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Some Evidence on the Effect of Unionism  
on the Average Wage of Black Workers Relative to White Workers, 1900-1967

by

Orley Ashenfelter  
Princeton University

Lamond Godwin  
Rutgers University

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Orley Ashenfelter  
Princeton University

and

Lamond Godwin<sup>1/</sup>  
Rutgers University

The effect of the presence of trade unionism on the average wage of black workers relative to white workers may usefully be defined as the proportionate difference between the black/white wage ratio that actually exists at a particular date and what that wage ratio would have been in the absence of unionism.<sup>2/</sup> If, for example, the average wage of black workers divided by the average wage of white workers were .51 at a particular date, and if it would have been .50 at that date in the absence of unionism, then the effect of unionism is to raise the wages of black workers relative to white workers by 2 percent [= 100(.51 - .50)/.50]. In general, when defined in this way the effect of unionism on the wage of black workers relative to white workers will depend on (a) the extent of unionization of black

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<sup>2/</sup>That is, if we write  $R_b$  and  $R_w$  for the average wage rates observed for black and white workers at a particular date, and  $R_b^c$  and  $R_w^c$  for what these wage rates would have been in the absence of unionism, then the effect of unionism on the average wage of black workers relative to white workers is

$$\Delta = [(R_b/R_w) - (R_b^c/R_w^c)] / (R_b^c/R_w^c).$$

workers relative to white workers, and (b) the union/nonunion wage differential for black workers relative to white workers. That is, it will depend on the likelihood that a black worker will get into a union relative to the likelihood that a white worker will get into a union, and it will depend on the magnitude of the additional wages that a unionized black worker may expect to receive relative to the additional wages that a unionized white worker may expect to receive.

Empirical estimates of the effect of unionism on the black/white wage ratio during the last decade have only recently become available. In this paper we propose to offer some tentative evidence on the magnitude of these effects at selected points throughout the years since the turn of the century. Aside from general interest in the magnitude and variation in these effects over time, our purpose in doing this is twofold: First, we propose to examine in a time-series context the hypothesis that industrial unionization has had a more egalitarian (or less discriminatory) effect on the black/white wage ratio than craft unionization.<sup>3/</sup> Since the bulk of unionization in the United States prior to the 1930's, and after the demise of the Knights of Labor in the 1880's, was craft (or "AFL") unionism, this hypothesis predicts that the effect of unionization on the black/white wage ratio

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<sup>3/</sup> For more detail on the development of this hypothesis see Orley Ashenfelter, "Racial Discrimination and Trade Unionism," The Journal of Political Economy, (May/June 1972), and Ray Marshall, The Negro and Organized Labor (New York: John Wiley and Sons, 1965). For the cross-sectional evidence that craft unions are more discriminatory than industrial unions see Ashenfelter, op.cit.

should have been numerically smaller (less positive, or more negative) prior to the 1930's than later. Second, we want to shed some light on the hypothesis that the variability in the attitudes of black

political organizations toward unionism may be explained as a result of the size and sign of the effect that the presence of unionism has on the earnings of black workers relative to white workers.

#### I.

Table I contains estimates of the extent of unionization of the black and white work forces at scattered dates since 1886. The estimates of the number of black unionists at each date, which are most crucial for our purposes, are from a variety of sources, as noted in the table. Though all of these estimates undoubtedly contain errors, the data for the years before 1930 are probably of reasonable accuracy because of the concentration of black unionists in a very small number of unions in these years. The most striking impression from this table is the substantial difference in the percentage that black unionists were of all unionists as between the years before and after the 1930's. With the exception of the industrial-style Knights of Labor unionism in 1886, black unionists were never more than four percent of all unionists before 1940 and never less than seven percent of all unionists after 1940. Moreover, the variation in the position of black unionists relative to all unionists between 1886 and 1930 was dominated primarily by the waxing and waning of the single large industrial union that existed in this period, the United Mine Workers. This evidence provides strong

TABLE I

Estimates of the Extent of Unionization Among Black and  
White Workers, 1886-1967, Selected Years.

Year	Total Unionists (1)	Black Unionists (2)	Percentage of Black Labor Force Unionized (3)	White Unionists (4)	Percentage of White Labor Force Unionized (5)	Black Unionists as a Percentage of Total Unionists (6)
1886	960,241	60,000	2.4	900,241	4.2	6.3
1890	540,454	3,523	.1	536,931	2.8	.7
1900	868,000	32,619	.9	835,381	3.5	3.8
1910	2,140,000	68,753	1.4	2,071,247	6.4	3.2
1926-28	3,500,000	61,000	1.1	3,439,000	7.9	1.7
1930	3,416,000	56,000	1.0	3,360,000	7.9	1.6
1940	8,717,000	600,000	10.7	8,117,000	17.3	6.9
1944	14,146,000	1,250,000	21.4	12,896,000	25.8	8.8
1955	16,802,000	1,500,000	21.3	15,302,000	26.0	8.9
1967	17,790,070	1,989,270	23.0	15,800,770	23.0	10.7
1980 (projected)	21,698,000	3,385,000	28.5	18,313,000	21.3	15.6

Sources: Total Unionist: from Leo Wolman, The Growth of American Trade Unions, 1880-1923 (New York: National Bureau of Economic Research, 1924), p. 32 for 1886 through 1890; from Wolman's revised series in Historical Statistics of the United States, Colonial Times to 1957 (Washington: U.S. Bureau of the Census, 1961), p. 97 for 1900 through 1930; and from the BLS series, ibid., p. 98, for 1940 through 1955. The estimate for 1967 in column (1) is obtained by applying the percentage of the labor force figures in columns (3) and (5) to the appropriate labor force estimates for 1967 from Handbook of Labor Statistics 1970 (Washington: U.S. Bureau of Labor Statistics, 1970), pp. 31-32. This procedure is used for 1967 so that the estimate in column (1) will be consistent with the estimates in columns (3) and (5), the latter of which are based on union membership among private wage and salary workers only. The implicit assumption behind this procedure is that the extent of unionization among government workers is similar to that among workers in the private economy for both black and white workers. The method of projection to 1980 is described in the appendix.

TABLE I (continued)

Black Unionists: for 1886 based on estimated black membership in the Noble and Holy order of the Knights of Labor from Sterling Spero and Abram Harris, The Black Worker (New York: Columbia University Press, 1931), p. 42; for 1890 based on American Negro Artisan (Atlanta University Publication No. 7) as reported by Ira Reid, Negro Membership in Labor Unions (New York: Alexander Press, 1930), pp. 101-103; for 1900 based on Eric Hardy, The Relation of the Negro to Trade Unionism (Masters Essay, University of Chicago, 1911) as reported by Reid, op. cit.; for 1910 based on F. E. Wolfe, Admission to American Trade Unions (Baltimore: Johns Hopkins University Press, 1912) and reported by Reid, op. cit.; for 1926-28 based on Reid, op. cit.; for 1930 based on Abram Harris, The Negro Worker (New York: Conference for Progressive Labor Action, 1930), p. 13; for 1940 and 1944 based on Gessie Guzman, The Negro Year Book (Tuskegee: Tuskegee Institute, 1947) and George McCrary, "The Labor Movement, 1944-45," in Florence Murray (ed.) The Negro Handbook (New York: Current Books, 1947), p. 109; for 1955 based on Ray Marshall, The Negro and Organized Labor (New York: John Wiley and Sons, 1965), p. 311; for 1967 based on Orley Ashenfelter, "Racial Discrimination and Trade Unionism," The Journal of Political Economy (May/June 1972); for 1980 projection method see appendix.

Labor Force Estimates: for 1910, 1930, and 1940 from Dale Hiestand, Economic Growth and Employment Opportunities for Minorities (New York: Columbia University Press, 1964), p. 7; for 1926-28 and 1944 obtained by linear extrapolation between adjacent census years from loc. cit.; for 1955 and 1967 from Handbook of Labor Statistics ..., p. 31-32; for 1890 and 1900 from Historical Statistics ..., p. 72, series 27 and 28; for 1886 a linear extrapolation backwards using the implied growth rate from the labor force estimates in 1890 and 1900.

support for the hypothesis that industrial unions have been less discriminatory (more egalitarian) than craft unions. Second, it is also clear from the table that since 1940 the percentage of the black work force that is unionized has been growing relative to the percentage of the white work force that is unionized. Indeed, by 1967 the extent of unionization had become similar for the two groups.

In order to use the data in Table I to compute estimates of the effect of unionization on relative wages (which we will denote by  $\Delta$ ), it is useful to observe that

$$(1) \quad \Delta = BM_b - WM_w,$$

where B is the proportion of black employment that is unionized, W is the proportion of white employment that is unionized,  $M_b$  is the proportionate difference between the wages of union and nonunion black workers, and  $M_w$  is the proportionate difference between the wages of union and nonunion white workers.<sup>4/</sup> Estimates of  $100 \cdot B$  and  $100 \cdot W$  are contained in columns (3) and (5) of Table I, but estimates of  $M_b$  and  $M_w$  separately are available only since 1940 and during the year of a decennial census. In order to proceed it is useful to write the identities  $M_b \equiv \bar{M} + (M_b - \bar{M})$ ,  $M_w \equiv \bar{M} + (M_w - \bar{M})$  where  $\bar{M}$  is the overall average union/nonunion wage differential, and substitute for  $M_b$  and  $M_w$  in (1) to obtain

$$(2) \quad \Delta = (B-W)\bar{M} + B(M_b - \bar{M}) + W(M_w - \bar{M}).$$

Since white workers have always been around 90 percent or more of total employment it follows that  $(M_w - \bar{M}) \approx 0$ ; that is, the union/nonunion

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<sup>4/</sup> See Ashenfelter, op.cit., for more detail.

wage differentials for white workers cannot have differed by much from that differential for all workers. It follows, then, that even if  $W$  was not generally small  $W(M_w - \bar{M})$  was, in which case we may write (2) as

$$(3) \quad \Delta \approx (B-W)\bar{M} + B(M_b - \bar{M}).$$

We use (3) to provide estimates of  $\Delta$  for 1940 and after. Estimates of  $(M_b - \bar{M})$  are not available before 1940, however, so that (3) will not do for this earlier period. From Table I it is clear that  $B$  was exceedingly small prior to 1940, never larger than .014. Consequently, even if  $(M_b - \bar{M})$  was large in this period  $B(M_b - \bar{M})$  must have been very small, in which case (3) is simply

$$(4) \quad \Delta \approx (B-W)\bar{M}.$$

We use (4) to estimate  $\Delta$  in the periods before 1940.

Table II contains our estimates of the effect of unionization on the black/white wage ratio. According to these results the presence of unionism in 1900 may have lowered the black/white wage ratio by one-half percent at that date, but this effect seems to have grown steadily until at the beginning of the Great Depression unionism may have caused the ratio of the black wage to the white wage to be some two percent lower than would otherwise have been the case. By 1940 the expansion of unionization among black workers relative to white workers and a significantly larger union/nonunion wage differential for black workers, resulted in the black/white wage ratio being some three percent greater than would have been the case in the absence



TABLE II

Estimates of the Effect of Unionization on the Black/White  
Wage Ratio, 1900-1980, Selected Years

	$\bar{M}$	$M_b$	$M_w$	$\Delta$
1900	.200	---	---	-.005
1910	.160	---	---	-.008
1926-28	.268	---	---	-.018
1930	.282	---	---	-.019
1940	.262	---	---	.029
1944	.062	---	---	---
1955	.171	---	---	.030-.001
1967	.117	.161	.113	.017
1980 (projected)	---	---	---	.029

Source: For 1967 see Orley Ashenfelter, "Racial Discrimination and Trade Unionism," The Journal of Political Economy (May/June 1972), but note that  $\bar{M}$ ,  $M_b$ ,  $M_w$ , and  $\Delta$  are computed from weighted averages of more detailed components by industry and race/sex groups and not according to the simple aggregate equation (1) in the text. For 1926-55  $\bar{M}$  is computed from H. Gregg Lewis, Unionism and Relative Wages in the United States (Chicago: The University of Chicago Press, 1963) by inserting the relevant data from his Table 61, p. 218 into the equation  $\bar{M} = .163 + .032Z - 3.74X_2$  derived from his regression 8, Table 62. The same procedure is used to estimate  $\bar{M}$  for 1900 and 1910, except that since these dates are prior to the period of fit for Lewis' equation we take Z, the unemployment rate, from Lebergott's series in Historical Statistics ..., p. 73 and estimate  $X_2$ , the ratio of the actual to the expected wage level, from ibid., p. 91, series 590.

of unionism.<sup>5/</sup> As may also be seen from Table II,  $\Delta$  apparently declined over the period since 1940 to around 1.7 percent in 1967. This evidence clearly provides rather strong support for the hypothesis that industrial unionization has been less discriminatory than craft unionization.

## II.

If we assume that the general posture of the black political community with respect to unionism is based upon a rational calculation (perception) of the net economic benefits of unionism to that community, then we would expect that the black community would be favorably disposed toward unionism, on balance, when the effect of unionization on the black/white wage ratio was positive. On the other hand, we would also expect the black political community to be unfavorably disposed toward unionism, on balance, when the effect of unionization on the black/white wage ratio was negative. According to the estimates in Tables I and II, therefore, we should find three fairly distinct periods in the history of the relationship between black organizations and the labor movement. During the period of the rise of the Knights of Labor, in and about 1886, we should expect blacks and organized labor to coalesce. Likewise, in the period following the decline of the Knights we should expect this coalition to come apart and for the black political community to become anti-union, and increasingly so, until the 1930's. The third period of a renewed coalition between organized labor and black groups should then

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<sup>5/</sup>The estimate of  $M_b - \bar{M}$  for 1940 is derived from Ashenfelter, op.cit., Table 11. The estimate for 1955 is a range determined by the estimates from loc.cit. for 1950 and 1967.

begin following the Great Depression, but with some weakening in the decades immediately thereafter. In so far as we can determine from the available historical sources, this appears to be a generally accurate description of the overall course of the relationship between black political organizations and the labor movement.<sup>6/</sup>

For example, Spero and Harris report that black workers "flocked" to the Knights of Labor and that relations between unions and blacks in 1886 represented "an unprecedented era of good feeling between Negro and white workingmen."<sup>7/</sup> The disappearance of the KOL in the following four years apparently marked a turning point in the relation between unions and blacks. Anti-union sentiment became very strong amidst the black community over the period 1900-1930 and black workers frequently acted as strikebreakers to the accompaniment of the open encouragement of such prominent black leaders as Booker T. Washington<sup>8/</sup> and Marcus Garvey.<sup>9/</sup> Some black community organizations, especially the local affiliates of the National Urban League, even acted as a major source of black strikebreakers

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<sup>6/</sup> Important references are Sterling Spero and Abram Harris, The Black Worker (New York: Columbia University Press, 1931); Herbert Northrup, Organized Labor and the Negro (New York: Harper, 1944); Charles Wesley, Negro Labor in the United States (New York: Vanguard Press, 1927); and Ray Marshall, The Negro and Organized Labor (New York: John Wiley, 1965).

<sup>7/</sup> Spero and Harris, op.cit., p. 44.

<sup>8/</sup> Booker T. Washington, "The Negro and the Labor Unions," Atlanta Monthly (June 1913), p. 756.

<sup>9/</sup> Amy Jacques-Garvey, The Philosophy and Opinions of Marcus Garvey (New York: 1926), Vol. II, pp. 70-71.

for white employers. During the late 1930's, however, the upsurge in industrial unionism was apparently accompanied by a dramatic reversal in relations. The policies and practices of the Congress of Industrial Organizations won the support of both the National Association for the Advancement of Colored People (NAACP) and the Urban League. The NAACP played an active role in the unionization of basic industries and where the Urban League had previously been a source of strikebreakers it now established local "Workers Councils" to urge blacks to join unions. We conclude, therefore, that the evidence on the historical posture of the black political community with respect to unionism is consistent with the hypothesis that this posture is determined as if it was based on a rational calculation of the net economic benefits of unionism to the black community.

### III.

Our estimates of the effect of unionization on the average wage of black workers relative to the average wage of white workers provide historical support for the hypothesis that industrial unionization has been significantly more discriminatory (less egalitarian) than craft unionization. These results suggest that in 1930 the presence of unionism may have reduced the average wage of black workers relative to the average wage of white workers by some 2 percent below what it would have been in the absence of unionism. By 1940, after the expansion of industrial unionization in the 1930's, the effect of unionization may have been to increase the black/white wage ratio by as much as 3 percent

above what it would have been in the absence of unionism. This is fully consistent with the cross-sectional evidence presented elsewhere that in 1967 the ratio of black to white male wages might have been 5 percent lower in the craft union sector and 4 percent higher in the industrial union sector than would have been the case in the absence of unionism.<sup>10/</sup> Second, the historical variation in our estimates of the effect of unionization on the black/white wage ratio seems to provide a satisfactory explanation of the variation in the attitudes of black political organizations toward trade unionism. Though our results are certainly still tentative, they do suggest that organized labor has received approximately the kind of treatment from the political representations of black workers that it deserves.

Finally, the last rows of Tables I and II contain projections of what we believe is likely to happen to the extent of unionization among black and white workers, and the resulting change in the effect of unionization on the black/white wage ratio, during the next decade. These projections are based on the twin assumptions that (a) the extent of unionization among black and white workers in each occupational category remains constant at 1967 levels, and (b) the occupational shifts that have been occurring in the black and white work forces continue at the same rate during the next decade as they did in the last decade. Thus, the projections of extent of unionization in the last row of Table I reflect only the occupational changes that we may reasonably expect in the black and white labor forces over the next decade. As can be seen from <sup>10/</sup>See Orley Ashenfelter, op.cit.

the table, we expect the extent of unionization of the black labor force to continue to grow during the 1970's and the extent of unionization of the white labor force to continue to decline. As a consequence, we expect the percentage that black unionists are of all unionists to climb from around 11 percent in 1967 to perhaps 15 or 16 percent in 1980. Of course, it is possible that the extent of unionization among either black or white workers within occupations will change during this period, but this seems unlikely. It seems more likely that the extent of unionization among black and white workers will continue the course it has been following for the last three or four decades.

Appendix

If we let  $B_i$  represent the extent of unionization in 1967 among black workers in the 18 categories that result from the use of 9 occupations for male and female workers,  $P_i$  the predicted fraction of the work force of blacks that we expect to be in the  $i^{\text{th}}$  category in 1980, and  $L_m$  and  $L_f$  the projected sizes of the black male and female work forces in 1980, then our projection of the number of black unionists in 1980 is

$$L_m \sum_{i=1}^9 P_i B_i + L_f \sum_{i=2}^{18} P_i B_i .$$

A similar procedure is used to obtain the projection for white unionists. The  $B_i$  are computed from the 1967 Survey of Economic Opportunity. The  $P_i$  are estimates obtained by taking the actual  $P_i$  as of 1966 and adding fourteen times the estimated average annual change in  $P_i$  over the 1960's as taken from Orley Ashenfelter, "Changes in Labor Market Discrimination Over Time," The Journal of Human Resources (Fall 1970), Table 10.