THE DECLINE OF THE PLANTATION ECONOMY AND THE PUERTO RICAN MIGRATION OF THE 1950s

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Two kinds of causal explanations have been traditionally offered for the impressive increase of Puerto Rican migration in the 1950s. The first is that the Commonwealth of Puerto Rico promoted out-migration; the second looks at underlying economic and social transformations as the main propeller of migration. This paper examines the transformation of Puerto Rico's economy and society during the 1950's and argues that the shift from a monocultural plantation economy to an industrial economy, through a state promoted process of industrialization (Operation Bootstrap), brought about an absolute decrease in the total number of jobs available in the island between 1950 and 1964. Employment decline in the sugar industry affected mostly males, while the decline of the home-needle industry affected the female labor force. The combination of the two processes of employment decline served as a potent propeller of out-migration.

Puerto Rican migration was set into motion in 1917 by the granting of U.S. citizenship to all the residents of the Island, which had been acquired from Spain in the War of 1898. However, this change in political status did not produce an immediate wave of migration from Puerto Rico to the United States. The large migration of Puerto Ricans to the United States took place after 1945 as a result of economic changes having to do with the transformation of the Island's economy from a monocultural plantation economy into a platform for export-production in factories. The Puerto Rican case is only one example, among many others, of migrations of workers from colony to actual ruling metropolis. In one sense, Puerto Rican migration forms part of a larger pattern of migration of workers from the colonial or "underdeveloped" parts of the world to the metropolitan countries, similar to the migration of North African workers to France, of Indian, Pakistani and West Indian workers to Great Britain, and of Turkish workers to Germany (See Castles and Kosack, 1973).

Although Puerto Rican migration to the continental U.S. started long before 1945, the great displacement took place, as in the case of the migration of other colonial workers to Europe, only after the end of the Second World War. Within this larger framework of periphery-to-core migration, this paper seeks to explain the set of local circumstances which propelled the Puerto Rican migration of the late forties and fifties. In this particular Caribbean case what has to be answered is why the displacement of workers to the United States—which had increased slowly since the Spanish American War of 1898-- suddenly took a considerable leap in the

LATINO STUDIES JOURNAL, Vol. 7 No. 1 Winter 1996 62-90

late forties and early fifties, and continued in relatively large scale proportions through the 1970's.

The answer to the question lies in the transition from a monocultural plantation economy to manufacturing for export after World War II . The transformation of the Puerto Rican economy under the export promotion program known as "Operation Bootstrap" caused a shift of employment from agriculture to manufacturing and a shift of the rural population to the towns and cities of Puerto Rico. But by themselves these changes are not a sufficient explanation for the magnitude of the exodus from the island after 1945. The transformation associated with Operation Bootstrap signified an absolute decline in the total number of jobs available in the island, in the context of a rapidly increasing population and increasing spatial mobility of labor associated with the decline of agriculture and increase in manufacturing activity.

Before the onset of Operation Bootstrap in 1947, migration to the United States took place at a much lower rate. In the decade of 1930-1939 the annual rate of migration to the United States averaged 1,800 people annually. In the decade of 1950-1959, by contrast, the Puerto Rican exodus was taking place at a rate of 43,000 persons a year. Why did massive migration take place then and not before, and why so suddenly?

The transformation of the island's economy which took place after World War II must be examined in the context of the previous pattern of economic development, from which Operation Bootstrap was a departure. The first point which distinguishes the Puerto Rican case from other cases of migration from the Third World to metropolitan countries is the high levels of proletarianization which characterized the island even before 1945. Even though the vast majority of the population lived in the countryside, there was only a weak peasantry properly speaking. Instead, a large rural working class existed in the countryside of Puerto Rico. Unlike many other underdeveloped countries, by 1945 Puerto Rico had already undergone a transformation which had established capitalist agriculture.

Proletarianization in the countryside had begun under the Spanish regime (Bergad, 1983). After the U.S. occupation of 1898, the process of rural proletarianization accelerated precipitously, generating a large rural proletariat. The U.S. occupation of 1898 had a negative impact on the principal economic activity of Puerto Rico under the Spanish regime, the

cultivation of coffee for export. Free entrance of Puerto Rican products into the U.S. market promoted the impressive growth of the sugar industry under the U.S. colonial regime, followed by the growth of another protected crop in the U.S. market, tobacco. The development of the monoculture of sugar and to a lesser degree the growth of tobacco cultivation for export for the U.S. market were accompanied by changes in the social structure of the rural regions.

Under the policies imposed by the new colonial power, and particularly as a result of a tax on land imposed in 1901 known as the Hollander Bill, the peasantry polarized. The middle, land-owning sectors lost ground as land became concentrated into larger farms, at one extreme, and into ever smaller peasant plots on the other, as existing peasant plots were subdivided to heirs, creating a multiplication of farms too small for viable commercial exploitation (Medina Mercado, 1987: 42). Vast numbers of peasants lost lands through expropriation, and through the slower process of differentiation of the peasant economy. Sugar production became the main economic activity of the island.

Proletarianization in the countryside

In retrospect, it may seem important to underline that the pre-existing class structure in the Puerto Rican countryside helps explain why the process of industrialization generated such a large exodus of population after 1945. Some accounts of migration, for example, emphasize the "backwardness" and poverty of rural Puerto Rico, without specifying that the plantation economy which developed after 1898 had integrated rural Puerto Rico into the broader processes of capital accumulation propelled by U.S. business interests. In some accounts, poverty and backwardness in the countryside appear as the products of lack of development, not as the result of the particular kind of colonial capitalist development which took place in 1898-1945. In actual fact, rural Puerto Rico was not a "typically backward, traditional agrarian economy" (Friedlander, 1965: 45). Capitalist agriculture had penetrated the Puerto Rican countryside, large numbers of farmers had become wage workers, and a combination of U.S. agribusiness corporations and local sugar mill owners had taken over the production of sugar, turning Puerto Rico into a paradigmatic twentieth century monocultural plantation

economy during the period 1898-1945 (Diffie & Diffie, 1931; Bird, 1941; Ayala, 1994). The post 1945 migration unfolded against the backdrop of a Puerto Rican countryside in which highly centralized corporate capital and capitalist class relations were dominant.

Under the conditions imposed by the colonial relationship to the United States, rural proletarianization was accompanied by the establishment of sugar mills which in effect functioned as industrial outposts in the countryside, but *no significant development of urban industry or industrial towns took place.* In a pattern which is typical of colonial economies elsewhere during the same period, industrial development was limited to those branches which were ancillary to the production of the main export products. The principal cities of Puerto Rico at the beginning of the century were in actuality small towns. None of them reached the level of 100,000 inhabitants. At the time of the U.S. occupation of the Island the municipality of Ponce had a population of 49,198, two thirds of its residents lived in the countryside. The town properly speaking had only 16,000 inhabitants. Mayagüez had a population of 37,662, of which 12,500 lived in town, the rest in the countryside. Bayamón had 2,200 inhabitants in the town, and 13,000 in the surrounding rural districts (Carrol, 1899: 18). In 1930, 27.7 percent of the population of Puerto Rico lived in urban areas defined by the U.S. Bureau of the Census as localities containing more than 2,500 inhabitants. Of these, only half—about 13 percent—lived in towns with populations of over 25,000 (*Puerto Rico Census of Population*, 1980). In 1930 72.3 % of the population lived in localities of less than 2,500 inhabitants. During the first half of this century Puerto Rico was overwhelmingly rural.

But overwhelmingly rural does not mean that the island had a peasant economy or that independent farmers provided the bulk of market production. During the first three decades of the 20th century the expropriation of small landowners produced the labor force necessary for the production of sugar. But the expropriation of the small farmer outstripped the capacity of the new agricultural production to absorb them. Under different conditions and in a different epoch, this "idle" labor force could have provided the manpower necessary for the development of urban industry. But in 20th century Puerto Rico no independent development of industry capable of competing in the international market was possible, because the

inclusion of Puerto Rico within the tariff walls of the United States made it impossible for local industries to compete with U.S. manufacturers. The growing mass of workers not absorbed by sugar production could not find employment in urban industries. The result was the appearance of massive unemployment and underemployment among a largely dispossessed rural population, who could not function as a viable independent peasantry but were trapped in the countryside due to the lack of industrial employment in the island. Regionally, the inland coffee zone, which was most affected by the changes in tariff structures and by the new colonial taxes on land, lost population to the coastal zones where the sugar industry was located. The availability of excess labor depressed wages, and this was a chronic complaint among the sugar workers. A study of labor conditions noted a surplus of labor even before the depression of agricultural prices which began in 1921.

> (...) the general complaint of laborers interviewed was that many people were coming down from the hills and cutting the wages down. Many coffee laborers, when the season is over in December, move to the coastal districts, which brings them just in time to participate in the cutting and grinding of sugar cane. Not all, of course, are able to do so for a good many reasons; and if large numbers of them were to come down they could not expect to find work as there are sufficient workers in the cane regions (Marcus, 1919: 32).

How this immense reserve of labor developed in rural Puerto Rico is a topic that has yet to be fully studied. The development of a rural proletariat had advanced in the late nineteenth century in the areas where coffee was cultivated (See Bergad: 1983). In 1901 a colonial tax on land known as the Hollander Bill forced many small farmers to sell their lands, but the exact number of farmers displaced by this legislation has not been calculated yet. The only available study on the Hollander Bill, which caused a polarization of land ownership in Puerto Rico, remains unpublished (Córdova Iturregui, 1988). Colonial taxation has been a classical mechanism for the dispossession of local rural populations and has helped throughout the colonial world to generate labor forces available for wage work in plantations

and mines. In the Puerto Rican case it was clear that the colonial government intended the expropriation of the small peasantry. Colonial administrators noted that, unlike the tradition in the United States, which left the assessment of property values to local authorities, in Puerto Rico taxation and assessment of property values were directly under the purview of the governor, who was appointed by the president of the United States.

> The administration of the (property) tax, it should be said, is entirely in the hands of the insular government, the treasury of Porto Rico making the assessment of property and taking charge of the collection of the tax. The reason for this arrangement, instead of one by which the tax is collected by the local authorities, as usually prevails in the United States, are to secure economy of administration, on the one hand, and on the other, to avoid the inequitable action in respect to both the assessment of property and the collection of the taxes that would result if these matters were left to the local authorities (Willoughby, 1905: 150).

While the effects of the Hollander Bill have not been measured exactly, the number of landless people in Puerto Rico continued to increase under U.S. colonial rule, to a degree that was exceptional in the Hispanic Caribbean at the time. Puerto Rico had a constant surplus of laborers for the sugar harvest. This stands in contrast with Cuba and the Dominican Republic, which had to import workers during the sugar harvest every year (Báez Evertsz, 1986; Alvarez Estévez, 1988). Those of us familiar with the present patter of migration of workers to Puerto Rico from the Dominican Republic may not remember that in the early decades of this century the flow took place in the opposite direction. Puerto Rican workers moved to the Dominican Republic in search of employment and better wages. In 1913, wages for agricultural workers in the sugar industry of Puerto Rico averaged 47 cents a day. In Cuba they ranged from 92 cents in Pinar del Río to $1.17 in Camagüey (Pérez Velasco, 1984: 161; Secretaría de Agricultura, Comercio y Trabajo de Cuba, 1914). In 1919, rural workers in Puerto Rico earned between $.75 and $1.00 for a 10 to 12 hour day. In Cuba they earned $2.00 for a 9 hour day (Marcus, 1919: 19). In contrast to Puerto Rico, where there was an abundance of "surplus" labor, "Cuba's great problem is

that of Labor supply" (Allen, 1926: 43). Both the Dominican Republic and Cuba lacked a landless rural population in proportions comparable to that of Puerto Rico. During the early decades of the century Puerto Rican workers migrated to the Dominican Republic, to Cuba, to Arizona, and to Hawaii in search of employment (Centro de Estudios Puertorriqueños, 1977).

Colonial administrators were aware of the effects of proletarianization, matched with the lack of urban industry, among the population. Theodore Roosevelt, governor of Puerto Rico, described the problem of unemployment in 1929 as follows.

> More than 60 percent of our people are out of employment either all or part of each year ... Hundreds come to the government offices weekly, with but a single request—work. They do not ask for a dole, merely the opportunity to earn a livelihood (Roosevelt, 1929, quoted in Diffie & Diffie, 1931: 167).

The absence of industry was equally noticed. "The labor situation in Puerto Rico," wrote the Chief of the U.S. Bureau of Insular Affairs in 1924, "is not a happy one. The population is so great that it could only live under reasonable conditions if half the people were engaged in industrial occupations. It is quite important that there should be produced in Porto Rico the clothing, the shoes, the material of which houses are built, etc. as it is that food should be produced there. Yet all these things are imported into Porto Rico at the manufactured state"(Difie & Diffie, 1931: 41). Unemployment figures for this period are difficult to interpret, because in many cases seasonal unemployment was so pervasive during the idle season of the sugar industry (*tiempo muerto*) as to render annual unemployment averages unreliable. Government statistics place the rate of unemployment at 17.9 percent in 1910, 20 percent in 1920, 30.2 percent in 1926, and more than 36% in December, 1929 (Difie & Diffie, 1931: 166-167).

Urban manufacturing industry properly speaking was almost nonexistent, with the exception of tobacco and cigar factories. According to the 1939 *Census of Manufactures* there were 23,484 wage earners engaged in "manufacturing activities" of which 9,658, or more than 40 percent, were engaged in the sugar mills and refineries, while over half of the total value added by manufacturing was accounted for by the industries

related to sugar. Approximately 40 percent of net manufacturing originated in the sugar based industries (Perloff, 1975: 98). Other industries included rum, the processing of tobacco, coffee, and fruit canning.

> In Puerto Rico the average amount of mechanical equipment per employee is low compared to the United States. Much of the Manufacturing in the island is hand work, not only in the needle-work industry but also in the tobacco processing industry and in most of the enterprises manufacturing for the local market (Perloff, 1975: 101).

Corresponding to the low level of fixed capital investment, the size of manufacturing establishments reveals the backwardness of industry and the feebleness of the towns. Most of Puerto Rico's manufacturing establishments were then extremely small. According to Perloff

> over half the enterprises employ less than six workers and have a weekly payroll of less than $50. Only 122 plants in the entire island employ more than one hundred workers. The majority of these are sugar mills and liquor distilling plants; although among the larger units are some tobacco processing and needlework establishments which differ from the usual cheap-labor units only in size (Perloff, 1975: 102).

Industry was dominated by sugar and its by-products. The town as the locus of concentration of industrial activity did not emerge in this period because the sugar mills were dispersed throughout the countryside. The few large scale industrial enterprises which did exist in the island were sugar mills, which did not generate urban development or further industrial growth. L. Chenault described San Juan as "the largest city in Puerto Rico, with a population of well over one hundred thousand, but not a complicated industrial center. Its narrow streets often appear to be as densely crowded as places in New York, and the noise seems fully as great at times as that of New York, except for the elevated railway sections. San Juan's buildings, however, are small; the methods of transportation are simple; and a person may walk over most of the entire business section of the city in a short time"

(Chenault, 1938: 59-60).

Migration Before World War II

Puerto Rican migration to the United States was slow and gradual, compared to the post World War II wave of migration. Employment and underemployment, low wages, and U.S. citizenship promoted out-migration. The magnitude of the movement can be regarded as insignificant not only in relation to the much larger migratory current of the 1950s, but also in relation to the size and proportion of the Puerto Rican unemployed population itself in the pre-1945 period.

In 1930 there were 52,774 first generation Puerto Ricans in the United States, i.e., persons born in Puerto Rico living then in the continental U.S. (Chenault, 1938: 53). Relative to the half million migrants of the 1950s, this figure may seem minor. Of the 52,000 Puerto Rican immigrants in the U.S. in 1930, 45,973, or 88 percent, lived in New York (Chenault, 1938: 57).

The participants of this early migration were largely drawn from the urban population. Given the smallness of urban centers in Puerto Rico the towns naturally yielded a small number of migrants.

> Some of these individuals...were trades people and factory workers, or followed some mechanical trade. Domestic workers, and servants constitute another important class. Many needle workers and persons engaged in home sewing have also migrated ... *Migration from Puerto Rico comes by way of the towns and cities and not from rural areas* (Chenault, 1938: 62).

Migration to the continental United States picked up after the economic crisis of 1921. Between 1910 and 1945, the number of migrants from Puerto Rico to the continental United States was 91,000, or approximately 2,600 a year. Forty five percent of this migration took place during the 1920s, when 42,000 people emigrated from Puerto Rico (Friedlander, 1965: 45). In the 1930s the movement slowed down as a result of the far reaching industrial crisis, in spite of the fact that unemployment was at its peak in Puerto Rico. The upturn in the 1920s and the downturn of the 1930s indicate the importance of the capacity of U.S. industry to

absorb workers in determining the migratory flow.

TABLE 1
Movement of U.S. Citizens between Puerto Rico and the Continental United States, 1930-35

Fiscal Years	Arrivals	Departures	Excess of Arrivals	Excess of Departures
1930	18,617	9,290	9,327	
1931	11,517	12,625		1,108
1932	9,683	10,385		702
1933	8,700	9,953		1,253
1934	11,569	7,466	4,103	
1935	13,174	10,214	2,960	

Source: L. Chenault, The Puerto Rican Migrant in New York City

According to one estimate, with the unemployment rate at 65% there were more than 250,000 jobless workers in Puerto Rico in 1933 (Matthews, 1969: 130; Wells, 1969: 114) but in that year there was a movement of return migration to Puerto Rico instead of the increase of out- migrationthat one might expect. During 1930-35 about 6,000 Puerto Ricans settled in the United States. L. Chenault remarked (1938: 57) that "many Puerto Ricans found conditions so bad that they desired to return to their former homes. Relief also had a part in the unusual movement of people which took place. Puerto Ricans, like citizens of other states, were often returned to the island." The depression determined not only the deceleration of migration to the U.S. relative to the 1920s, but also an absolute reversal during its worst years, notably 1933 (Senior, 1946: 57). During the recession of 1938 there was a reduction in the number of migrants, but not a net return flow (Goldsen, Mills & Senior, 1950: 44).

Throughout its different phases, Puerto Rican migration to the United States has come by way of the towns. This, however, does not rule out that its main propeller has been the rural relative "surplus" population. Town dwellers migrate and are in turn replaced by newcomers from the countryside. In the weakness of the towns we find one of the explanations of the slow tempo of migration before 1945. The other lies in the long term industrial crisis in the U.S. (and worldwide) between the two world wars. The economic expansion that followed World War II undid both of these

constraints.

Table 2
Yearly Out-Migration from Puerto Rico, 1940-1988

Year	Out-Migration	Year	Out-Migration	Year	Out-Migration
1940	1,008	1950	34,155	1960	23,742
1941	500	1951	41,920	1961	13,800
1942	928	1952	61,658	1962	11,363
1943	2,601	1953	74,603	1963	4,798
1944	8,088	1954	44,209	1964	4,366
1945	11,003	1955	31,182	1965	10,758
1946	24,621	1956	61,647	1966	30,089
1947	35,144	1957	48,284	1967	34,174
1948	28,031	1958	25,956	1968	18,681
1949	33,068	1959	37,212	1969	-7,047
	145,010		460,826		144,724

Year	Out-Migration	Year	Out-Migration
1970	44,082	1980	16,101
1971	1,811	1981	11,000
1972	41,664	1982	33,000
1973	28,421	1983	44,000
1974	36,117	1984	39,000
1975	39,184	1985	29,000
1976	38,758	1986	47,000
1977	4,610	1987	22,000
1978	20,282	1988	39,000
1979	6,078		
	261,007		280,101

Sources: Figures for 1940-1976 are from Center for Puerto Rican Studies, *Labor Migration Under Capitalism: 186-187;* figures from 1977-1980 are from Junta de Planificación de Puerto Rico, *Informe Económico al Gobernador, 1980,* p. 290; figures for 1980-1988 are from Junta de Planificación de Puerto Rico, *Informe Económico al Gobernador, 1988,* chapter 11, p. 3.

Operation Bootstrap

The industrialization of Puerto Rican began during World War II, with industries owned by the Puerto Rican government, in an effort to supply local industries and the U.S. armed forces with products which might otherwise not become available in the event of a German naval blockade. But plans for the diversification of the economy of the island had emerged already, as a result of the Great Depression, which ravaged the island, creating widespread misery among the already very poor rural population. The extent of the misery and the vulnerability of the island's economy to fluctuations in the price of sugar led to the first developed critiques of the monocultural plantation model of development. In 1934 Carlos Chardón issued his plan for the economic diversification of the island, which included the dismantling of the sugar industry and an agrarian reform program (Puerto Rico Policy Commission, 1934; Pantojas García, 1990: 36-38). In 1931, Bailey and Justine Diffie published their classic indictment of the Puerto Rican monocultural plantation economy. In 1937, Esteban Bird published another devastating critique of the monocultural plantation economy. Bird demonstrated that in the early 1930s the Puerto Rican rural worker had an income of twelve cents a day for each member of his family. According to Bird this was four cents more than the cost of feeding a hog in the United States (Bird, 1941: 43).

The Popular Democratic Party of Luis Muñoz Marín was founded in 1938 on a platform of opposition to the sugar interests. In 1940, it swept the elections to the local legislature and local offices. During the War, a federal program of road construction to connect the diverse military bases led to the construction of local cement plants, and the construction of some other plants producing goods for the local market. After the end of the war, the state promoted process of industrialization was replaced by a system of incentives and tax breaks aimed at attracting private U.S. capital to Puerto Rico. The industrial incentives act of 1947 formally initiated what is known today as Operation Bootstrap. The program of industrialization was coupled with a program of agrarian reform aimed at the sugar industry (See Pantojas García, 1990).

Before Operation Bootstrap, the only significant sectors of modern industry in the island were the sugar cane mills and sugar related industries.

Most branches of industry were small, employed few workers and were at the level of handicraft industry. Investments in fixed capital were low, and there was no capital goods producing sector. The plants that utilized modern machinery—the sugar mills—acquired their equipment in the capital goods industries of the U.S.. Thus the monoculture of sugarcane, instead of modernizing the country, as has been claimed, created an unbalanced economic structure. The dispersion of sugar mills throughout the countryside promoted a pattern of development which retarded urbanization and industrialization.

Today sugar production plays a secondary, and even insignificant role in the Puerto Rican economy. The town-country relationship has been altered significantly. In 1980, 66.8 % of the islands population lived in urban areas, as opposed to 27.7% in 1930. The San Juan metropolitan area, as defined by the U.S. Bureau of the Census, contained 1,086,376 inhabitants in that year. Ponce had a population of 253,000; Mayagüez has a population of 183,000; Caguas was fourth with 173,000, and Arecibo fifth with 140,000. Puerto Rico had by 1980 five cities of over 100,000 inhabitants, and one of over a million inhabitants.

The decline of sugar production was part and parcel of the organized project of Operation Bootstrap. American capital began to invest in consumer goods industries. The legislature of Puerto Rico adopted the Industrial Incentives Act of 1947 which, as amended in 1948, granted private firms a ten-year exemption from insular income and property taxes, excise taxes on machinery and raw materials, municipal taxes, and industrial licenses.

> By the summer of 1950 eighty new industrial plants were in operation and the hundredth was under construction. When the constitution of the new Commonwealth of Puerto Rico came into effect, on July 25, 1952, some 152 factories were in operation. The overwhelming majority were consumer goods industries: producers of textiles, wearing apparel, footwear, electronics equipment, electric wiring, drafting tools, artist's brushes, fishing tackle, artificial flowers, and other plastic and metal articles assembled in Puerto Rico for sale in the Unites States. They were 'labor intensive' industries, for they relied more heavily on labor than on machinery to supply the value added to the raw materials which they imported from the mainland (Wells, 1969: 152).

The sugar mills, which had been the main representatives of modern industry employing 20,000 workers in 1940, employed 13,000 in 1948 and only 8,000 in 1952 (Puerto Rico Planning Board, 1964). The dispersion of industry throughout the countryside was altered and *substituted by urban centered industry*. In 1956 the income generated by the manufacturing sector exceeded that of agriculture for the first time.

A process of expulsion of population from the countryside ensued, simultaneously with the process of urban growth. There were 203,000 workers employed in agriculture in 1950 but in 1960 the number had decreased to 124,000. Of the 51,000 workers of the home needle industry in 1950, only 10,000 remained in 1960. In the 1960s the reserve of surplus labor seemed inexaustible. "How much more surplus labor was still contained in the reservoir of disguised unemployment can only be guessed at, but there seemed no reason to assume that the supply had been exhausted" (Ross, 1976: 157). The sugar cane and home needle industries collapsed simultaneously. Manufacturing employment increased from 55,000 to 82,000 during the same period. This was a significant increase but not enough to compensate for the decline in agriculture. Total employment in Puerto Rico decreased from 603,000 in 1951 to 543,000 in 1960. During this decade, 450,000 Puerto Ricans migrated to the United States. Total employment in Puerto Rico reached its 1951 level again only in 1963, when it amounted to 606,000 (Puerto Rico Planning Board, 1964).

The collapse of employment in the sugar cane countryside, together with the growth of towns and conditions of rising employment in the U.S. set the stage for the massive migration of the 1950s. The distribution of the national income by industrial sector changed. In 1950, 35.9% of the labor force was engaged in agriculture and this sector generated 24.3% of the net income of Puerto Rico. In 1960 manufacture—with the exception of the home needle industry—employed 15.1% of the labor force but generated a proportionally higher share of net income, 21.3%.

Table 3
Puerto Rico: Employment, Unemployment, Labor Force Participation Rate, and Out-Migration, 1950-1965.

Year *	Agriculture *	Non-agricultural *	Tot. *	Labor Force participation * (1)	Unemployment rate * (2)	Out-Migration **
1950	203	400	603	55.50	15.40	34,155
1951	192	379	571	53.50	16.00	41,920
1952	172	378	550	50.90	14.80	61,658
1953	174	366	540	50.10	14.50	74,603
1954	164	375	539	49.00	15.30	44,209
1955	161	396	557	48.30	13.20	31,182
1956	152	400	552	47.50	13.20	61,647
1957	151	404	555	47.20	12.80	48,284
1958	137	409	546	46.30	14.20	25,956
1959	125	417	542	45.40	13.30	37,212
1960	135	430	565	45.70	11.80	23,742
1961	135	433	568	45.50	12.70	13,800
1962	132	429	561	44.20	12.80	11,363
1963	122	464	586	44.40	11.00	4,798
1964	108	496	604	44.60	11.20	4,366
1965	99	535	634	45.40	11.70	10,758
						529,653

(1) Percentage of the non-institutionalized civilian population belonging to working group.
(2) Percentage of working group who were unemployed.

*Source: Junta de Planificación de Puerto Rico, *Serie Histórica del Empleo, Desempleo y Grupo Trabajador en Puerto Rico, 1984*.

**Source: Center for Puerto Rican Studies, *Labor Migration Under Capitalism* (New York: Monthly Review Press, 1978), pp. 186-187.

The introduction of industries of higher productivity was accompanied by an absolute decrease in employment. At the same time, growing shares of the national income were concentrated in the new industrial sectors, which employed relatively fewer workers. The best example is the needle and textile industry. In 1951 there were 51,000 employees in the home needle industry and 12,000 engaged in textile and garment production in factories. The combined net income of the cottage and factory clothing industries amounted to $18.5 million. In 1960 the cottage industry was reduced to 10,000 workers but the textile and clothing factories increased their labor force to 22,000. Total employment—at home and in factories—in the clothing industry decreased from 63 to 32 thousand between 1950 and 1960, but the net income of the clothing industry increased from $18.5 to $60.3 million in the same period.

In 1950 as well as in 1960, net income in textile and garment production represented 20.8% of total manufacturing net income, but the latter had increased from $89 to $291 million during the same period, and its share of total insular net income increased from 14.5% to 21.3%. With 31,000 workers less, in 1960, textile and garment production enjoyed a much greater specific weight in the economy, due to the increase in productivity that the shift from cottage to factory production brought about. Accordingly, the industry employed a reduced share of workers.

How many workers were displaced during the decade is hard to tell. Despite the massive rate of out-migration, unemployment rates never fell under 12% during 1950-1960. The labor force participation rate—the percentage of the population of working age active in the labor force—decreased during the decade. This figure is a better indicator than the unemployment rate because the latter does not take into account those "discouraged workers" who give up their search for jobs. In 1972, the agricultural sector's share of net income was 4%, down from 31% in 1940 (Curet Cuevas, 1976: 191). The only exception to the decline of agriculture has been the dairy industry, which produces for the local market. Puerto Rico produced 1,286,000 tons of sugar in 1950, but in 1972 it only produced 295,000 tons (Puerto Rico Department of Agriculture, 1973: 36-37; Curet Cuevas, 1976: 150-151). As one may expect, the decline of sugar cultivation resulted in the deterioration of cultivated land and deterioration of the quality of the crops. In 1950 one hundred tons of sugar cane yielded twelve tons of sugar. In 1972, by contrast, the same amount of cane yielded less than seven tons of sugar.

The migration in the 1950s is intimately intertwined with the shift from sugar monoculture to industrialization. The "surplus" population in the countryside generated during the period of sugar monoculture remained latent until the 1950s, when the channels were open to its exodus toward the new towns in Puerto Rico and through them, as a stepping stone, to the

cities of the U.S.. This "surplus" population was trapped in the countryside until it was able to burst out in the 1950s, toward both the towns in Puerto Rico and through these, to the cities of the U.S.. The birth of industrial towns in Puerto Rico, the opening of the cities in the U.S. to this population seeking an outlet, and the changing conditions in the world economy, which included a new tendency to export light industry to the colonial world, combined to promote massive and sudden emigration from the island.

Table 4
Puerto Rico: Employment in Agriculture, 1940, 1950, 1960

Year	1940	1950	1960
Cane	124	87	45
Coffee	26	22	23
Tobacco	18	20	9
Other	61	85	47
Fishing		2	
Total Agricultural employment	229	214	124
Non-Agricultural Employment	283	382	419
Employment of all Kinds	512	596	543

Source: Junta de Planificación de Puerto Rico, Serie Histórica del Empleo, Desempleo y Grupo Trabajador en Puerto Rico, 1984.

During the post-World War II period, to the "surplus" population created characteristic of the period of sugar monoculture was added a new "surplus" population that resulted from the renewed expulsion of workers from the land by the rapid decline of sugar production. These two processes combined to produce the "push factors" promoting the exodus of 450,000 Puerto Ricans from an island whose total population in 1950 was 2,210,000.

The growth of industrial employment did not function as a counter-tendency to the decline of agricultural employment. Urban industry absorbed workers, but at a pace hardly sufficient to keep pace with the rural exodus. In fact, the increase of employment in the new industrial branches did not absorb more workers than the number expelled by the decline of traditional manufactures. If we include the home needle industry in the account, there was an absolute decrease of employment in manufacturing.

Table 5
Puerto Rico: Manufacturing Employment, 1940-1960
(In Thousands)

Year	1940	1950	1960
Sugar	20	11	8
Tobacco Products	6	6	6
Textiles	17	12	22
Liquor			2
Others	13	24	43
Manufacturing Jobs (except home-needle industry)	56	55	81
Home Needle Industry	45	51	10
Total Manufacturing Employment (Including Home Needle Industry)	101	106	91

Source: Junta de Planificación de Puerto Rico, *Serie Históricadel Empleo, Desempleo y Grupo Trabajador en Puerto Rico,1984.*

The Decline of the Sugar Industry

Part of the historical program of the Partido Popular Democrático was the elimination of dependence of the island's population on the sugar industry. As part of its agrarian program, the Popular Democratic Party resurrected a law introduced by the U.S. Congress early in the twentieth century, called the 500 acre law. This piece of legislation, introduced by protectionist beet farmers in an attempt to prevent competition from the colonial sugar industry, was part of wider legislation which also attempted to prevent the development of the sugar industry in the Philippines through the limitation of corporate land ownership there to 1,050 acres. The law was never applied in Puerto Rico or the Philippines. The revival of the 500 acre law by the Popular Democratic Party did not significantly reduce sugar output in Puerto Rico. Sugar production peaked in the early 1950s and then remained stable throughout the decade. It is simply not true that the sugar industry collapsed in the face of an aggressive agrarian reform carried out by the Partido Popular Democrático. A study of the decline of the sugar industry of Puerto Rico characterized the agrarian reform of the Populares as "nothing more than a 'real estate' transaction between the government and the sugar interests. There are currently over 100,000 acres in open

violation of this law (Cruz Báez, 1977: 39).

There was no sudden collapse of the sugar industry in Puerto Rico. Throughout the 1950s, sugar production in Puerto Rico hovered around the yearly figure of one million tons. However, employment in the sugar industry declined much faster that total sugar output, suggesting an increase in productivity during the decade. New varieties of cane increased agricultural yields, particularly in the lands operated by large corporations such as the Aguirre Sugar Company. Productivity in the sugar industry increased from a level of 14.82 tons of sugar per worker in 1951 to 25.25 tons of sugar per worker in 1964, an increase of 70 percent (Cruz Báez, 1977: 79). The sugar corporations were able to sustain high levels of output while at the same time shrinking their payrolls. Between 1950 and 1960, the sugar industry laid off 42,000 workers. In 1960 the sugar industry produced 70 percent as much sugar as in 1950, with 40 percent as many workers.

Most of the employment in the sugar industry was generated by the agricultural phase of the process, which was difficult to mechanize. The cutting of sugar cane was done by field workers with a machete, essentially with the same technology of the 19th century. In Puerto Rico there was no mechanization of the cutting phase in the 1950s. What seems to have made the difference in the 1950s was the mechanization of the process of lifting the sugar cane into trucks once it was cut. "Most of the improvement in labor productivity between 1951 and 1964 was the result of mechanizing the loading phase in the fields. Simple field cranes replaced labor in loading the cane into the trucks. By 1964, almost 100 percent of the cane was completely loaded by machinery (Cruz Báez, 1977: 80). After 1964, productivity growth in the sugar industry ceased. Smaller mills began to shut down operations while some of the larger mills actually increased their share of sugar production. The only municipality in which the area planted in cane increased in 1963-72 was Guánica on the southwestern coast, the site of the gigantic Guánica mill of the South Porto Rico Sugar Company. Between 1950 and 1955, Central Constancia in Ponce and Central San José ceased operations. In 1955-60 Pasto Viejo in Humacao, and centrales Rochelaise and Victoria closed down. In the first half of the 1960s Constancia , El Ejemplo, Guamaní, Juanita and Plazuela shut down. Centrales Canóvanas. Cayey, Machete, Río Llano, Rufina, San Vicente, Santa Juana and Soller all closed down between 1965 and 1970. Cortada, Juncos, Lafayette, Los Caños and Monserrate closed down between 1970 and 1975. The giants of the industry, which were established in the first decade after the U.S. occupation of the island and which controlled much of the wealth of the insular economy for decades, finally collapsed in the late 1970s and eighties. Central Fajardo of the Fajardo Sugar Company closed down in 1978. Central Guánica, which had been in the first decade of the century the largest sugar mill in the world, closed down in 1982. Central Aguirre, whose yearly dividends of 30 percent to its owners earned it the title of "Drake's Treasure" in the 1930s, closed down in 1991 (Puerto Rico Department of Agriculture, 1980; 37-38; Puerto Rico Department of Agriculture, 1991).

By the late 1980s and 1990s the sugar industry of Puerto Rico was in a profound state of decline. Headlines in the local press of the island pointed to the unprofitability of the industry and the obsolescence of the industrial equipment. The few remaining centrales which were operated by the government owned *Corporación Azucarera* needed constant government subsidies so sustain operations, and in some years they were even unable to supply enough sugar for the local market or even enough molasses for the rum industry.

The Decline of the Home Needlework Industry

The home needle industry in Puerto Rico developed after 1914 as a result of the closure of traditional U.S. sources of supply of embroidered cloth and drawn linen. France, Belgium and Japan, the traditional providers, became inaccessible during and after the First World War due to the German blockade, high tariffs, and virtual embargoes (Hernández Angueira, 1993: 88). The wholesale trade in cloth and garments was controlled by large manufacturers and specialty stores, and responded to the development of mass produced *ready made* clothing which replaced locally craft-produced garments. Garments were manufactured in large factories, in smaller establishments called *sweatshops*, and in the homes of the workers who received already cut consignments of cloth and materials. There had been some development of the garment industry for export to the U.S. market between 1898 and 1914, but the big expansion of employment in that industry in Puerto Rico happened after 1914. In 1909, after 40,000 workers

from different branches of the garment industry went on strike in New York, the Department of Education in Puerto Rico introduced needlework classes into its school curriculum. Between 1909 and 1926, 26,277 women were trained through the public education system in Puerto Rico to provide an abundant and skilled labor force for this industry (González, 1993: 69-70).

The development of the garment industry is intimately intertwined with the development of the two other principal export crops of the Island, sugar and tobacco. Garment production took advantage of the transportation infrastructure, such as trains, trucks, and ships, introduced originally to service the sugar industry (González, 1993: 77). The seasonal nature of employment in the sugar industry pushed many households in the rural areas and in the towns into misery during the *tiempo muerto*. Employment in the home needlework industry was a means of household survival during the off-season when the majority of male workers were unemployed. During the months of August, September and October, payrolls in the sugar industry shrank to half their harvest time size (January to July). In November, the sugar industry employed only a third as many workers as during the harvest, so that two thirds of the workers and small cane growers were idle (Bird, 1941: 51). Home needlework was an industry "without any foundation except misery. It could exist only on desperation wages. No one could make a living at it; but a woman whose husband is unemployed and whose children are starving will go to great lengths for the price of a few pounds of rice" (Ross, 1976: 17).

There were some rather large workshops in Puerto Rico. In 1918, four large establishments in Mayagüez employed 1,000 workers, and two large establishments in Ponce employed 1,400. However, most shops were small. By 1930 there were 166 garment shops with approximate average employment of 40 workers each. As the sugar industry advanced, and generalized the problem of seasonal unemployment, garment production also advanced. Because most of the workers were women, wages in the industry were considered "supplementary" to those of the household males, allowing the jobbers to pay very low wages. However, these large shops paid better wages than home production, and allowed the workers congregated at the production site to organize, in contrast to the dispersed household producers who dealt individually with the jobbers. The poorer paid household producers were responsible for the bulk of the output of the needlework

industry. Ninety percent of garment production took place in the homes of the workers, in the classical pattern of "putting-out" or "cottage" industries (Hernández Angueira, 1993: 95).

The number of employees in the official figures are probably an underestimation. In many homes, women worked and were assisted by their children, and in times of economic duress, adult males also worked in cottage production, but the figures for wage employment in the cottage industry register only the transactions between the women and the intermediaries who delivered the materials and picked up the finished product. According to a Report of the Women's Bureau of the U.S. Department of Labor, more than 40,000 *families* were employed in the domestic needlework industry in Puerto Rico in 1933 (Manning, 1934; Hernández Angueira, 1993: 93). In 1929, the sugar industry paid $4.6 million in wages, the garment industry $3.1, and the tobacco industry $1.9. Garment production became the second largest source of wage employment in the island. During the 1930s, the industry became the second largest employer in Puerto Rico (González, 1993: 68, 74-75).

> The system as it now works is this. A continental agent takes to the Island all the necessary materials for turning out the completed product, sets himself up in a rented storehouse and announces that he is ready to put out the goods he has brought. He seldom deals with the workers directly, for being alone or at best having one or two partners, he cannot supervise the entire process. The cloth and other materials are put out to a number of subagents who, in turn, make contracts with the women for doing the work. Most of the work so done is carried to the homes of the workers where it is made up (Diffie & Diffie, 1931: 181).

Total employment in the needle and textile industries increased from 18,000 in 1920 to about 70,000 in 1948, three and a half times faster than the increase of manufacturing employment in other branches during the same period (Perloff, 1975: 105). As late as 1950, the cottage needle industry employed as many workers as all other manufacturing sectors combined (Puerto Rico Planning Board, 1951).

Most studies of the home needle industry end in the 1930s or 1940s. However, the precipitous decline of the home needle industry took place in the decade of 1950 to 1960, the decade of the great migration of Puerto Ricans to the United States. In 1938, the Federal Labor Standards Act became law in the United States and was extended to Puerto Rico. In the United States, out of a labor force of 54,000,000, only about 300,000 were affected by the minimum wage legislation. The overwhelming majority of workers made above the minimum wage, and factory wages were typically at least double the minimum wage, but in Puerto Rico the federal minumum wage stood above the level of wages in the majority of branches of employment. "Home needlework, which from the point of view of employment was by far the largest manufacturing industry in Puerto Rico, with average earnings of between 3¢ and 4¢ an hour, was the most seriously affected of all. For such an industry, a 25¢ hourly wage was fatal" (Barton & Solo, 1959: 7). The Puerto Rico Chamber of Commerce sent a delegation in May 1939 to Washington to protest the application of the minimum wage legislation. The U.S. Department of Labor reported that "The needlework industry consisted principally of hand sewing operations performed by women in their homes on material supplied by manufacturers and jobbers on the mainland, and supervised locally by a series of contractors and subcontractors. It suffered from competition from China, the Philippines and the Madeira Islands, price-cutting among contractors, and inefficient organization. This and many of the other industries on the Island were marginal in the sense that their existence depended upon the maintenance of low wage rates." Between 1937 and 1940 needlework exports from Puerto Rico dropped from over $20 million to $5 million, and some sectors of the needlework industry left the island permanently at this time (U.S. Department of Labor, 1959; Barton & Solo, 1959: 9). A Report by the office of the governor of Puerto Rico concluded that "the Needlework Industry of Puerto Rico cannot pay a minimum wage rate of 25 cents an hour." As a result of these problems new bills were introduced in the U.S. Congress between March 1939 and May 1940 amending the Fair Labor Standards Act for Puerto Rico and the Virgin Islands. The amendment, S. 2682, authorized minimum wage administrators to set up industry committees to recommend minimum wage rates for Puerto Rico and the Virgin Islands. This revision to the rise in wages, which was threatening to employers, was combined with

submarine blockades which interrupted Far Eastern competition during World War II, and by 1950 needlework exports were far above the prewar peak.

After 1954, revisions to FLSA raised wages in Puerto Rico and employers fled the island.

> Particularly in apparel and especially in the lines under the jurisdiction of the International Ladies' Garment Workers Union, Puerto Rico's new apparel factories (as distinct from home needlework) were becoming of substantial competitive importance. Mainland employers and the union both complained about what they regarded as the unfair nature of this competition which depended mainly on the lower wage rates prevailing in Puerto Rico. Mr. David Dubinski, president of ILGW, was particularly outspoken in urging that a 25¢ an hour increase being considered for the Federal statutory minimum also be applied to each of the various minimums then existing in Puerto Rico (Barton & Solo, 1959: 12).

Governor Luis Muñoz Marín argued before the House Committee of Education and Labor that raising the minimum wage represented an invasion of the spirit of self government implicit in Puerto Rico's recently acquired Commonwealth status (Barton & Solo, 1959: 13). The Congress rejected a flat increase and reintroduced the committee system which had been operating since 1940. In Puerto Rico, the Minimum Wage Administration nevertheless raised local minimums. During the early 1950s employment in the home needle industry declined while employment in garment factories increased. The job losses in the home needle industry were considerable. From a peak of 54,000 in 1950, employment decreased to 43,000 workers in 1951, 36,000 in 1952 and 34,000 in 1953, a decrease of 37 percent. By 1957, there were about 15,000 workers employed in the industry. Whereas 31 percent of all women workers were in the home needle industry in 1940, by 1979 less than 1 percent of the labor force was employed in it (Dietz, 1986: 226).

Employment in the home-needle industry declined by 40,000 jobs in 1950-1960. During the decade of industrialization and Operation Bootstrap, not only did employment decline in the sugar industry precipitously. It

declined drastically in the home needle industry as well. Industrial employment in all the other branches increased from 55 to 82 thousand. The "modernization" of Puerto Rico did not bring about an absolute increase in manufacturing employment. On the contrary, during the first 15 years of Operation Bootstrap, total agricultural employment declined, and total industrial employment *also* declined (counting the home needle industry). The expansion of factory production was not able to counterbalance the collapse of the home needle industry. The decrease of 41,000 jobs in the home needle industry was greater than the increase of 27,000 jobs in new factories, adding to the already very strong push towards immigration imparted by the decline of employment in the sugar industry.

Conclusion

Operation Bootstrap brought about a profound social transformation in Puerto Rico. The traditional dependence of the island on the sugar industry declined, and so did the home needle industry. However, the process of industrialization did not generate sufficient employment to compensate for job loss in these two branches of industry. Men were principally affected by the decline of employment in the sugar industry. Women were affected mostly by the decline of employment in the home needle industry. The combination of declining employment opportunities for both men and women provided a powerful impetus to the process of migration. The Migration Division of the Commonwealth of Puerto Rico directed the exodus of the Puerto Rican population in the 1950s, but it did not create it. The dimensions of the process of migration cannot be understood without taking into account the underlying economic and social causes propelling the exodus of population from the Island.

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LATINO STUDIES JOURNAL

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