THE present demographic situation in Puerto Rico is well known in a general way. Briefly stated it is this: The Island has an agricultural economy with an industrial density. In 1940 the proportion of gainfully occupied males working in agriculture, according to the census, was 57 per cent. The proportion has been declining gradually, but as late as 1945–1946 agriculture still originated twice as much income as did manufacturing, and half of the manufacturing that did exist was devoted to the processing of agricultural products. This dependence on agriculture would represent no problem if the other conditions were satisfactory, but Puerto Rico suffers from a great limitation on its primary agricultural resource—land. With a population estimated to be 2,182,000 by the beginning of 1948, the Island has a density of 638 per square mile. This is a density that approximates that of England and Wales (718 in 1940) and exceeds that of Japan (496 in 1940) and Massachusetts (546 in 1940). For its size Puerto Rico is the most densely populated agricultural area in the Americas. It has a higher ratio of farm population per unit of cultivable land (approximately 570 per square mile) than does India.\textsuperscript{3} Without much exaggeration it can be called “the little Java of the Western Hemisphere.” Its population is surely beyond the optimum size for the highest per capita return from agriculture.

Instead of reducing its population, however, Puerto Rico is steadily increasing it. The death rate, though still high by American standards, continues to decline, while the birth rate remains at a very high level. Between 1932 and 1947 deaths

\textsuperscript{1} From the Office of Population Research, Princeton University.

\textsuperscript{2} Formerly on the staff of the Office of Population Research. Now Director of the Division of Population Research, Bureau of Applied Social Research, Columbia University.

\textsuperscript{3} For comparative figures see Kingsley Davis, “Demographic Fact and Policy in India,” in Demographic Studies of Selected Areas of Rapid Growth, New York; Milbank Memorial Fund, 1944, p. 36.
Puerto Rico's Population Problem

declined from 22.3 to 12.0 per thousand, a drop of 46 per cent; whereas births increased slightly from 41.5 to 43.4 per thousand. (See Figure 1). As a result the crude rate of natural increase has risen sharply, from 19.2 per thousand in 1932 to 31.4 per thousand in 1947; it is now probably the highest in the world. In the year 1946, when the natural increase was 29.5, approximately 61,200 persons were added to the Island's population by natural increase. This would have added approximately 18 persons per square mile in a single year, more than a third of the average density in the United States, and if continued, would have doubled the population in 23 years.

No wonder a safety valve operated to keep this natural increase from actually expanding the population at such a rapid rate. The safety valve was emigration. Approximately 38,900

Fig. 1. Birth and death rates in Puerto Rico, 1887-1947.
persons, or two-thirds of the natural increase, left the Island in 1946, most of them coming to New York City. This was the biggest single year of emigration from Puerto Rico. In fact it was nearly half as many as the total net recorded emigration in all the years up to 1946 (87,000). Yet even with this massive emigration in 1946, the percentage increase in the Island's population (1.1 per cent) was high when compared to the rest of the world taken by and large. This suggests that the safety valve is not working adequately, and that Puerto Rico not only has a population problem now but is likely to have an even worse one in the future. In 1947, with an even higher natural increase and a lower emigration, the growth on the Island was much greater, being 1.9 per cent.

When faced with this continuous population increase on an agricultural island, the observer thinks of one or more of three possible solutions. First, he may decide that Puerto Rico must rapidly increase the tempo, scope, and variety of its economy, so as to provide not only for the increased number of persons but also for a higher standard of living. To this end, he may say, Puerto Rico should increase its industrial capacity, intensify and diversify its agriculture, and secure whatever advantages it can in foreign trade. Second, the observer may state that a larger emigration is necessary—an outflow of Puerto Ricans large enough to cancel the natural increase or even to reduce the existing population. To this end, he may say, the difficulties in the way of further movement to accustomed places of emigration (such as New York City and St. Croix) should be removed, and new places of emigration (viz. Venezuela, the Dominican Republic, Brazil, or American cities other than New York) should be found. Third, one may take the position that the birth rate in Puerto Rico should be reduced until it virtually matches the death rate, thus eliminating the population pres-

4 Puerto Rico, Bureau of the Budget, Division of Statistics: *Monthly Statistical Report*, Oct.–Dec., 1947, p. 31. The year 1947 showed a slight drop in the number of Puerto Rican emigrants, approximately 24,600 leaving the Island in that year (ibid.). It is interesting that Puerto Rico's postwar emigration has been almost entirely airborne, the first airborne mass migration in human history.
sure at its source. To this end, it is often argued, a contracep­tive program should be pushed in Puerto Rico, and measures known to be associated with the use of contraception—educa­tion, female employment, urbanization—should be encouraged.

In advocating any particular one of the three solutions, many persons forget the other two; yet it is quite clear that the three are related in a complex way. If economic advance is proposed as the only solution, the reasoning is unrealistic, because in Puerto Rico’s situation one of the main obstacles to economic progress is precisely the redundant and ever growing population, which makes capital accumulation and mechan­ization extraordinarily difficult. Since 1940 the labor force has been growing at a rate of about 14,000 each year. The labor force is too large and is growing too fast to be absorbed by the limited economic structure, with the result that even in the most favorable times large numbers are unemployed, many are underemployed, and wages are low. The enormous burden of providing relief, of educating the ever-growing num­ber of children, of importing food, places a great handicap on fundamental industrial change. Instead of building up an eco­nomic system that will draw a dense population, Puerto Rico has a dense population and is trying to draw to itself a new economy—a process that is far from easy. The world’s most

---

5 Felix S. Cohen has recently become the spokesman for the point of view that the solution of Puerto Rico’s problems lies in developing the resourcefulness of its people. See his article, “The Myth of Puerto Rican Overpopulation” in the News Letter of the Institute of Ethnic Affairs, Vol. 2 (October, 1947), pp. 1–3, and his rebuttal to Clarence Senior’s reply in a later issue of the same publication, Vol. 3 (March, 1948), pp. 3–4. See also Cohen’s fuller version of his views, “Science and Politics in Puerto Rico.” Journal of Social Issues Vol. 3 (Fall 1947), pp. 6–17. By liberal use of innuendo and appeals to nationalistic and religious prejudice, he argues that Puerto Rico has all the natural resources that it needs, that there is no population problem, and that economic development by “resourcefulness” can solve perma­nently the question of poverty no matter how dense the population becomes. It seems never to occur to him that the “resourcefulness” of a people may manifest itself in the control of its population increase, just as much as in the control of its economic life. On the contrary, he seems to argue that reproduction should not be controlled. He does not realize the interdependence of population growth and economic develop­ment.

In his reply to Cohen, Clarence Senior in the same publication, “Puerto Rico Is Overpopulated,” Vol. 3 (March, 1948), pp. 1–3, stresses both the necessity of industrialization and the obstacles that the rapid population increase poses for such a program.
rapidly industrializing areas (Australia, Argentina, Russia) are those with comparatively sparse populations, as has generally been the case. It would therefore seem absurd in Puerto Rico not to help economic progress along by working at the same time on the demographic side to slow the rate of population growth. In the long run the purely economic solution would be hopeless unless it affected population growth, because no conceivable economic progress could endlessly take care of ever-growing numbers in a restricted area. In Puerto Rico it seemingly cannot do it even for a short period.

On the other hand, emigration can hardly serve as the single solution. In a world where population is growing nearly everywhere, where increasing barriers are being erected against foreigners, there is little likelihood that any country can place its people elsewhere indefinitely. Nor is today's cost of continued emigration easy to bear. The human and economic cost indeed makes very strange the notion that migration is an easier solution than the limitation of fertility. The question, “Is it easier to move to a foreign country than to have fewer offspring?” does not present itself to the actor, but it does present itself to the observer, and the answer is clearly negative. Migration can be a short-run aid to solving Puerto Rico’s population problem, but unless it helps to lower fertility and to foster economic advance, it cannot be effective. In itself it is not a complete solution.

The third possibility, a reduction of fertility to the level of the death rate, would alleviate Puerto Rico’s poverty, in so far as population growth is responsible. But unless economic change took place at the same time, Puerto Rico would still remain comparatively poor. Moreover, a change in so fundamental a thing as reproductive behavior cannot take place without a corresponding and facilitating change in other aspects of social organization. To neglect these other changes would

---

6 Japan is a notable exception, but when she started her industrialization her population density was far less than that of Puerto Rico today.

7 The logic of this question was first suggested to the writer by his colleague in Puerto Rican research, Professor Paul K. Hatt.
be to omit the very factors most likely to guarantee success for fertility control.

In short, all three variables—the economic, the migratory, and the reproductive—are parts of a dynamic equilibrium. A change in one affects, and is effected by, the others. Any successful overall policy must address itself to all three. This is no argument, of course, against specialized research, but against single-factor determinism on the interpretative and policy levels. As far as the economic side is concerned, research and government policy in Puerto Rico have gone a good way. On the population side considerable research has also been done, especially with reference to the formal demography of the Island. The vital statistics and census returns are sufficiently accurate to provide a clear view of the major population trends. Puerto Ricans and others have realized, however, that a knowledge of trends is not enough. A knowledge of causes and motives is also required. Consequently, several studies have been undertaken which will throw additional light on the population question.

One of these, now nearing completion, is an investigation of Puerto Rican migrants in New York City. The Government of Puerto Rico commissioned the Bureau of Applied Social Research, Columbia University, to make the study. Professor C. Wright Mills was made project director, and Professor Clarence

8 The Social Science Research Center of the University of Puerto Rico is sponsoring fundamental economic studies. See Creamer, Daniel: *The Net Income of the Puerto Rican Economy*, 1946. A broader study will shortly be published by Harvey S. Perloff. A third study on agricultural problems is now about complete. And a fourth study, on labor efficiency, is being planned. In addition, the Puerto Rico Planning, Urbanizing, and Zoning Board is making studies and plans for official action. The government, through its developmental agencies, is stimulating industrial development and helping to rationalize agriculture. See Mackie, Donald: *The Industrialization Program of Puerto Rico*. (Senior Thesis, Princeton University, 1948).

Senior, until then the head of the Social Science Research Center at the University of Puerto Rico, was made associate director. "The purpose of the investigation is twofold: (1) to serve city, state, and private welfare agencies by answering their questions concerning Puerto Rican migrants, and (2) to help the Puerto Rican Government in guiding and directing migration, and possibly to suggest other cities in the United States to which the migrants could successfully adjust." Three kinds of information are emerging from the study. First there is demographic information on the number, location, age, sex, family composition, occupation, and industrial affiliation of the migrants. Second there is welfare information on the amount of medical and other social assistance needed and received by the Puerto Ricans. And third, there is psychological information on the migrants' modes of adjustment to life in New York. Since, as previously mentioned, New York City is the chief destination of Puerto Rican emigration, the significance of this study for an understanding of the migratory aspects of Puerto Rico's population problem is quite apparent.

In New York a study has also been made by the Welfare Council Committee on Puerto Ricans, giving the welfare picture as seen by the social work agencies and making constructive suggestions for the better adjustment of this ethnic group in the City. In addition, the Social Research Laboratory of the College of the City of New York is investigating various aspects of community organization among the Puerto Rican New Yorkers; and New York University and the University of Puerto Rico have been cooperating on a project of teacher education with reference to the school problems of Puerto Ricans.


11 The second most important destination of Puerto Rican migrants is the island of St. Croix, in the Virgin Islands. Clarence Senior has made a study of the Puerto Rican community there: The Puerto Rican Migrant in St. Croix, Río Piedras, Social Science Research Center, University of Puerto Rico, 1947. Most of the results of this study were incorporated in the larger volume, Puerto Rican Emigration, previously cited.

both on the Island and in New York City. In so far as such investigations lead to policies facilitating the adjustment of Puerto Ricans in New York, they will doubtless tend to increase the number of migrants coming to the United States. As the continental group increases in size, it will tend to attract more people from the Island. Barring a depression with consequent unemployment and a deterioration of welfare activities, the movement to the United States can be expected to continue on a large scale.

With reference to Puerto Rico itself, the Office of Population Research of Princeton University and the Social Science Research Center of the University of Puerto Rico are currently engaged on a joint two-year study of population problems. The project embraces two aspects, first a definitive investigation of the formal demography of the Island, and second a field study of the motives, attitudes, and institutions that are affecting fertility and migration. The demographic work, under Mr. José L. Janer's supervision, includes the following: population projections under various assumptions, a detailed analysis of mortality, a review of the statistics and trends in general and differential fertility, a survey of marriage statistics, and a study of the characteristics of emigrants. The field investigation of motives and attitudes, under Dr. Paul K. Hatt's supervision, is aimed at sampling the entire population with reference to the cultural and social conditions affecting fertility and migration. It hopes to find those factors that might most readily and feasibly be influenced by public policy, and to suggest possible ways by which policies designed to slow the natural increase might be implemented.

14 The investigation of factors affecting fertility includes a complete pregnancy and contraceptive history, a complete marriage history, material on attitudes toward female employment, aspiration levels for children (employment, education, type of marriage, etc.), attitudes toward type of marital union, and sentiments and behavior with respect to religion. The study of factors affecting migration includes attitudes toward migration as regards both the respondents themselves and their children; the amount of money sent back from abroad, the relationship of the sender to the receiver, and the regularity of the remittances; and finally, the previous pattern of

(Continued on p. 308)
Although the field work, editing, and coding of the schedules have been completed, it is too early to announce preliminary results of the investigation. The same is true of the demographic work. It is expected that results will be available within a year or two.

This summary has mentioned all the current research projects known to the writer which bear on population in Puerto Rico. There are doubtless others. In any case, enough has been said to justify the conclusion that demographic research is being undertaken on a scale adequate to furnish the scientific basis for a consideration of population policies. The actual implementation of such policies will certainly require still more research, but at least a start has been made. It seems clear that Puerto Rico has a serious population problem, and that responsible officials are aware of this problem and wish to understand better its scope and causation. Practically no one questions the necessity of working at the same time on the economic problems of the Island. In fact, it should become increasingly clear, as both demographic and economic research proceed, that the two aspects are closely interrelated. In the formation of policy, attention cannot be given to one aspect alone while ignoring the other, because in that way the policy may defeat itself. Population trends have consequences in every aspect of life. The future welfare of Puerto Rico depends on a knowledge of, and an intelligent policy with respect to, population, just as it depends also on a knowledge of economic life. Research cannot determine the policy to be adopted, but it can make the policy more effective in achieving desired ends.

migration of the respondents on the Island. Such information will supplement other data being obtained from official sources on the occupation, residence, age, sex, and permanent place of residence of overseas migrants, and on the patterns of internal migration on the Island.