the distribution of land, and the population is far above that which could be supported by peasant agriculture. This ordering of these communities suggests
the trend toward greater involvement with wage labor opportunities which allows a greater population to be sustained in the peasant community.

The technology employed in a peasant community and the usual fixed amount of land, the means of production, impose a limit on the productive potential. Thus, within the peasant community, there is a limited economic viability which is allocated through some means of organized social relations. When population size expands beyond the carrying capacity of the socio-cultural system, an adaptive crisis is the result.

To resolve this crisis, the paring off of excess individuals can be accomplished without any directional culture change in the peasant community. The elimination of population may be quite common to socio-cultural systems. In tribal situations or in peasant communities with land for expansion, the process is often accomplished through the budding off of a daughter tribe or peasant community. However, in Jamaica there has been since about 1911 no land for further settlement. Excess population cannot be eliminated through fission of the peasant community. Rather, it appears, the population overburden is eliminated by expelling individuals who take up wage work on a plantation or in an urban center. Also, internal directional culture change may extend the efficiency of the carrying capacity. Lastly, directional culture change toward accommodating
more individuals may occur through symbiosis with the larger industrial society.

An underlying theme in the ethnographic examples is the confrontation of socio-cultural systems, one with a higher level of integration and one with a lower level of integration. Directional culture change in the Jamaican peasant communities may result from economic penetration by the larger, extra-island industrial society. As the influences of the larger society expand, opportunities for wage labor increasingly finger into the peasant communities of Jamaica, and peasant communities enter symbiotic relations with the larger society in order to accommodate excess population.

The generational balance in the allocation of the fixed amount of land is upset with the addition of other sources of subsistence - wage labor - within the peasant community. As a result, the community can accommodate a larger population but no longer autonomously controls the managerial role in the generational redistribution of productive means. The larger industrial society is encroaching on the land resources, capturing a work force in the peasant communities, and absorbing the managerial roles in control of the productive resources. This symbiosis has not been an altogether satisfactory strategy as the Jamaican economy is not expanding rapidly enough to affect rising unemployment, and the situation in terms of adaptation is becoming more critical
with the unflagging population expansion.

It appears that the important factor propelling this directional culture change is population expansion. All of the peasant communities reviewed here experience population pressure, but in none is there reported an attempt at birth control. Further, in none of the communities is sexual access to women the exclusive right of males in a conjugal union. Reproductive resources are not apportioned to those who have gained the productive resources to provide for children. Rather, conditions favorable to overpopulation are perpetuated and culturally sanctioned. There is no evidence of effective population control in relation to the supportive socio-cultural systems. Even the strategies reviewed here - the exportation of excess individuals, internal reorganization toward greater efficiency of the carrying capacity, and symbiotic reliance on the industrial society for wage labor opportunities - are only stopgap measures. It appears that an inherent population dynamic is functioning to erode the adaptive reprieve gained by such changes.

One source of the perpetuation of overpopulation in peasant communities might be, in fact, an adaptive strategy on the part of the individual peasant. With little expectation of ever acquiring access to substantial means of production, the peasant may view human labor as his primary resource with which to devise a subsistence. Therefore, in
order to increase the size of the work force he controls, the peasant may desire to have many children. In such a case, individual adaptive strategies conflict with those efficacious to the socio-cultural system as a whole. Certainly, the different perspectives of individual viability and that of the socio-cultural system contribute to more sensitive research on cultural adaptation in relation to population change.

Due to the small amount of data available, this inquiry into limited membership in Jamaican peasant communities cannot conclude with the establishment of a principle of cultural adaptation in relation to population change. To underscore other limitations of this inquiry, attention has not been directed to the causal relationships among variables that affect structural organization and its alteration in Jamaican peasant communities under the press of a population overburden. To further emphasize the exploratory nature of this inquiry, hypotheses concerning the variables that determine the degree of population overburden that will be tolerated within any socio-cultural group before directional culture change occurs are not encompassed in this inquiry. Certainly, the relationship between food supply and human population size is complex, and variables such as cultural values and physiological changes intervene in this relationship. Cultural values in relation to the range of alternatives condition the
degree of deprivation and the level of anxiety that will be tolerable. Resulting from population pressure, physiological changes which affect behavior and the occurrence of foetal casualties must also be considered. At this level of inquiry, the adaptation of human populations to population pressure becomes a problem for interdisciplinary cooperation. These issues must be left for future research directed to these problems.
NOTES

It is necessary to interject here that this inquiry does not dwell on equivocation concerning the concept of peasant, its development or its different references. "Peasant" is a general term utilized to signify a type of socio-cultural group that employs neolithic technology and exercises effective control of productive resources (Wolf 1966). The peasant community is dependent upon an urban center which influences the demands placed upon the peasant and the opportunities available to him. Yet, the locus of adaptation is still within the peasant community.

The third of Clarke's communities, a middle class farming community, is of recent origin. This third community has never been a peasant community, and, therefore, will not be considered here. However, it should be noted that this third community deviates the most from the overall pattern presented by Clarke. There is no indication of the importance of family land or of the existence of extended kin groups that corporately hold land. The radical disparity from Clarke's model in this third center underscores the limitations of Clarke's inductive methodology and her goal of outlining patterns common to Jamaica as a culture area.
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