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The Transformation of Southern Agriculture and the Migration of Blacks and Whites, 1930-1940[1]

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The migration of blacks and whites from the South since 1930 has been traditionally characterized as resulting from the mechanization of agriculture. It is argued in this article that the real cause of the migration must be situated in the crisis in cotton farming during the Depression of the 1930s. Large farm owners secured aid from the federal government in the form of agricultural subsidy payments. In response to this program, they reduced their cotton acreage, bought tractors, and displaced their tenants. This transformation drastically reduced the need for tenant labor and brought about the large-scale migrations. Regression analyses of relevant data confirm this interpretation. The major conclusion is that migrations will be shaped by social, economic, and political relations that require unique historical understanding. Further, migrations will tend to reflect conditions at the point of origin.

The theory of American development and its effects on the redistribution of the American population has largely been left to economists and demographers. This theory suggests that America became an urban society as machines replaced men in the countryside and opportunities for jobs in industry expanded. This article demonstrates that the cause of the most important population movement of this century in America, the movement of blacks and whites from the South to the North and West, is not consistent with this characterization. Indeed the migrations from the South resulted from the ability of large farm owners to secure government intervention on their behalf during the Depression of the 1930s. The Agricultural Adjustment Administration's program of the period

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reduced cotton acreage and provided large farm owners in the South with capital to buy tractors. This program made it more profitable to farm larger tracts of land with machines and wage labor and therefore, large farm owners displaced the mass of white and black tenants. This resulted in the transformation of southern agriculture from a labor-intensive tenant system to a mechanized, capitalist agriculture.

In this article, the dominant economic theory of migration is reviewed. Then a brief critique is offered. Next, the relevant aspects of the history of the South are given and the political and economic crisis and their solutions are outlined. Data supporting this interpretation are then presented.

ECONOMIC THEORY AND A CRITIQUE

The economists' view of American development can be summed up very easily. In the early stages of American history, most people lived in rural areas and were subsistence farmers. The urbanization of America proceeded as the result of two forces: mechanization in agriculture and industrialization in cities (Lee *et al.*, 1964, p. 2). The mechanization of agriculture began first and the major result was the reduced need for manpower in the countryside. Industrialization, which can be characterized as the growth of the factory system, drew people to the cities. From a theoretical point of view, economists see migration as a function of wage rate differentials (Vickery, 1977; Todero, 1969; Sjaasted, 1962; Eldridge and Thomas, 1964; Greenwood, 1975). The theory suggests that people move in response to wage differentials; *i.e.*, they move from areas of low income to areas of high income. The economic version of the move of blacks and whites from the South is a straightforward application of the development hypothesis and the wage rate hypothesis. In the South from 1930 on, machines replaced laborers in the cotton fields. At the same time, opportunities were opening up in the industries of the North and West and people responded to wage rate differentials by moving (Street, 1957; Dilingham and Sly, 1966; Vickery, 1977; Mandel, 1978, to mention a few). This interpretation of the migrations from the South is also held by most demographers (Hamilton, 1939, 1959, 1964; Taeuber and Taeuber, 1958).

The critique offered here of this explanation centers on anomalies that economic theory is unable to explain. First, mechanization proceeded in the South at a slow pace and came rather late. Some have asserted that this was due to the culture of agricultural production in the South which was based on a traditional, labor intensive tenant system (Street, 1957; Day, 1967). It is argued here that the lack of mechanization must be traced to the development of the southern rural class structure and that structure's peculiar dynamics. Mechanization in the South was not held back by tradition-bound white landlords and uneducated tenants. Rather, the absence of machines reflected the lack of liquid capital in the region and the social organization of agriculture into a landlord-tenant relation. The former prevented outlays of capital for machines. The landlord-tenant relation was highly dependent on the landlord's extracting money from the tenant for seed, fertilizer, and living expenses as well as for rent. From the landlord's point of view, supplying tenants was more profitable than buying machines. The mechanization of southern agriculture occurred in the 1930s when capital became available and tenant farming was no longer profitable for the landlord.

The second part of this critique centers on wage rate differentials as the basis of migration choices. If wage rate differentials underlay migration, then one would have to argue that historically blacks and whites should have left the South immediately following the Civil War. Wages were higher in the North and the differential actually narrowed from 1870 (Lee *et al.*, 1964). The wage rate differential did not match the patterns of migration from the South. From 1870 to 1915 migration from the South was very low and only increased from 1915 onward. The issue or question is "why?" Here it is argued that migration from the South was more dependent on events in the South than on circumstances elsewhere.[2] In general the migrations from the South reflected the social and economic structure of the South. In particular, the dynamics of cotton production and the expansion and contraction of opportunities within cotton agriculture conditioned the flow of labor in the rural South.

THE CLASS STRUCTURE OF THE SOUTH

The most important point to note about the South is that for much

[2] In this article, the mechanization hypothesis is directly tested, while the wage rate hypothesis is not. There are a number of difficulties in testing the wage rate hypothesis and therefore, no measures are included here. *See*, Fligstein, 1981, Ch. 9 for a discussion of those difficulties and some data analysis that attempts to test for effects of wage rates.

of the past 200 years it has been geared to the production of cash crops for a world market. The basic set of social and economic relationships in the South has been structured by this fact. The rural class structure in the South circa 1930 was distinguished by two classes: those who owned land and those who did not (the following discussion is based on material from Hammond, 1897; Brooks, 1914; Ransom and Sutch, 1977; Brannen, 1924; Woofter, 1936, 1969; Goldenweiser and Truesdell, 1924 and Schwartz, 1976). Those who owned land can be further distinguished by the size of their holdings. Small farm owners worked less than 200 acres with their families and perhaps a few wage hands. Large farm owners or plantation owners operated much larger farms which were subdivided into plots that were rented under a variety of arrangements. Plantations were operated in one of four ways: 1) the owner lived on the plantation, worked part of the land, and rented part to tenants, 2) owners moved to town, become absentee landlords, rented the land and left the tenants unsupervised , 3) merchants in town controlled plantations where they rented the land and supplied the tenants with food, seed and fertilizer, or 4) corporations or banks controlled the land and operated as absentee landlords.

The non-owners of land formed a rough scale with the following identifiable positions beginning with the lowest first: laborers, sharecroppers, share tenants, cash tenants (Brennen, 1924; Woofter, 1936, 1969). Laborers were paid daily wages and worked under the close supervision of a farm owner often in work gangs. Sharecroppers worked a part of the plantation, usually 20 to 30 acres and supplied the labor and one-half of the fertilizer while the landlord supplied the land, fuel, housing, tools, work stock, feed, and seed. At the end of the year the crop was split with half going to each. The sharecropper tended to be closely supervised; the landlord told the sharecropper what to do and when to do it. Share tenants were closer to being true renters. The landlord supplied the land, housing, fuel, and one-third or one-fourth of the fertilizer while the tenant supplied labor, work stock, feed, tools, seed, and the rest of the fertilizer. The share tenant took two-thirds or three-fourths of the crop and the landlord took the rest. The share tenant was a renter and hence was not supervised in his daily activity. The cash tenant was a true renter. The landlord furnished only land, housing, and fuel and the tenant supplied the other necessities. The landlord received a fixed rent in cash or crop and the tenant kept the rest. This tenant status had the most independence as well as giving the tenant the impetus toward increased production. If a tenant was able to keep any amount of product above the amount required to pay the rent, this was incentive enough to encourage increased production.

CLASS STRUCTURE AND THE DYNAMICS OF COTTON PRODUCTION, 1900-1950

The entire system of cotton production was based on credit, as there was little capital available to undertake production. Both tenants and owners borrowed money on the basis of the crop that was to be grown. They entered into an agreement that was called a crop lien. The grower of the crop would get food, clothes, seed, fertilizer, and supplies from a local merchant in exchange for a crop lien, which entitled the merchant to first rights to the cotton. Landlords often operated as merchants for tenants and they would make money by supplying tenants as well as getting paid rent. The merchant got the money to buy supplies by using the crop liens as collateral to purchase goods, supplies, and food from merchants and factories in the North on credit. The people of the South, in essence, planted the crop, bought food and clothing, and survived, all on the basis of credit extended locally by merchants (Woodman, 1968).

When the price of cotton was high, people grew as much as they could and indeed cotton production was profitable. But eventually there was overproduction of cotton and the price dropped. This had the effect of forcing people to grow more cotton in order to pay off debts. Of course, this caused the price to drop even further. During very bad times, many landowners lost their farms because of the perennial crisis of overproduction. This pattern of boom and bust repeated itself from the late 19th century to the mid 20th century.

In the 20th century, the relation between the cycle of cotton prices and debt and the class composition (*i.e.* the numbers and distribution of persons into owner and tenant positions) was quite complex. From 1900-1923, there was a gradual increase in cotton acreage, and until 1914, an increase in production (Fligstein, 1981:94-5). The price of cotton while erratic, tended to rise. During this period, there was an increase in the numbers of both black and white farmers in the South (this discussion is based on tables presented in Fligstein 1981:84-85). In class composition, whites were more likely to be owners (57%in 1900, 55%in 1920) while blacks, tended to be tenants (only 19% owned land in 1900 and this rose to 20% in 1920). While high prices for cotton and expansion of cotton lands in Texas and Oklahoma brought more blacks and whites into cotton farming, the number of owners and tenants did not shift their relative proportions significantly. Opportunities in cotton farming were available for new owners and new tenants in similar proportions.

The price of cotton dropped in the decade 1920-1930, while the acreage and production of cotton increased. This created a crisis of overproduction that led to unfavorable economic conditions and increased debt, particularly for farm owners. Indeed, between 1920 and 1930, the number of white owners decreased by 26 percent (about 195,000 farmers lost their land) and the number of black owners decreased by 33 percent (about 53,000 farmers lost their land). This decrease was caused mainly by loss of land due to debt. The crisis of the late 1920s continued into the 1930s and this provided the preconditions for the transformation of southern agriculture. There was a great decrease in the number of farmers between 1930 and 1950 and this was totally due to decreases in tenants. During this period, the number of white tenants decreased 51 percent (about 416,000 white tenants were no longer employed) and the number of black tenants decreased by 49 percent (about 313,000).

From this discussion one can conclude that the general dynamics of cotton production created and reduced opportunities for blacks and whites in a similar fashion. However, these dynamics had more serious consequences for blacks since four out of five of them were tenants, whereas only one of two whites was a tenant. In the South, then, one could argue that the racism that kept blacks in a lower class position also meant that the eradication of that class would differentially bring hardship to blacks. Another indication of this hardship is that the number of white owners increased from 1930 to 1950 by 160,195 or almost 18 percent, while the number of black owners increased 7,928 or about 8 percent. Blacks were concentrated in the lower class in the South and that concentration meant that the transformation of southern agriculture hit them the hardest.

THE CRISIS OF 1932

From 1926 to 1932, cotton farmers were forced to keep production high because of debts incurred during the boll weevil infestation and debts compounded by the drop in the price of cotton. In the late

1920s, this crisis of overproduction was so severe that massive numbers of landowners lost their land and were forced to become tenants. Overproduction and too much debt brought the southern economy into the depression. An indication of the severity of the crisis of overproduction is that from 1928-32, the amount of unsold United States cotton increased from 2.3 million to 9.7 million bales (International Cotton Advisory Committee, 1951). Further, the United States' share of the world's unsold cotton increased from 22 percent to 53 percent. In 1932, the price of cotton dropped to 6 cents a pound. These events all occurred in the face of a national and international depression. Throughout most of the ups and downs of cotton production, from the Civil War on, merchants and large planters were still able to make money. From the merchants' perspective, people needed to eat and obtain the essentials of life and the crop lien guaranteed them a product to sell. The planters, some of whom supplied their tenants with goods, also were in a position whereby they were guaranteed income. In the late 1920s and early 1930s, however, this situation changed. The indebtedness of tenants and farm owners increased drastically and the price of cotton decreased. By 1932, merchants and planters themselves were threatened with the loss of their businesses. The bankruptcy of the privileged groups in the South would affect merchants, industrialists, and banks in the North. The first Roosevelt administration began with the need to counteract the depression in general and solve the southern situation in particular.

THE STATE, THE FARMER'S BUREAU, AND THE AGRICULTURAL ADMINISTRATION ACT

For economic problems to have political consequences, there often exist groups organized to bring pressure to bear. In the case of farmers in the first 40 years of the 20th century, two farmers' groups were important: the Farmers' Union and the American Farm Bureau (McConnell, 1953, pp. 36-55; Tindall, 1967, pp. 427-478; Montgomery, 1929, pp. 7677; Kile, 1948, pp. 17-22; Ford, 1973, pp. 42-44; Baldwin, 1968, pp. 286-287). The Farm Bureau is the most important group to consider as it had the most important impact on farm policy (McConnell, 1953, pp. 71-83; Campbell, 1962; Kile, 1948, pp. 203-244). The Farm Bureau had its origins in the educational programs of the U.S.D.A. Initially the federal government paid county agents to demonstrate new farming methods throughout the country. To help disseminate such information, local county farm bureaus were formed. These farm bureaus began expanding their functions from education to the formation of buying and selling cooperatives (Kile, 1948, pp. 40-46). In 1920, the American Farm Bureau Federation was born. It sought to represent all farmers and self-consciously distanced itself from agrarian radicalism (Kile, 1948, pp. 50; McConnell, 1953, p. 56). The members of the Farm Bureau tended to be relatively well-off farm owners (McConnell, 1953, p. 56).

The Farm Bureau had its start in the Northeast, spread to the Midwest, and finally came to the South. The politics of the Farm Bureau from the moment of its formation were oriented towards the marketing problems of farmers (*i.e.*, low prices and high costs of selling). In the early 1920s, farm organizations thought cooperatives would solve their problems and the Farm Bureau was instrumental in having legislation passed in Congress to allow these ventures to proceed (Montgomery, 1929, pp. 249-265).

The ideal of price supports for various agricultural products became an important political issue beginning in 1924. George Peek, Chester Davis, and George Jewett proposed a plan whereby the government would support the price of farm commodities (Kile, 1948, pp. 146-151; McConnell, 1953, pp. 61-64; Campbell, 1962, pp. 30-43; Benedict, 1953, pp. 207-238). The basic approach was that farm surpluses would be exported at world prices, while domestic prices were maintained at an acceptable level. The difference between the two prices would be financed by government farm tariffs. This plan was introduced in Congress in 1924 and came to be called the McNary-Haugen Bill (after its co-sponsors).

The Farm Bureau became the staunchest advocate of the McNary-Haugen Bill in the late 1920s. The bill twice passed Congress and was twice vetoed by a Republican president. With the Depression and a Democratic regime, price supports for agriculture became law. The program of the Farm Bureau and most other agrarian organizations basically represented farm owners and their interests. No organization before 1934 was oriented towards easing the credit burden and peonage-like state of the tenant. Further, no farm organization in the period, until the Southern Tenant Farmers' Union was formed, was concerned with the problems of blacks. Rather, the Farm Bureau and other farmers' organizations concentrated on lobbying efforts in Washington oriented towards aiding the farm owner.

The crisis of agriculture which began in the late 1920s was not confined to producers in the South. Although the tenant system and the crop lien mechanism were not operative in the rest of the country to the extent that they existed in the South, the crisis of overproduction and the concomitant low prices for farm commodities were. However, the impoverishment of the people in the South was much more severe than in the rest of the country. Franklin Roosevelt came to power in 1932 promising to solve the problems of rural poverty in the South.

The solution of the crisis in agriculture was embodied in legislation called the Agricultural Adjustment Act of 1933. This act represented a permanent change in the government's attitude toward farm production and the prices of commodities. From this time on, the government intervened into the production process to regulate it and insure stable prices. The basic provisions of the legislation were relatively simple. The government paid farmers subsidies to cut down the amount of whatever crop was being regulated (Nourse *et al.*, 1937, pp. 78-114; Richards, 1936, pp. 30-42). Further, the government bought surpluses already on the market to stabilize prices.

The Farm Bureau played a key role in the support and passage of this legislation (Campbell, 1962, pp. 44-67). The Farm Bureau, with the leadership of Ed O'Neal, a southerner and a planter who was the Farm Bureau president throughout the 1930s, accomplished two major feats. First, the Farm Bureau brought about a sectional alliance between midwest and southern farmers. Second, in 1932, O'Neal personally undertook the task of presenting a united front of agricultural organizations in support of legislation embodying principals like those contained in the Agricultural Adjustment Act (McConnell, 1953, pp. 71-72; Campbell, 1962, pp. 44-84).

Paying farmers' subsidies not to produce crops does not necessarily imply that only farmers owning land benefited. To consider how farm subsidy payments worked against tenant farmers, it is necessary to understand how such payments were administered. The basic mechanism by which contracts were signed, enforced, and subsidies paid was the county farm extension agent system (Nourse *et al.*, 1937, pp. 51-54; Grubbs, 1971, pp. 36-38; Richards, 1936, pp. 67-81). The farm owner was entitled to a subsidy on part of his land and was paid for the "usual" amount of crop grown. If the owner had cash tenants, the tenant was entitled to the entire subsidy. In the case of share tenants or sharecroppers, tenants were entitled to their share of the subsidy. Further, the landowner was not supposed to change the tenants' status nor was he supposed to reduce the number of tenants (Nourse *et al.*, 1937, pp. 340-349; Richards, 1936, pp. 135-146). The subsidy payment in the case of share tenants and sharecroppers was given to the farm owner who was supposed to split the payment. The mechanism whereby the tenant could argue that he had been cheated consisted of a local committee made up of the county agent and respected members of the community (in the South this usually meant other planters).

Given this kind of organization and the possibility of denying tenants' rights, it is not surprising that reports of abuse of tenants' rights were widespread (Grubbs, 1971, pp. 30-61 ; Conrad, 1965, pp. 64-82). In Arkansas, the Southern Tenant Farmers' Union was formed in 1934 with the goal of preventing the spread of these injustices (Grubs, 1971, p. 29). Certain elements in the Agricultural Adjustment Administration (AAA) were also alarmed at the possibilities of landlord domination and they attempted to help tenants by investigating whether landlords kept a disproportionate share of the income and whether tenants were being displaced or forced to become wage hands. These activities, in particular the Myers Report, strongly indicated that tenants were being denied payments, forced off the land, or forced to become wage laborers (Grubbs, 1971, p. 54; Conrad, 1965, pp. 177-186; Nourse *et al.*, 1937, pp. 347-348). The issue came to a head in 1935 when Chester Davis, head of the AAA, demanded a purge of the liberals in the AAA as they tried to enforce a rule that would have prevented landlords from displacing their tenants. Davis went to Agriculture Secretary Wallace and threatened to quit if the liberals were not forced to resign. Wallace went along with Davis because Roosevelt depended upon cotton state spokesmen for support in Congress, in particular Senators Robinson of Arkansas and Harris of Mississippi. Alienating important Senators and Representatives by alienating planters was not politically feasible. Further, Davis and his supporters controlled the structure of the AAA and the Department of Agriculture. In the face of this, Wallace had little choice but to accept Davis' demands. The result was that things were left in the hands of county agricultural agents and planters were able to do what they pleased.

The transformation of southern agriculture had begun. With subsidy payments, land owners no longer needed tenants. Those who remained often became wage laborers. Further, the influx of tractors in the late 1930s and 1940s into cotton production is related to the growth of capital in the South.

The view that mechanization occurred in the South to make production more efficient is an oversimplification. Mechanization did occur in the South because it was more efficient in the sense that profits were higher. However, mechanization would not have occurred unless social conditions had been right. The federal government provided the catalyst whereby the infusion of capital and the control of production allowed the transformation of southern agriculture to proceed. When intervention came into the process of accumulation of capital in agriculture, it came first and foremost in the interests of farm owners, particularly those producing commercially.

The Agriculture Adjustment Act of 1933 was not a measure oriented towards alleviating rural poverty. Instead, it allowed the cotton growing industry to attain some semblance of stability in the face of low prices, debt, and overproduction. It brought the government into the market place to increase the farm owners' income, cut back on production, and, thus, affect a price increase which further raised farm income. But the major difficulty was that the system worked for the plantation owner or other commercial producers while allowing the displacement of the tenant population. As a result, rural poverty increased. Displaced tenants were in a difficult position and many took the obvious way out: they migrated.

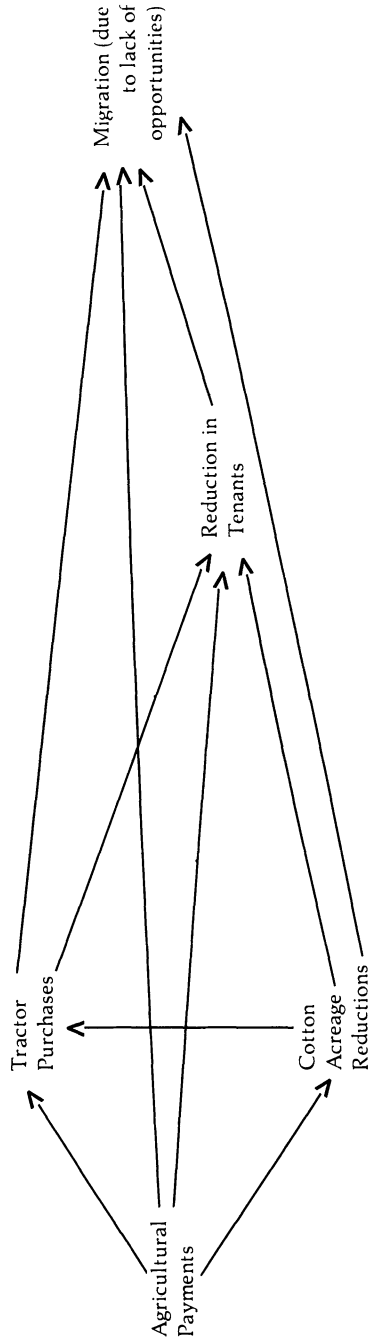
A MODEL OF THE CAUSES OF MIGRATION FROM THE SOUTH

The argument presented so far can be summarized in the causal model depicted in Figure I. It has been asserted that agricultural payments to farmers, and in particular, large farm owners were the basic cause of the transformation of southern agriculture from a labor intensive, tenant based system to a mechanized, wage labor system. One result of this transformation was the drastic reduction in the demand for tenant labor. The outcome was the eventual out-migration of millions of rural southerners.

By using a causal diagram, one is able to make explicit hypotheses

FIGURE I

A DIAGRAM OF THE CAUSAL PROCESS UNDERLYING THE MIGRATION OF BLACKS AND WHITES FROM THE SOUTH, 1930-40



about the causal relations between the various factors involved in the verbal argument. Figure I suggests the following hypotheses. Agricultural payments caused cotton acreage reductions and provided money for the purchases of tractors. Cotton acreage reductions implied more intensive cultivation of the land and this also stimulated tractor purchases. All three factors were responsible for a reduction in the demand for tenant labor. Agricultural payments caused a reduction in tenant labor, mainly through the mechanism of reducing the amount of cotton acreage planted. Tractors displaced tenants as machine cultivation replaced hand cultivation. Acreage reduction reduced opportunities for tenant farmers and hence, reduced the demand for tenant farmers. The agricultural payments, increase in tractor purchases, reduction in cotton acreage and reduction of tenants, all brought about migration as they implied lower demand for labor. Individuals in the rural South perceived these forces that undermined their ability to earn a living, and in the face of these conditions, migrated.

DATA AND METHODS

It is important to attempt to test these assertions using data and multivariate techniques. To begin, one must choose a unit of analysis. In some ideal research world, one would like to sample persons across the South and study their migration patterns over the relevant period of time. In the real research world, such a study is impossible because: 1) the time has passed; and 2) many of those whom one would want to sample have died. To study migration, many scholars have chosen to look at net migration or in-and out-migration over some geographical area. Here the county is the unit of analysis. The basic strategy is to estimate a net migration rate (Shryrock and Siegel, 1971) by race at the county level. Then it is necessary to test various hypotheses about how those rates fluctuate as a function of the social and economic characteristics of the county. Counties were chosen as units of analysis because counties are relatively homogeneous in terms of social and economic characteristics. Further, there is a wealth of data collected by various agencies which is disaggregated at the county level.[3] The model of migration con-

[3] The sample used here is restricted to southern counties producing cotton in North Carolina, South Carolina, Georgia, Alabama, Mississippi, Louisiana, Arkansas, Texas, and Oklahoma. Virginia, Tennessee, Florida, and Missouri are excluded from the analysis as they all produced negligible amounts of cotton.

structured is differentiated by race. Earlier it was argued that blacks tended to be in the worst positions socially and economically. Hence, their net out-migration rates will be higher than whites and if the argument is correct, the transformation of southern agriculture affected them more than it affected whites.

The dependent variable in the analysis presented here is the net migration rate by race for each county. The net migration rate is defined as: $(NM_r/TP1_r) \times 100$, where NM_r is the net migration for each county by race and $TP1_r$ is the total population by race at the first time point. The rate is directly interpretable as the net number of persons per 100 who have left or arrived in a county by race. Net migration (NM_r) is estimated by a forward census survival rate method (Shryrock and Siegel, 1971; Price, 1955; Lee *et al.*, 1964). For more information on this measure, *See*, Fligstein (1981, Appendix C).[4]

The independent variables in this analysis include measures of agricultural payments and changes in cotton acreage, tractors, and tenantry.[5] Agricultural payments is measured by the dollar amount in thousands of dollars that counties received in agricultural payments in 1934.[6] If agricultural payments played a key role in causing net out-migration, this measure should be highly associated with net out-migration. The change in the percent of all farm acres in a county in cotton over the decade 1930-40 measures the decline in cotton acreage. If a county were declining in cotton acreage, there should be net out-migration. The percent change in the number of tractors in a county over the decade captures the increase in mechanization and if the economists are right, this measure should be highly related to net out-migration. The percent change in the number of tenants by race measures the reduction of tenants in a county. This variable should be highly related to net out-migration. The data analytic strategy is to use multiple regression to assess

[4] It is impossible to calculate the "in" and "out" components of migration by race at the county level. Therefore, one must make do with an estimate of net migration. The net migration rate taps into the concept of whether or not more people were arriving in a county than were leaving. The net migration rate is also a standardized measure that is adjusted for population size.

[5] Data sources for these measures are available from Fligstein, 1981, Appendices A and B.

[6] The year 1934 was chosen because it is the only year in which agricultural subsidy payments data were available at the county level.

TABLE 1

MEANS, STANDARD DEVIATIONS, AND CORRELATIONS OF THE VARIABLES IN THE ANALYSIS

		(2)	(3)	(4)	(5)	(6)	(7)	X	S. D.
(1)	Net migration rate-blacks	.26	-.57	.34	-.22	.43	.16	- 9.3	16.33
(2)	Net migration rate-whites		-.53	.23	-.23	.22	.41	- .22	22.44
(3)	Agricultural payments			-.70	.26	-.31	-.27	124.95	141.95
(4)	% change Cotton Acreage				-.23	-.40	.42	- .10	.07
(5)	% change Tractors					-.22	-.10	1.29	1.83
(6)	% change Black Tenants						.47	- .33	.31
(7)	% change White Tenants							- .12	.21

Note: (N = 741)

whether or not the causal model presented in Figure I has any validity.[7]

Table 1 presents the means, standard deviations and correlation coefficients of the variables in the analysis. The average net black migration rate is -9.3 which means that over 9 percent of the blacks were leaving southern counties during the decade 1930-40 on the average. The average white net migration rate is -.33 suggesting greater variability among the migration patterns for whites than blacks. Agricultural payments averaged nearly $125,000 in each county in the South in 1933 dollars. Further, the average county had a ten percent decrease in cotton acreage and almost a 130 percent increase in tractors. These means are consistent with the theoretical expectations implied by our model. Black tenantry decreased 33 percent on the average while white tenantry decreased 12 percent. These numbers show that blacks were initially more affected by the changes in the social organization of agriculture than whites.

Table 2 contains regression results that test some of the hypotheses implied by Figure I. First, consider the relation between agricultural payments and changes in cotton acreage (Column 1). It is clear that agricultural payments caused massive cotton acreage reduction. Column 2 shows that agricultural payments and cotton acreage reductions were modest causes of increases in tractors. This is evidence that the transformation of southern agriculture to a machine-oriented stage was the result of the activities of the federal government. These results are in line with the hypotheses suggested from the historical analysis presented earlier.

Columns 3 and 4 show the effects of the reorganization of cotton agriculture on the change in tenantry for whites and blacks. For whites, it appears as if the major effect of agricultural payments was to reduce cotton acreage and, as a result of the cotton acrege reduction, white tenants decreased. There is no evidence that tractors displaced white tenants. A similar conclusion can be reached for blacks, although there is a small statistically significant effect of tractors on black tenantry which implies that tractors did displace black tenants to some degree. The major cause of the reduction in both white and black tenants is agricultural payments which reduced

[7] To some degree, these models may be misspecified. However, these results do not change with the addition of numerous control variables (*See*, Fligstein, 1981, Ch. 8).

TABLE 2

RESULTS OF A SET OF REGRESSIONS FOR BLACKS AND WHITES FROM COUNTIES OF THE SOUTH AND VARIOUS DEPENDENT VARIABLES (n=741)

Independent Variables	(1) [1]		(2)				(3)		
	b[2]	B	b	B	b	B	b	B	b
Agricultural Payments	-.003**	-.70	.003*	.26	.003**	.20	-.004**	-.27	.0001
	(.000)		(.000)		(.001)		(.0000)		(.0001)
% Change Cotton Acreage					-2.46*	-.09			1.36 **
					(1.30)				(.14)
% Change Tractors									
Constant	-.06		.87		.73		-.07		.007
R^2	.49		.07		.07		.07		.18

[1] (1) = % change in cotton acreage, (2) = % change in tractors, (3) = % change white tenants, (4) = % change black tenants.

TABLE 3

RESULTS OF A REGRESSION ANALYSIS USING THE NET MIGRATION RATE FOR BLACKS AND WHITES AS THE DEPENDENT VARIABLE (n- 741)

Independent Variables			Whites					
	b[1]	B	b	B	b	B	b	B
Agricultural Payments	-.084**	-.53	-.114**	-.72	-.111**	-.70	- .114**	-.72
	(.005)		(.007)		(.007)		(.006)	
% Change Cotton Acreage			88.63**	.28	92.06**	.29	150.19**	.47
			(13.63)		(13.55)		(12.88)	
% Change Tractors					-1.39**	-.11	-1.35 **	-.11
					(.38)		(.34)	
% Change Tenants							42.86**	.40
							(3.18)	
Constant	10.25		5.21		6.23		5.89	
R^2	.28		.32		.33		.46	

[1] b= unstandardized coefficients, standard error of b in parentheses, B = standardized coefficient.

TABLE 2 (continued)

RESULTS OF A SET OF REGRESSIONS FOR BLACKS AND WHITES FROM COUNTIES OF THE SOUTH AND VARIOUS DEPENDENT VARIABLES (n=741)

	(3)				(4)			
B	b	B	b	B	B	b	B	b
.05	.0001 (.0001)	.05	-.00007** (.000)	.31	-.00001 (.000)	-.06	-.000 (.000)	-.03
.45	1.36** (.14)	.45			1.59** (.21)	.36	1.53** (.21)	.35
	-.001 (.003)	-.01					-.022** (.006)	-.13
			-.25		-.16		-.14	
	.18		.09		.16		.17	

[2] b= standardized regression coefficients, standard errors of b are in parentheses, B = standardized regression coefficients.

* p .05, ** p .001.

TABLE 3 (continued)

RESULTS OF A REGRESSION ANALYSIS USING THE NET MIGRATION RATE FOR BLACKS AND WHITES AS THE DEPENDENT VARIABLE (n-741)

Blacks							
b	B	b	B	b	B	b	B
-.066** (.003)	-.57	-.075 (.005)	-.65	- .073 (.005)	-.63	- .072 (.005)	-.62
		26.99** (9.83)	.12	28.82** (9.81)	.12	54.80** (9.50)	.23
				- .74** (.28)	-.08	- .37 (.26)	-.04
						16.93** (1.63)	-.32
- 1.11		- 2.64		- 2.09		.25	
.32		.33		.34		.42	

* p .05, ** p .01.

cotton acreage and brought about tenant reductions. The causal mechanism previously suggested are confirmed by the data analysis.

Table 3 presents results analyzing the net migration rate by race as a function of the variables outlined previously. For whites, all variables have statistically significant effects on the net migration rate. However, the strongest effects are agricultural payments, acreage reduction, and change in tenantry. The tractor effect is small and one can conclude that the political transformation of southern agriculture is the most important cause of white net migration, while the technical transformation is only a minor cause. One should reflect on the size of the agricultural payment effect. The effect persists net of the other variables and one could speculate that this suggests whites in southern counties understood that the agricultural payments would eventually transform southern agriculture and they moved in anticipation of the final push. Some have viewed the mechanization that occurs in the late 1940s and early 1950s as caused by a labor shortage. This data suggests that individuals realized as early as the 1930s that cotton agriculture would change its social organization and, therefore, left as they understood the implications of changes for their employment opportunities.

The regression explaining the black net migration rate provides the same general conclusion. There is, however, one significant difference. The effect of tractors becomes statistically insignificant when the percent change in tenants is added to the equation. This implies that tractors are displacing black tenants and because of this, blacks are migrating. There is no direct effect of tractors on the black net migration.

In conclusion, the major hypotheses put forward in the historical section of this article have been confirmed by the quantitative analysis presented here. The causes of migration in the decade 1930-40 appear very much related to the social reorganization of cotton production. Subsequent analysis including more controls and additional decades confirms and extends these basic conclusions (*See*, Fligstein, 1981). Agricultural payments caused cotton acreage reductions and increases in the use of tractors. The cotton acreage reductions resulted in a decrease in the demand for tenant labor and all of these factors produced net out-migration for blacks and whites. There is additional evidence that black tenants were displaced by tractors and this contributed to their out-migration. Generally, the social reorganization of cotton production preceeded mechanization (and indeed, caused mechanization to some degree) and is the major cause of out-migration from 1930 to 1940. We speculate that blacks and whites throughout the South understood the transformation occurring around them, even before it affected their employment opportunities and moved in response to their expectations of future employment. This conclusion is based on the fact that the agricultural payments has a large effect on migration even net of the factors by which it lowered employment opportunities. The labor shortage in the rural area of the South around 1950 resulted from the perception of the underlying social processes at work.

CONCLUSIONS

In this article, it has been argued that the basic cause of the out-migration of blacks and whites from the South from 1930 to 1940 was the result of the transformation of southern agriculture from a tenant-based labor intensive system to a mechanized agriculture. This transformation occurred because the large farm owners (in the South, plantation owners) were able to secure aid from the federal government to support the price of cotton. The result of the activities of the Farm Bureau and the Agricultural Adjustment Administration was the forced migration of tenants. Mechanization was the result of the political activity of southern planters and the federal government's intervention. Tenants were forced off the land and thus had no choice but to migrate.

The data analysis presented offers strong support for the historical argument. Black and white net migration rates were caused, to a great degree, by the transformation of southern agriculture and the use of agricultural payments. Mechanization was not a major cause of migration from 1930 to 1940. Instead, mechanization was the result of the use of subsidy payments. Further, both blacks and whites were forced to migrate because of the subsidy payments and cotton acreage reductions. Blacks appear to have been more susceptible to this process because they were more highly concentrated in the tenant class position.

There are four major implications one can draw from this study for the study of migration in general. First, differing historical circumstances are likely to condition and structure migrations in different ways. The migration from the South reflected different historical and structural conditions than, for instance, the migrations from east to west. It is only within an understanding of the unique social, political and economic conditions that migrations are explicable. Second, mechanization in agriculture, industrialization, and urbanization are not merely economic or demographic processes. They occur within given sets of social and political relations and do not have effects on the distribution of population unless the social and political conditions are ripe. The problem with the economic view of the relation of mechanization in agriculture to migration is that it is incomplete. The timing and extent of mechanization will depend on the existing set of relations underlying agriculture and the crises engendered by those relations.

Third, generally, individuals act rationally given their information and constraints. When confronted with an agricultural system that is clearly being developed in ways that undermine their abilities to remain on the land, individuals will move. The rapid urbanization in the developing nations is thought by some to be irrational in the sense that urban areas are unable to provide recent migrants with jobs. It could be argued, that the migrations generally do not reflect the "pull" of urban areas, rather they may more accurately demonstrate the "push" from rural areas. From this point of view, the migrations appear more rational. Finally, in general, it may be the case that the conditions at the point of origin may be more important causes of migration given low levels of information about destinations. In essence, to understand large scale migration, it may be most useful to examine the transformations occurring in basic social and economic relations at the point of origin.

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