Development and Changes in Population Distribution in the Out Island Bahamas

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RÉSUMÉ

Un certain nombre de théories en cours tentent d'expliquer les migrations humaines dans les îles de Bahamas. Les auteurs procèdent à une vérification de ces théories en se basant sur des recherches faites dans plusieurs communautés ayant subi différemment l'influence du développement économique.

Anthropologist for some time have asserted that sociocultural systems are adapted to their environments (Radcliffe-Brown 1964:ix)[1]. If this assertion is true,[2] specific types of changes in the behavior of the individuals composing a system under analysis should follow specific types of environmental modifications. Population distributions at times may be used as behavioral indices to check premises of adaptation. This is so because: (1) environments include situations which may be exploited by the individual actors confronting them; and (2) the exploitive situations are located in space, and individuals (or in sum, populations) will often locate themselves in relationship to them. It follows that if *perceived* exploitive opportunities shift spatially from "time 1" to "time 2", it is highly likely that certain categories of the

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[2] Conceptions of environment have changed greatly since Radcliffe-Brown's day and now include competitors (Barth 1956:179-189), technology (Ogburn 1956:3-9) and other factors external to and affecting a unit of observation (Rodgers 1969:1-13).

individuals composing the population distribution of a system will shift as well.

Herein an attempt has been made to test hypotheses exploring the relationships between environmental modifications (related to economic development) and changes in population distributions by employing ethnographic data collected in the Out Island Bahamas. In this instance the hypotheses have been derived from Abaconian folk theories, though it is probable that they could have been generated from economic or demographic theory as well.

THE UNEXPOSED COMMUNITY

Crossing Rocks is a small coastal village located on the island of Great Abaco in the Out Island Bahamas.[3] In 1964 the village was composed of some twenty-five households and one hundred and nineteen individuals. The village was isolated from other Abaconian settlements by the absence of roads and the presence of rough waters. Subsistence was supplied by slash and burn farming and by fishing. Three type of fishing were common: (1) subsistence fishing by young boys and old men on the reefs outlying the village; (2) crawfishing by approximately half of the mature men of the village, on expeditions to the Little Bahama bank, for sale to passing crawfish traders; and (3) smack fishing by most of the other mature males of the community, in the waters of the northern Bahamas, the fish being marketed in the capital, Nassau, N. P. Food was primarily supplied by subsistence farming and by subsistence fishing, while the cash derived from the crawfishing and smackfishing was allocated for the purchase of goods such as: rice, flour, kerosene, building materials, simple tools and machinery, etc. that could not be manufactured or produced in the home environment. In general, because of subsistence production, the cost of living was quite low in Crossing Rocks, but in the absence of wage labor alternatives, it was impossible for individuals of the village to

[3] Crossing Rocks as well as the other two community units of observation (Murphy Town and Dundas Town) previously have been more completely described (Rodgers 1965).

accumulate much wealth in cash or material goods. These facts tend to aid the explanation of the Crossing Rocks population distribution (see Table 1), which was characterized by: (1) an overall male sex imbalance, (2) a relatively high proportion of children under sixteen years of age, and (3) a relatively low proportion of young and middle-aged adults.

TABLE 1

Population Distribution of the Unexposed Community

Age Groups	M	F
0–5	17	15
6–10	18	5
11–15	7	8
16–20	3	1
21–25	2	4
26–30	4	5
31–35	1	2
36–40	3	1
41–50	6	4
51–60	2	2
61+	4	5

When queried about the population distribution, Crossing Rocks villagers would consistently reply with a set of shared folk explanations which seemed quite plausible.

Surplus of Children

In answer to why there were so many children in their community, Crossing Rock villagers asserted that in addition to their own children, other village children, the products of dissolved marital and consensual unions, were from Nassau. Later analysis of household censuses and genealogies indicated that many of the children of Crossing Rocks were the offspring of absent sons, daughters, and siblings of the villagers and that most of these

immigrant children resided with their maternal grandparents. When queried about the male sex imbalance that characterized the population distribution of the community, the villagers asserted that this too was due to the immigration of children from the capital for: (1) the in-migration favored young males over young females, and (2) most of the over-all sex imbalance was caused by the predominance of young males under fifteen years of age. In checking the latter assertion against the population distribution (Table 1) it was noted that if only individuals over fifteen years of age were considered, Crossing Rocks did indeed have a balanced sex ratio. When asked why the in-migration favored young males, the villagers asserted that if young males were left unattended by working mothers in the capital, they would "get into trouble." For this reason they were sent to the Out Islands where they could be supervised. On the other hand they stated it was a common Bahamian belief that little girls should be brought up by their mothers whenever it was possible, and hence were less often sent away by their mothers. These practices, the villagers asserted, accounted for the surplus of young males in Crossing Rocks. (Later interviews in Nassau with the mothers of some of the immigrant children indicated that they shared the same beliefs and acted upon them when deciding which children to send back to the village.) The villagers were further queried regarding why there should be *so many* children from Nassau in the village. They replied that the primary reason was that it was cheaper to "bring up" children in the Out Islands as most of their food came from the "land and the sea", while in Nassau it takes "money to raise a child".

Deficit of Young and Middle-aged Adults

The villagers were also asked about the relatively small number of young and middle-aged adults in the Crossing Rocks population. They asserted that this was because many individuals in these age groups had migrated to Nassau. When asked if this migration was a new trend, they replied that as long as they could remember young people had always migrated from Crossing Rocks. A check of the collected genealogies revealed that *almost every adult* in the community (regardless of age) had one or

more siblings who, although born in the community, presently lived elsewhere in the Bahamas. Informants further asserted that more people *from* Crossing Rocks were living *away* from the community *than in it.* This strongly suggests, though exact data are not available, that Crossing Rocks has had a high emigration rate for at least the last fifty years.[4] When questioned about the reasons for this emigration, villagers uniformly replied that the emigrants left seeking jobs. They further asserted that most individuals had left Crossing Rocks because "they weren't owning anything" and because they wanted "to get ahead" (to accumulate money and goods). As they believed that jobs and wage labor were a necessary condition for "getting ahead" and as wage labor was absent in Crossing Rocks if one wished to be "successful" (to accumulate "things"), it was necessary to leave Crossing Rocks. When asked why they too had not emigrated, individual villagers would reply that they did not like the capital, that it was too difficult to bring up children there, that life was too expensive there, or that somebody had to stay home and care for the parents and the old people. They further believed that in many ways the Out Island way of life was better and that if wage labor jobs were available, few people would emigrate from the community.

As it is often the case that when men emigrate for work, the communities from which they migrate are characterized by female sex imbalances (Smith 1962:24, Solien 1959:244), it was asked why this was not so for Crossing Rocks. Informants replied that many men married before emigrating and took their families with them; this they believed accounted for the balanced sex-ratio for the population over fifteen year of age. A check against the genealogies and household censuses revealed that almost all young marriageable females were married before they emigrated. It was also learned that few emigrants returned to Crossing Rocks (only one such case was recorded for a ten year period),[5] although, as

[4] Other research (Sharer 1955: 43-49) indicates that Great Abaco has had high emigration rates for at least eighty years preceding the initiation of economic development in the late 1950s.

[5] On the other hand, many of the adult males in Crossing Rocks have worked in the capital for short periods of time although they considered themselves "citizens" of the village and did not move their families.

noted above, many of the young children of these emigrants were sent to Crossing Rocks to be reared after their parents' consensual or marital unions had dissolved. Finally, it was learned that older people seldom emigrated from the village as they did not have "strength to sell" (could not compete with younger men for jobs) and it was more sensible for them to remain in the village where they "could work their field and have their own people care for them."

In general, the set of folk explanations elicited from informants in Crossing Rocks seem to account for the population data recorded there. It later became apparent that some of these folk explanations or assertions could be stated in hypothesis form and tested with population data collected in other Abaconian communities that had been differentially exposed to economic development.

DEVELOPMENT AND POPULATION DISTRIBUTION

The research described was conducted as part of a change study initiated to document the effects of economic development on Abaconian populations. In this study Crossing Rocks was selected as the unexposed "baseline" community, and changes were located by comparing Crossing Rocks data with data collected in two other communities, Murphy Town and Dundas Town, which had been differentially exposed to economic development. With reference to this portion of the study, the problem was to attempt to predict changes in the population distributions of the exposed communities from what we knew about: (1) the Crossing Rocks population distribution, and (2) the nature of the environmental modifications in the exposed communities related to economic development. In the following analysis environmental factors related to development are treated as independent variables, and population data from the exposed communities are used to construct dependent variables. Population data for the two developing communities necessary to test the hypotheses are presented in Table 2.

The first hypothesis to be tested explores the relationship between cost of living and immigrant children, and is derived

TABLE 2

Population Distributions of the Exposed Communities

Age Groups	Murphy Town		Dundas Town	
	M	*F*	*M*	*F*
0–5	51	33	42	39
6–10	30	24	19	15
11–15	17	15	15	10
16–20	3	10	7	12
21–25	7	9	5	15
26–30	12	13	7	11
31–35	12	10	9	7
36–40	12	10	9	7
41–50	11	3	7	14
51–60	4	6	5	7
61+	9	14	10	10

from folk explanations collected in Crossing Rocks. In summary: (1) a surplus of children under fifteen were observed in the unexposed community; (2) informants attributed this surplus to an in-migration of children from the capital; and (3) explained the in-migration by noting that because of a lower cost of living, it was cheaper to rear children in Crossing Rocks than in the capital.[6]

If this relationship is true and generalizable, *the percentage of the total population that children compose should decline as the relative cost of living for a specific Out Island population rises and approaches equilibrium with the capital.* In the developing communities of Murphy Town and Dundas Town, with the advent of wage labor and the abandonment of subsistence farming and fishing, the cost of living has increased relative to Crossing Rocks and children under fifteen years of age there should make

[6] Cash outlay per household for food averages sixteen pounds sterling per month in the exposed communities and six pounds sterling per month in Crossing Rocks, where the size of the average household is larger.

up a smaller percentage of the total population than they do in Crossing Rocks; the percentage should be smaller in Dundas Town, which has been exposed to the developmental factors longer than Murphy Town. Data to test the hypothesis are presented in Table 3.

TABLE 3

Relationship Between Cost of Living and the Frequency (and Percentage) of Children in the Population Distributions of the Exposed and Unexposed Communities.

		Individuals	
Cost of Living		Age 0-15 years	Age 16 years and over
Low	Crossing Rocks	70 (59%)	49 (41%)
High	Murphy Town	170 (54%)	145 (46%)
"	Dundas Town	140 (50%)	142 (50%)

Though the result is not statistically significant, Table 3 supports the first hypothesis, in that the percentage of children in the whole population declines from 59% in Crossing Rocks, to 55% in Murphy Town, to 50% in Dundas Town.[7] These results were achieved in spite of a higher birth rate and a lower child mortality rate in the developing communities, factors related to a more efficient access to modern medicine. It must be stressed that this theory relates specifically to the Bahamas, and probably to the Caribbean islands generally, but it is not held to apply universally, for it depends on the behavioral precondition of rearing children in grandparent-grandchild households which is common in the West Indies but not throughout the world.

The second hypothesis to be tested explores the relationship between the presence of wage labor and the percentage of the total population formed by young and middle-aged adults. This hypothesis also was derived from a folk theory present in Crossing Rocks. In summary, villagers in Crossing Rocks asserted that young and middle-aged adults composed a small percentage of

[7] Similar percentage frequency shifts were observed for both male children (63% to 58% to 56%) and female children (54% to 49% to 44%) from Crossing Rocks to Murphy Town to Dundas Town.

the total population because many individuals of these age categories had emigrated in search of wage labor employment, in order to maximize their accumulation of cash and material goods. If the asserted relationship is true and generalizable, then *as the opportunities for wage labor for a population increase, so should that part of the population that can exploit it (young and middle-aged males) increase in terms of their percentage frequency in the total adult population.* This hypothesis has obvious significance for a developmental situation, as in most such cases the environment is modified by the increase in frequency of jobs. This was certainly the case for Murphy Town and Dundas Town. It is also clear that the male populations there have responded to new job alternatives by acquiring the necessary skills to take advantage of the jobs (Rodgers 1966). If the hypothesis is true, there should be a higher percentage of young and middle-aged males in the adult male population in Murphy Town and Dundas Town than in Crossing Rocks. Data to test the hypothesis are presented in Table 4.

TABLE 4

Relationship Between Wage Labor and the Frequency (and Percentage) of Young and Middle-Age Adult Males in the Adult Male Population Distributions of the Exposed and Unexposed Communities.

		Individuals in the	
Wage Labor		16 to 40 age group	41 or over age group
Absent	Crossing Rocks	13 (52%)	12 (48%)
Present	Murphy Town	46 (66%)	24 (34%)
Present	Dundas Town	37 (64%)	22 (36%)

Again, though the result is not statistically significant, Table 4 tends to support the second hypothesis. The number of sixteen to forty year olds in the adult male population increases in percentage frequency from 52% in Crossing Rocks to 66% and 64% in Murphy Town and Dundas Town.[8] We interpret this

[8] Similar percentage frequency shifts were observed for females in the 16 to 40 year age group (54% to 69% to 63%) from Crossing Rocks to Murphy Town to Dundas Town.

percentage shift as an index of the adaptive behavior of individuals in the exposed community in response to modification in their economic environment, although we are aware that some of this percentage shift can be attributed to the in-migration of skilled workers from Nassau. In most cases, these new immigrants are *returnees,* Abaconians originally from the exposed community who emigrated to Nassau only to return when the environment was modified and wage labor alternatives for skilled workers became available. Nor has the emigration of young adults ceased. Men in the developing communities have learned that it is no easier to "get ahead" with the wages of an unskilled laborer than it is with the earnings of a crawfishman.[9] It is difficult for those without the necessary skills to secure a high paying "skilled" job, for there is a high measure of competition both from returnees who have skills and from their fellow villagers who most often do not. Some individuals can make the transition from unskilled laborer to skilled worker while staying in the home environment, but many cannot. Consequently many young men still emigrate to the capital where more jobs are available and there is a higher probability of acquiring the necessary skills. Most, however, do not marry before emigrating, nor do those who do marry take their families with them (which is the case in Crossing Rocks) as they expect to return as soon as possible to compete on the skilled job market in the home environment.

These changing behavior patterns as well as the declining in-migration of children from the capital have modified the sex ratios of the developing communities (Table 5).

Comparison of the sex ratio data shows that in the sixteen to forty year age groups, though the sex ratio is balanced in Crossing Rocks and only slightly out of balance in Murphy Town, there is an extreme female sex-imbalance in Dundas Town. If it is indeed the case that these observed sex imbalances are primarily due to the emigration of younger males who return to their home communities once they have acquired job skills,

[9] When the additional cost of living is considered, unskilled laborers net little more cash income than crawfishermen and smack fishermen but skilled workers can earn two to three times as much.

TABLE 5

Sex Ratios of the Exposed and Unexposed Communities

Age Groups	Crossing Rocks	Murphy Town	Dundas Town
0–15	.66	.73	.84
16–40	1.0	1.13	1.40
41+	.92	.95	1.40
16–25	1.0	1.90	2.2
26–40	1.0	.92	1.0
overall	.78	.88	1.09

$$\text{Sex Ratios} = \frac{\text{Females}}{\text{Males}}$$

then in the developing communities the sex imbalances should be most extreme in the lower portion of that age-sex category (the sixteen to twenty-five age group). Data from Table 5 indicate that this is so: (1) although the sex ratio is balanced in the sixteen to twenty-five age group in Crossing Rocks, in the exposed communities there are twice as many females as males, and (2) in all three of the communities in the twenty-six to forty age group, the sex ratio is balanced or nearly balanced. We cannot, however, presently account for the female sex-imbalance observed in the over forty-one age group in Dundas Town, although we are certain that it is not related to an immigration of older females.

The sex ratio data further lends additional support to the first hypothesis: the relationship between cost of living and child in-migration. It was noted previously that child immigrants were more likely to be males than females. A reduction in the child immigration rate, then, should be accompanied by less extreme male sex-imbalances in the zero to fifteen year age group. Data from the first line of Table 5 show that in this age category, the male sex imbalances become less extreme (from Crossing Rocks, to Murphy Town, to Dundas Town) with exposure to economic development and a higher cost of living.

CONCLUSION

We have described and attempted to explain the population distributions of three Abaconian communities. In doing so we have considered folk explanations of these population distributions and have been concerned with such factors as childhood immigration, young and middle-aged adult emigration, and male and female sex ratio imbalances. To achieve change perspective we have, through the controlled comparison of population data from the three communities which have been differentially exposed to economic development, attempted to assess the effects of related environmental modifications on the population distributions of the exposed communities. Finally, we attempted to test two hypotheses derived from Abaconian folk explanations of population distribution. Though neither test proved to be statistically significant, we hold that the data indicate that the hypotheses are substantially correct. It is certainly the case that both hypotheses could be reformulated so as to predict more of the observed variation, but it is probable that these communities will be restudied after development has proceeded for a longer time and the changes have become more clear-cut. At that point these, as well as additional hypotheses, can be retested by *longitudinal vertical* comparison as well as by *controlled horizontal* comparison (Rodgers n.d.); and this should produce more definitive validation.

The conclusions we have drawn from the foregoing analysis lead us to predict that *if, through exposure to economic development, similar environmental modifications occur in Crossing Rocks* (new wage labor alternatives and substantial increases in the cost of living), *the population distribution of this community will come to more closely approximate those presently found in the exposed communities of Murphy Town and Dundas Town.* Conversely, *if the developments are not maintained in the latter two communities, it is highly probable that the population distributions will become more similar to the one presently found in Crossing Rocks.* As we consider individuals to be the mechanisms of sociocultural change, the observed statistical shifts in the population

distributions of the communities are regarded as indices of the behavioral changes of individuals who have responded, adjusted or adapted to modifications in their perceived environments.

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