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THE STRUCTURE OF EMPLOYMENT AND THE STRUCTURE OF UNEMPLOYMENT

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ABSTRACT

This paper examines how segmentation in employment relationships produces different types of unemployment. In particular, it examines the relationship between race and employment, and concludes that although the personal characteristic of race distributes workers to specific employment positions, it is the specific combination of firm and position vulnerability to market forces that determines the type of unemployment.

The paper is organized in four sections. First, it theoretically defines the structure of employment as composed of sets of positions differentiated by their resources and capacities. Secondly, it outlines the differentiated structure of unemployment. Thirdly, the paper presents a theory of the relation of types of employment positions to types of unemployment and derives a series of hypotheses which provide a test of this theory. The next section sets forth the methodology for operationalizing the variables and testing the hypotheses, and reports the findings from a log-linear analysis of the January, 1973, Current Population Survey data for black and white males, ages 20-64. Finally, it considers the implications for theory and policy.

The Structure of Employment and the Structure of Unemployment

The central thesis of this paper may be put very simply: the way people are employed determines the way people are unemployed. In advanced capitalism, the structure of unemployment is segmented in accord with the segmentation of employment. Different positions of employment, determined by different means and social relations of production, produce corresponding, different positions of unemployment.

Two elements in the Marxist analysis of advanced capitalism are especially relevant to the argument of this paper. First, in advanced capitalism sectors of capital develop unevenly; as a consequence, capital is segmented into monopoly, competitive, and state sectors. Across and within these sectors, positions of employment have different resource pools from which to extract benefits. And because the different sectors are affected differently by and possess different resources for responding to fluctuations in the business cycle, employment positions in the different sectors are associated with different forms of unemployment.

Second, employment positions are among the most salient social relationships which embody and manifest class relations. Employment positions reflect the domination of capital over labor and the limitations on that dominance. Just as the structure of employment affords capital the ability to subordinate labor, through market mechanisms, to its requirements of profitability, it also affords labor opportunities to shield itself against these mechanisms, and to attain benefits from the accumulated stock of resources in the sector. Such worker capacity differs according to the extent that unionization, training

requirements, or technological complexity enable employment positions to mitigate their vulnerability to market mechanisms and attain relatively more favorable adjustments in job quitting or loss.

This research proposes that types of worker resources for obtaining benefits and types of worker capacities for resisting market forces (1) are variously attached to positions of employment and (2) structure the type of unemployment associated with these positions. More precisely, various combinations of the sectors of resources and types of capacities are differentially associated with four types of unemployment: short layoffs, firings, long layoffs, and quits. The first task is to define the structure of employment as composed of sets of positions differentiated by their resources and capacities.

STRUCTURE OF EMPLOYMENT

The structure of employment comprises sets of positions which are determined by the social relations of production (Wright and Perrone, 1977, p. 33). Positional analysis has usually focused on the occupational structure defined in terms of census industry-occupation categories (cf. Stolzenberg, 1975a, 1975b; Bielby and Kalleberg, 1975); of manual and nonmanual, blue and white collar, skilled and unskilled, clerical and managerial distinctions (cf. Parkin, 1971; Giddens, 1973); or of socioeconomic status (cf. Blau and Duncan, 1976; Duncan, Featherman, and Duncan, 1972; Sewell and Hauser, 1975).

Here positions are defined by their location within the relations of production and aggregated into classes (Wright, 1979), on the basis of whether or not the position entails (a) the sale of labor power for wages, (b) ownership of the means of production, and (c) control over policy, resources, or workers

within the productive unit. The capitalist class, then, is the set of positions which entail ownership of the means of production but not the sale of labor power for wages. The working class comprises those positions which involve the sale of labor power but no control over policy, resources, or workers. Finally, managers, supervisors and foremen constitute contradictory positions in the class structure; these positions entail the sale of labor power but also exercise at the work place one or all of the forms of control over policy, resources, or workers (cf. Wright, 1978). In theory, each of these positions, depending on the resources and capacities attached to it, will have different abilities and mechanisms for class struggle, and thereby different relationships to unemployment.[1]

Resources

The first dimension of positions of employment, resources, is determined by the sector of capital in which the position is located. The three sectors--monopoly, competitive, and state--provide different stocks of resources from which benefits may accrue to positions of employment through struggle and negotiation. Understanding these differences involves some understanding of the way the different sectors themselves have evolved.

In early phases of capitalism the segmentation of capital into functional sectors was more relevant than it is today. Industrial, commercial, financial, and agricultural sectors represented differing arrangements of productive and unproductive labor, labor producing value and labor involved in the realization of value. In the monopoly phase of capitalism, the horizontal and vertical integration of capital made such functional distinctions outmoded. Instead, capital became segmented into monopoly and competitive sectors. Any analytical

distinction between the two entails differentiating old from new competitive capital an exposition beyond the scope of this paper. Here we need simply note that competitive capital should not be defined merely as the remnant of petty-bourgeois production or commercial activity. Rather, according to Averitt (1968) and Poulantzas (1975), competitive capital is best understood in the advanced stages of capitalism as subordinated yet articulated to center monopoly capital. This satellite competitive capital is distinguished, on the one hand, from petty bourgeois production and commercial activity, and on the other, from "loyal opposition" firms that provide moderate competition for monopoly firms in a particular industry and "free agent" firms that are free from affiliation with center firms. Such nonmonopoly or satellite competitive firms are characterized by their functions for monopoly capital in that (1) they shoulder a disproportionate amount of the business risk associated with pioneering new investments and with downturns in the business cycle; (2) they engage in less profitable but necessary sectors and thereby free monopoly capital for investments with higher profitability; (3) they engage in secondary and nonintegrated lines of production as well; (4) they have higher production costs and through their relatively high commodity prices legitimize the comparably higher pricing of monopoly firms whose costs do not warrant such price levels; (5) they utilize a disproportionate degree of labor-intensive production thus they function as a staging post for the general subjection of labor and help remove labor-organization conflict from monopoly capital.

As a result of this functional interdependency, the monopoly sector is able to extract a higher return on investment as well as to engage in monopoly pricing whereby they pass on higher labor and capital costs to the consumer. Thus the pool of resources available to monopoly sector positions is large and is subject to expansion in the face of labor struggles for increased job or wage

benefits. In contrast, competitive capital gains a lower return on investment; it is both constrained by having to meet monopoly prices in the product market, and restricted to pricing schedules dictated by national and international competition. Consequently the stock of resources from which positions in competitive firms may draw benefits is necessarily limited and also constrained by the inability of the firms to pass on the increased costs which result from labor struggles.

Capacities

Employment positions differ not only in their stock of available resources but also in their capacity for extracting benefits from that stock of resources. Positions with high capacities are associated with social relations of production that lower the position's degree of vulnerability to market forces. Positions with low capacities are associated with relations of production that enforce a high degree of vulnerability to competitive market forces. More analytically, high-capacity positions are associated with what is here called "vacancy-competition" modes of matching workers to jobs; low-capacity positions are those which remain tied to wage-competition processes.

The distinction between wage- and vacancy-competition mechanisms for job attainment, wage and benefit determination, and capacity for struggle derives from recent literature on labor market segmentation.[2]

While this segmentation research often confuses attributes of workers, jobs, and labor market processes, its central insight is valid: that taken alone traditional neoclassic theory is inadequate for explaining the way characteristics of individual workers, of jobs, and of outcomes are related to each other.

Thurow (1975) provides a more adequate formulation of segmentation of the labor market, or the arena of exchange between factor offers and employer demand. His distinction of wage and job competition models offers a first approximation of segmentation in the relations of employment. Thurow calls the traditional neoclassical model of the labor market "wage competition." Under wage competition, a competitive labor market is cleared in the short run by wage rates. The value of the marginal productivity of a worker for the production of a commodity equals the marginal cost or price of a worker. But labor is not necessarily homogeneous, as classical economics presupposes. Instead, workers differ in their physical productivity and thereby embody differing marginal productivity.

As an alternative to the neoclassical, wage-competition model, Thurow elaborates a job-competition mechanism for clearing labor markets and matching workers to jobs. According to Thurow, "in the job competition model, instead of competing against one another based on the wages that they are willing to accept, individuals compete against one another for job opportunities based on their relative costs of being trained to fill whatever job is being considered" (1975, p. 75). The two models coexist as labor market mechanisms. The wage-competition model applies to the static sector of the economy. Job competition obtains in the dynamic sector characterized by a high rate of technological progress and by long-run as opposed to short-run organization for growth and profitability.

In Thurow's argument, skills are job-specific, and are not acquired exogenously through education and training. Workers are hired into the job queue on the basis of their rank on a labor queue according to their trainability rather than their transferable marginal productivity. In this way, "supplies

of trainable labor are matched with training opportunities" which equal the number of available job slots (Thurow, 1975, p. 79).

The second aspect of modern capitalism that establishes job competition is the capacity for worker benefits that emerges from the nature of on-the-job training. Established workers are needed to train new workers to job-specific skills; workers must consent to organizational and technological innovation. In return, workers received advantages and benefits: job security, promotion ladders based on seniority, and wage rates protected from market competition.

Thurow's formulation, we have argued elsewhere (Schervish and Sørenson, 1977) provides only part of the answer: for instance, Thurow, we believe, wrongly identifies job competition with a technologically dynamic sector and wage competition with a static sector. There are other characteristics of jobs and the organization of jobs, not just simply the rate of technological progress and the need for on-the-job training, that contribute to worker control. Even in the technologically static sector, worker control is derived from promotion ladders established to elicit increased productivity, creativity or initiative, interdependence among jobs, inability to measure output from a job, collective organization among employees and customary or legal constraints on the employment relation.

For Thurow's job-competition model we subsititute the vacancy-competition model (see Sørenson and Kalleberg, 1976). The vacancy-competition model of capacities suggests that in many instances employers are unable to calculate either the marginal productivity of workers, or the marginal productivity of jobs. Thus incumbents of these high-capacity positions are shielded against market competition from other workers and from measurement against a standard

of productivity. As with job competition, the matching of a labor queue to a queue of jobs is a key factor. But in vacancy competition, positions are structured so that workers are hired not only in view of their trainability for a specific job, but also in view of their future productivity vis-à-vis projected vacancies of positions.

In sum, positions that compose the employment structure in the private sector are differentiated along two dimensions: the stock of resources from which benefits may be won, and the capacities for struggle that shield their incumbents from market forces and thereby enhance their ability to extract benefits from the stock of resources. The location of positions in the monopoly or competitive sector, on the one hand, and the high (vacancy-competition) or low (wage-competition) capacities of those positions within capital sectors, on the other, structure the types of employment into which the incumbents of the positions enter-and, I contend, the types of unemployment that they will suffer. To this issue we now turn, examining first the structure of unemployment.

THE STRUCTURE OF UNEMPLOYMENT

This section differentiates types of unemployment as a prelude to elaborating a theory of the systematic social relations by which positions of employment relate to types of unemployment.

Figure 1 presents a nonexhaustive representation of the different modes of job loss and unemployment. Theoretically, a job loss results from the separation of an incumbent from a position of employment. Unemployment is the type of job loss in which the incumbent is severed from one job position without simultaneously reentering another one.

Figure 1. Modes of Job Separation

This figure is adapted from Schervish (1977).

Outcome for Incumbent in Relation to Present Job	Outcome for Position: Position Remains (a) vacancy created (b) position moved	Position Ended Temporarily	Position Ended Permanently	Position Reclassified (a) downgraded (b) upgraded
Involuntary: not severed from employment	no unemployment transfer demotion 1	no unemployment transfer demotion 2	no unemployment reassignment 3	no unemployment (a) demotion 4
severed from position temporarily	unemployment suspension 5	unemployment layoff 6	7	8
severed from position permanently	unemployment firing/dismissal forced retirement 9	unemployment firing/dismissal 10	unemployment firing/dismissal termination cut-back 11	unemployment firing/dismissal 12
Voluntary: not severed from employment	no unemployment promotion quit with new job in hand 13	no unemployment promotion quit with new job in hand 14	no unemployment promotion quit with new job in hand 15	no unemployment (b) promotion quit with new job in hand 16
severed from position	no unemployment (voluntary retirement) unemployment 17 (quit w/o new job)	18	19	unemployment quit w/o new job 20

Variations in the number and types of positions represent changes in the opportunity structure of the demand side of the labor market. This variation in demand can occur for any number of reasons, ranging from national recession or expansion or the changing distribution of the number and types of employment positions throughout the economy to the intensification of national or international competition which induces individual plants or firms to curtail productive capacity or to transfer operations to locations where lower costs enhance profitability.

The variation in demand can result in any or all of the following changes in the structure of employment, all of which have consequences for job loss:

1. Positions may remain unchanged but become vacancies through the severance of a worker from the position (a) because of employer decisions such as transfers, suspensions, or firings (often euphemistically called "dismissals," "letting a worker go," or, in the case of forced removal on the basis of age, "retirement") or (b) because of worker decisions, such as quitting.

2. Positions may be ended temporarily. Downturns in the economy lead employers to end or decrease the number of employment positions for a specific period or until product demand increases again. Workers often are not severed from temporarily ended positions and retain priority for reemployment when the position is reestablished.

3. Positions may be ended permanently, either individually, in sets within a division, or completely when a firm ceases operations. Positions that are ended permanently may in fact be terminated or may be moved to a geographical location where workers who once held them are unable or unlikely to follow.

4. Positions may be reclassified by being upgraded or downgraded. In this case individual workers may or may not be severed.

Job loss and unemployment are characterized as well by their outcomes for incumbents. Incumbents may be severed from positions voluntarily or involuntarily. Variations in outcomes for the incumbents of positions are given in the first column of Figure 1.

The different combinations of outcomes for positions and outcomes for incumbents of these positions provide a classification of job loss and the subtype of job loss known as unemployment. Transfers, demotions, promotions, and voluntary retirement are modes of job loss which are not simultaneously forms of unemployment and do not neccessarily entail the separation of the worker from employment; however, they do involve the loss of a specific job. In transfers, incumbents remain tied to specified positions, which are not ended but are moved; the incumbent moves along with the position. The transfer of a job to another location or subdivision of a firm may, of course, create a vacancy in the original employment structure if the firm wishes to duplicate the transferred position. Transfers of jobs may be temporary, as in the case of a short-term movement of a managerial position to the site of a new or struggling operation.

Demotions and promotions are also types of job loss which are not considered forms of unemployment. Promotions and demotions in Cell 1 of Figure 1 represent the situation where a worker is promoted or demoted, but the status of the worker's former position remains the same. Promotions and demotions in Cell 4 represent the situation where the position and incumbent both are reclassified. In reassignment (Cell 3), a position is ended; the worker does not lose employment, but becomes employed in another position. A voluntary retirement (Cell 17) is another type of job loss that is not considered a form of unemployment. Both voluntary retirements and quits (Cell 3) result in the creation of a vacancy and the severance of a worker from employment, but the former implies at least temporary abandonment of the search for reemployment. Quits may coincide with the temporary or permanent ending of positions (Cells 14

and 15) or with their reclassification (Cell 16). In fact, voluntary departure from a position may provoke its ending or reclassification.

The remaining forms of job loss are concomitantly modes of unemployment. Some cautions should be made. First, many, but not all, of the forms of unemployment defined here are coterminous with official Department of Labor definitions of unemployment. Secondly, some distinctions made in official data collection and reports on unemployment which we will incorporate in the theoretical discussion later in the paper, are not here--for instance, the distinction between layoffs of a short duration (less than 30 days) and indefinite layoffs (30 days or longer). Thirdly, some of the forms of unemployment designated in Figure 1 are not immediately relevant for this research. Others would be relevant, but remained unmeasured in national surveys. Finally, other important types of unemployment, such as that experienced by so-called discouraged workers, those entering the labor force for the first time, and those reentering the labor force after having voluntarily left it, are not described here.

A suspension (Cell 5) occurs when a worker is severed from a position temporarily although the position remains unchanged. A suspension thereby creates a temporary vacancy which may or may not be filled for the duration of the suspension. A layoff (Cell 6) is the form of unemployment which results from the coincidence of the temporary ending of a position of employment and the temporary severance of the worker from employment. A layoff is distinguished from a firing by the continued connection of worker and position during the period of unemployment. When the position is reopened, the worker retains priority for reentry.

A firing occurs when a worker is separated involuntarily from employment regardless of what happens to the position. A firing, as commonly understood,

occurs when a position remains open but its incumbent is severed from employment and replaced by another worker (Cell 9), but it may also happen when a position is ended temporarily (during a slack period in the business cycle, for instance) and the worker becomes unemployed (Cell 10), with little or no priority for reemployment in the temporarily ended position.

A final form of firing (Cell 11) occurs when individual or sets of positions are ended and workers lose employment permanently. In the case of individual positions, this firing is sometimes called a dismissal or letting a worker go; but when a whole set of positions is systematically eliminated the firings are called terminations or cutbacks.

A THEORY OF FIRINGS, LAYOFFS, AND QUITS

Elaborating a theory of the relationship between the differentiated structures of employment and unemployment requires that we formulate the relationships between capacities and unemployment, and between sectoral resources and unemployment, that we examine the combined relationship of capacities and resources to forms of unemployment. We will focus on three types of unemployment which are measured in the CPS monthly surveys: firings, layoffs, and quits. Layoffs and quits (which result in unemployment) are directly measured. The category of "firings" is not found in the data but with some caution we can conceive it as a job loss which is not a layoff or quit, and because of which former a job holder undertakes job search.

Whether a position of employment is located in wage- or vacancy-competition relations of production determines the nature of the capacities by which incumbents gain relative control or property rights over their positions. In

vacancy competition, the separation of an incumbent from a position is constrained by the relatively high capacity of the workers to resist arbitrary firings and the rehiring of other workers from the labor pool. When economic downturns force firms to curtail employment, workers who are released are laid off, that is, they are separated from the relations of production on a temporary basis but retain a hold on their positions even while unemployed. Moreover, when the positions are reopened, the laid-off worker retains a prior claim to the lost position. Although workers may lose jobs permanently if positions are ended permanently, positions are usually ended only temporarily, and workers laid off.

In wage competition, workers possess low capacities for struggle and retain little or no control over the processes of unemployment and reemployment. When positions are ended permanently, workers are fired, of course. But when positions are ended temporarily or even when they are not ended, workers may be separated permanently from their jobs. This process has also been defined as a firing. Low-capacity positions do not provide workers with rights to those positions. Workers are fired and hired according to their productivity rather than in accordance with sets of systematic constraints like those which regulate the process of unemployment in high-capacity positions. When production cutbacks require the temporary ending of positions, workers are "let go" or "laid off" (that is, fired) and new workers rehired when the position is reestablished.

A similar argument applies to the relation of vacancy and wage competition capacities to quits and long layoffs. CPS data distinguish between short and long layoffs, as earlier defined. Indefinite layoffs are often euphemisms for

firings; they represent the power of employers to separate workers from positions without the workers being able to keep track of or to ensure reentry into the lost position. Indefinite layoffs should, therefore, relate to capacities of positions in the same ways as do firings. That is, wage-competition positions are expected to be associated with indefinite layoffs as well as with firings since these positions have little resistance to or voluntary control over the market relations which dictate employment decisions. The case of quits is more ambiguous. High-capacity, vacancy-competition positions might be expected to be more regularly associated with quits than is the case for low-capacity, wage-competition positions. But this is not necessarily true.

Incumbents in both high- and low-capacity positions make decisions to quit. Whether quits are more usual in vacancy- than in wage-competition positions depends on the size of the unemployed population, and this, in turn, is partly a function of the stage of the business cycle. This is so because quits represent different realities for low-capacity workers under differing labor market conditions. In contrast, quits associated with high-capacity positions reflect similar worker decisions during both high and low levels or worker demand. Because a quit from a high-capacity position is a choice exercised in light of a relatively high degree of power in the labor market, it represents throughout levels of general labor demand a dissatisfaction with existing work conditions or rewards. For low-capacity positions, quits during periods of high labor demand tend to represent worker aspirations for better positions, as is the case for high-capacity positions. During periods of high unemployment and low labor demand, however, quits from low-

capacity positions represent not simply aspirations for better jobs, but instead represent a reaction to the hidden downgrading of positions. Low-capacity positions find it difficult to resist de facto wage cuts due both to inflation rates which outstrip wage increases and to the general lowering of wages induced by market forces during periods of abundant labor. Consequently, quits are expected to be slightly more associated with high- rather than low-capacity positions during periods of tight labor markets, and to be slightly more associated with low- rather that high-capacity positions during periods of relatively high unemployment.

The effect of the location of positions in monopoly or competitive sectors of capital on types of unemployment is somewhat less straightforward a theoretical problem than is the impact of capacities. In examining capacities, we view employment positions from the side of the worker, or supply; in examining resources, we view employment positions from the side of capital. Monopoly capital's need to generate and introduce capital-intensive technology, and its ability, through monopoly pricing, to recoup the higher costs for labor and technology thereby incurred, affect the role of resources in determining unemployment. Many of the same factors that strengthen worker capacity in both monopoly and competitive sectors also affect the way resources in the monopoly sector affect unemployment. Because monopoly-sector positions generally pay higher wages and entail larger investments in worker benefits and training, monopoly-sector capital is faced with a dilemma during economic stagnation. On the one hand, monopoly pricing has resulted in greater worker benefits, which represent high levels of investment in workers; and monopoly capital does not wish to forfeit this investment. On the other hand, such investment directed at expansion undermines monopoly capital's range of possible

responses in times of crisis and high unemployment. Unlike competitive capital, monopoly capital cannot restructure its technical relations of production to employ greater numbers of relatively cheap labor. Thus it is forced to curtail production, cut back its labor force, and hope to weather the recession, often by raising relative prices, in an effort to maintain profitability. Although employment positions are decreased drastically during recessions, the decrease takes the form of layoffs, both short- and long-term. For their part, workers benefit, at least in the short run, from an unemployment pattern of layoffs, because they receive at least some degree of enforceable guarantee of recall should the position be reestablished. To say this is not to imply, however, that this apparent mutual benefit to employer and worker truly serves the fundamental interests of workers. For, despite the good will or intent of any particular capitalist, the crisis of accumulation and underconsumption creates conditions that force monopoly capital especially (cf. Hodson, 1978) to contribute to unemployment. Even layoffs, although preferable to firings, conflict with the fundamental interest of workers in eliminating the forms of domination inherent in capitalist relations of production.

In contrast, resources available in the competitive-capital sector induce unemployment patterns of firings and quits. Competitive capital is less capable than monopoly capital of controlling prices throughout phases of the business cycle. But is is likewise less constrained by established technical relations of production; it enjoys substantial incentives for but relatively few constraints on firing workers. Competitive capital seeks to employ workers with the highest value of marginal product rather than to fill vacancies with either stable or uncalculable marginal productivity. Arrangements of technology enable competitive capital to adjust to differing levels of supply, cost, and

quality of labor by adding or subtracting quality and quantity of labor rather than by temporarily ending positions as monopoly capital does. Free market relations of supply and demand continue, in the competitive sector, to rule employment relations. Workers are hired on the basis of the value of their marginal product; when recessions occur, competitive firms adjust by lowering wage rates and by acquiring more productive employees. Thus the traditional workings of the free market envelop capital-labor relations; individual capital units and individual workers adjust to structural changes in the economy through the market processes embodied in labor decisions to quit and employer decisions to fire.

Technically, then, workers and employers remain mutually "free" to adjust to each other's utilities. In fact, neoclassical theory regards quits as the only actual form of unemployment and, in this case, a form voluntarily chosen by workers to enhance their utility. Firings occur only because free market mechanisms are curtailed by institutions which constrain capital (such as minimum wage laws) and permit workers to subsist independent of employment (welfare and assistance programs). In the extreme case, if workers were to adjust their prices in accord with fluctuations in demand, and if they were not able to survive with family or state welfare, firings would not take place. But because workers are often unable or unwilling to adjust their prices and because welfare structures exist, firings do take place. Moreover, once firings are incorporated into market relations, workers who, while employed, have incentives to resist the workings of the competitive market are, when fired, forced by their need for a job to bid down wages, thus precipitating the firing of other workers.

HYPOTHESES

The foregoing theoretical arguments suggest three hypotheses, each containing a number or propositions, which may be tested by data from the standard monthly Current Population Survey. Additional findings concerning the relation of capacities to sector resources and the relative size of the effects of capacities, resources, and race are also discussed.

Hypothesis 1. Capacities and Unemployment.

High-capacity positions grant their incumbents more favorable capabilities for resisting negative impacts of unemployment. Therefore workers employed in high-capacity positions (1) tend to suffer lower unemployment rates than low-capacity workers and (2) when unemployed, will be unemployed more frequently than low-capacity workers in short layoffs and quits and less frequently than low-capacity workers through long layoffs and firings.

Hypothesis 2. Sector Resources and Unemployment.

The monopoly sector shelters workers from market mechanisms but at the same time is constrained from using such market mechanisms to adjust to economic downturns. Therefore workers employed in monopoly sector positions (1) tend to experience higher unemployment rates than competitive sector workers controlling for capacities and race; and (2) when unemployed, will be unemployed more frequently than competitive workers in layoffs (short and long) and less frequently than competitive workers through firings and quits.

Hypothesis 3. Racial Discrimination and Unemployment. Although personal characteristics, especially race, affect the distribution of workers to the ranks of the unemployed, they do not affect the distribution of workers to types of unemployment. Positively, racial characteristics distribute workers to positions with certain capacities and resources, but race does not affect the distribution of workers directly into types of unemployment when the effects of capacities and sector resources are taken into account. Specifically, being black rather than white increases the incidence of a worker (1) being in low-capacity rather than high-capacity positions; or (2) being in the competitive rather than the monopoly sector. It (3) increases the incidence of unemployment in general; but (4) does not directly affect the distribution of workers to types of unemployment.

DATA AND METHODOLOGY

The data for testing the hypotheses is taken from the January 1973 CPS, a monthly, national, random sample of households conducted by the Bureau of the Census. The January 1973 survey contains 102,374 records for members of those households 14 years and older. The subsample chosen for this research is composed of white and black males aged 20 to 64, who are employed or unemployed members of the experienced civilian labor force. Excluded are all the self-employed, those who never worked (including those seeking their first jobs), discouraged workers considered by the Survey to be outside the labor force because they have abandoned the job search, and all racial and ethnic

groups which are neither white nor black.

For this research, a specific weighting procedure was designed to adjust the given CPS weights for each case so as to provide true subsample weights. First, each case in the subsample was assigned the CPS case weight, which was calculated to inflate the total survey sample to the demographic characteristics of the national population. These assigned weights were summed over the subsample and averaged. A new subsample case weight was calculated for each subsample case by dividing the case's original CPS weight by the subsample average. Each of these adjusted subsample case weights was then deflated by a factor of .33 to adjust for the nonrandom sample design of the CPS by reducing the probability that significant statistical differences would emerge in the analysis of data. The deflated sample size used here is 16,571.45.

The four variables used throughout the analysis are a dependent variable (D) representing a worker's status in the structure of employment; and three independent variables: capital sector resources (S), capacities for struggle (C), and race (R). Employment status comprises four categories of unemployment and the comparative category of employment. Unemployment is differentiated into short layoffs, firings, long layoffs, and quits. Short layoffs and long layoffs are operationalized from the CPS item inquiring why a worker was absent from work the previous week. Two of the eight possible responses to the inquiry are "temporary layoff (under 30 days)" and "indefinite layoff (30 days or more or no definite recall date)." A later survey question, "Why did the person start looking for work?" is addressed to all the unemployed except those who had already indicated their unemployment status as temporary or indefinite layoff. The category of "quit" in the dependent

variable is measured simply by the response of "quit job" to this second question. The category of "firings" cannot be so directly ascertained from the CPS data. It is operationalized here as those unemployed who indicated they had "lost job" but were not explicitly among those who were unemployed because they were laid off, had quit, had left school, wanted temporary work, or for some other reason. It may appear problematic to measure firings by the residual category of job loss. However, directly asking whether a worker was fired would incur as much if not more measurement error than is incurred through operationalizing firings by the less threatening category of job loss. The category of "employed" is included in the dependent variable in order to extend the analysis beyond the impact of the independent variables on the relative chances of being in one category of unemployment rather than another. Including the employed extends the comparisons to include the impact of the independent variables on the relative chance of being unemployed rather than employed, and of being in any one particular type of unemployment rather than employed.

The independent variable, sector resources, comprises four categories: monopoly, competitive, farm, and construction sectors. These categories are operationalized by industry categories as described in Hodson (1978). Hodson differentiated monopoly from competitive sectors of capital on the basis of four criteria: two measures of economic concentration, and average weighted concentration ratios for value of shipments and employees. Farm and construction sectors, which are operationalized simply by the appropriate industry codes, are treated in the analysis as separate categories for the resources variable because they do not clearly fall into either monopoly or competitive sectors. Hodson defined the state sector as comprising all federal, state, and local government employment, and employment in utilities.

The sector is not included because preliminary analysis indicated that during the early phases of the current recession in 1973 the state sector had virtually no measurable unemployment.

Ideally, the variable "capacities," dichotomized into "high" and "low", should be operationalized by a composite indicator contructed directly from measures of the variables which theoretically comprise vacancy- and wage-competition relations. Measures of inter-dependence of tasks, of marginal productivity, on-the-job training, and unionization are available in the Michigan Quality of Employment Survey, 1972-73; but the small sample size of this survey does not permit the scaling of the entire occupational structure. An alternate measure of capacities is available from Rosenberg's (1975) rather sophisticated differentiation of census occupations into primary and secondary job, on the basis of skill level, social relations on the job, and median hourly wage. The jobs Rosenberg considers secondary are listed in Appendix A.[3] In the present research, high-capacity positions are operationalized by Rosenberg's primary-sector occupations while low-capacity positions are designated by his secondary-sector occupations.

Log-linear techniques (cf. Goodman, 1972; Bishop, Fienberg, and Holland, 1975; Fienberg, 1977) have proved especially suited for handling multicategory nominal variables, where the goal is to explain the observed frequency distribution of cases in a multidimensional contingency table through the specification of a theoretically relevant model.

Parameters derived from the model can be interpreted (cf. Daymont and Kaufman, 1977; Page, 1977) so as to indicate the nature and magnitude of the association among variables. Expected odds ratios can be calculated to summarize the chances of being in one category of one variable (rather than in one or more other categories of the same variable) for observations located in specified contrasting categories of one or more other variables.

FINDINGS

The base line model for the analysis (cf. Table 1) was constrained to include only the four one-way effects and the three two-way effects between the dependent and independent variables. This model is represented in Goodman notation as

$$(SC)(SR)(CR)(D) \qquad (1)$$

where (SC) is the interaction between sector resources and capacities, (SR) is the interaction between sector resources and race, (CR) is the interaction between capacities and race, and (D) is the effect of employment status. Throughout, whenever two- or higher-way interactions are specified, all the lower-order effects (one-way, two-way, etc.) are also included in the model and implied by the notation. Thus Model 1 contains the three one-way effects of sector resources (S), capacities (C), and race (R).

The three hypotheses considered here may be portrayed by either Model 2 or Model 4 as shown in Table 1. If the effect on labor force status (D) of sector resources (S) and capacities (C) is thought not to vary among the different combinations of levels of S and C, then Model 2 holds. If this three-way effect (DSC) is thought to be theoretically significant, then Model 4 should adequately reflect the observed distribution. Model 2 is the most parsimonious expression of the theory. It states that over and above the one-way effects, racial characteristics distribute workers to the structure of employment sectors (SR) and capacities (CR). The association (SC) between sectors and capacities represents the fact that sectors have differential proportions of high- and low-capacity positions and that the relative proportion of high- and low-capacity positions affects the long-run composition of

TABLE 1

Models for the Analysis of Employment Status and Independent Variables

Model	Fitted Marginals	Degrees of Freedom	Likelihood Ratio X^2	Index of Dissimilarity	P
1	(CS)(CR)(SR)(D)	63	384.13	2.167	0.000
2	(CS)(CR)(SR)(DC)(DS)	47	42.62	.553	> .5
3	(CS)(CR)(SR)(DC)(DS)(DR)	43	34.57	.506	>.5
4	(CR)(SR)(DCS)	35	33.03	.500	>.5
5	(DC)(DS)(CSR)	44	35.91	.401	>.5
6	(DC)(DS)(CSR)(DR)	40	28.13	.373	>.5
1 vs. 2		63 -47 16	384.13 - 42.62 341.51		<.001
2 vs. 3		47 -43 4	42.62 -34.57 8.05		c .10
2 vs. 4		47 -35 12	42.62 -33.03 9.59		>.85
2 vs. 5		47 -44 3	42.62 -35.91 6.71		c .08
5 vs. 6		44 -40 4	35.91 -28.13 7.78		.10

D Employment Status (dependent variable)
C Capacities of Positions
S Sector Resources
R Race

sector resources. Finally, sectors (DS) and capacities (DC) of positions distribute workers to their status in the labor force.

Table 1 indicates that Model 1 must be rejected ($p = 0.000$) because it fails to approximate the observed distribution. Model 2, however, dramatically reduces the disparity between the observed and expected distribution ($p > 5.$). The model reduces the likelihood ratio X^2 by 341.51 and uses up only 16 more degrees of freedom ($p < .001$).

Comparison of Model 2 with Models 3, 5, and 6 tests for additional race effects. The interaction between race and labor force status (DR) in Model 3 means that, over and above sector and capacity, race affects the distribution of workers to labor force status, through the relatively high p value (.1) indicates that the race effect is somewhat marginal. Whether we should include the DR interaction and modify the theory to take account of it is uncertain. The same is true when the interaction of sector, capacities, and race (SCR) is included, as in Model 5. One interpretation of the SCR interaction is that the relation between sectors and capacities differs for blacks and whites over different combinations of categories of sectors and capacities. The test of this interaction (row 10) indicates that the reduction of 6.71 X^2 is significant at approximately $p = .08$. Model 6 adds the DR interaction to Model 5. The p value (.10), again shows that this additional interaction involving race is only marginally significant.

Because the inclusion of the additional race interaction (DR) and (SCR) are not highly significant statistically, and because they are theoretically excluded in the hypotheses, Model 2 serves as the basis for analyzing the effect of the structure of employment on labor force status. Nevertheless, since the DR and SCR interactions are marginally significant statistically and since it is not unreasonable to suspect some direct effect of discrimi-

TABLE 2

Gross Unemployment Rates

Total	3.9%
Whites	3.7%
Blacks	5.7%
Monopoly Sector	2.8%
Competitive Sector	3.0%
High Capacity	3.3%
Low Capacity	6.7%

Source: Data from January, 1973, CPS.

nation on labor force status we will return to Model 6 and discuss these two additional race interactions.

Capacities and Unemployment. Hypothesis 1 maintains that capacities attached to positions are an important part of the structure of employment which distributes workers to the various types of unemployment. According to the hypothesis, wage-competition positions suffer higher unemployment rates than vacancy-competition positions. Table 2 presents unemployment rates for the total sample and for selected categories within the sample. High capacity workers have a 3.3% unemployment rate while that for low capacity workens is 6.7%. These unemployment rates provide one way to summarize the gross relationship between capacities and unemployment. Another representation of the relative chances of being unemployed, one that controls for race and sector is what we will call the ratio of unemployment likelihoods. It is an odds ratio which measures the relative chances of being employed rather than unemployed (in any of the four categories of unemployment). It is calculated by raising to the appropriate exponential level the Tau parameter for the effect of the independent variable on the category of employment in the dependent variable.[4] In the case of capacities and labor force status, we raise the Tau parameter (1.3027) which measures the effect of being in a high-capacity position on being employed rather than unemployed (in any of the four categories) to the power of 5/2. The calculated value of this ratio of unemployment likelihood is 1.94. This means that, as predicted by the hypothesis, the expected chance of being employed rather than unemployed (in any of the four unemployment categories) is 1.94 times greater for workers in high- rather than low-capacity positions.

Table 3 shows that, controlling for sector and race, workers in low-capacity positions are more likely than workers in high-capacity positions to be unemployed,

TABLE 3

Expected Odds Ratios for Contrasting Categories of Employment Status and Capacities

High- vs. Low-Capacity Positions

	Short layoff	Firing	Long layoff	Quit	Employed
Short layoff	_____	1.26	1.30	1.04	.59
Firing	.80	____	1.03	.83	.47
Long layoff	.77	.97	____	.81	.45
Quit	.96	1.20	1.24	____	.56
Employed	1.71	2.14	2.21	1.78	____

Low- vs. High-Capacity Positions

In this and other tables of odds ratios, the numbers above and below the diagonal are inverses of each other. Also the contrast stated at the top of the table (here, "high-vs. low-capacity positions") is reversed at the bottom (e.g., "low-vs. high-capacity positions"). When formulating a statement dealing with the contrast stated at the top of table, begin with the category in the row at the left side of the table and read across to the cell intersecting with the column designating the second category of concern. For example, within high-vs. low-capacity positions, to find the contrast between being in a

TABLE 3 Cont.

short layoff as opposed to being fired, begin with the row "short layoff" and read across to its intersection with the column "firing." Thus the chances of being in a short layoff rather than being fired (in high as opposed to low capacity positions) are 1.26 times greater. To reverse the contrast, begin with the row "firing" and read across to the intersection with the column "short layoff." Thus the chances of being fired rather than in a short layoff are simply .80, the inverse of 1.26.

When formulating contrasts stated at the bottom of the table, begin with the column category and read down to the intersection with the row category. So for contrasts dealing with low versus high capacity positions, start, for instance, with the column "firing" and read down to its point of intersection with "quit." This gives the odds ratio of 1.20. For the opposite contrast (i.e., for quits versus firings), start with the column "quit" and read down to the intersection with the row "firing." This gives the odds ratio of .83 (the inverse of 1.20).

Note that because of rounding numbers above and below the diagonal are not always exact inverses.

and especially through firings and long layoffs. The first hypothesis predicted that high-capacity positions would be associated with short layoffs and quits--a prediction also confirmed by Table 3.

Sector Resources and Unemployment. The second hypothesis discusses the structural effect of sector resources on the distribution of workers to the categories of unemployment or to employment (controlling for capacities and race). Monopoly, competitive, farm, and construction sectors of resources are the four categories of sector resources, but only the comparative effects of monopoly and competitive sector on unemployment are discussed here. The second hypothesis predicts that monopoly sector unemployment rates are higher than those in the competitive sector. The gross unemployment rate for the sample of black and white men aged 20-64 in the experienced civilian labor force is 2.8% in the monopoly sector and 3.0% in the competitive sector (cf. Table 1). The ration of unemployment likelihood

$$\frac{\tau \text{ employment, competitive}}{\tau \text{ employment, monopoly}}$$

5/4

tells a different story.[5] Controlling for race and capacities, the chances of unemployment are greater in the monopoly sector. Workers in this sector, as opposed to workers in the competitive sector, are on the average 1.20 times more likely to be unemployed in one of the designated categories than to be employed.

Unlike the situation with high- and low-capacity positions, however, the higher unemployment in the monopoly sector results not from the fact that monopoly sector workers are more likely than competitive sector workers to be unemployed in every category, but from the fact that these positions undergo short and long layoffs at a higher rate than competitive sector positions undergo firings and quits.

As with the discussion of capacities, the odds ratios calculated in Table 4 formulate the degree to which workers in the monopoly sector as opposed to the competitive sector are more likely to experience a particular form of unemployment.

The hypothesis makes specific predictions about the association of monopoly sector positions with unemployment in the form of short and long layoffs and competitive sector positions with unemployment of firings and quits. The differences revealed in Table 3 are quite substantial. For instance, the expected chance of being unemployed through a short layoff as opposed to being fired is more than twice (2.30) as great for workers in the monopoly as opposed to competitive sector, while the odds of experiencing a short layoff as opposed to a quit are strikingly high--more than three times greater for the monopoly sector.

Quits and firings do not evidence as similar a relationship to sector resources as do short and long layoffs (the expected chance of quitting as opposed to being fired is 1.43 times greater for workers in the monopoly sector). Nevertheless, the contrast between sectors in the matter of quits or firings is much smaller than the sector contrasts between either type of layoffs and firings.

Race and the Employment Structure. The third hypothesis suggests, in part, that racial characteristics distribute workers to the employment structure in such a way that white workers more frequently are attached to high-capacity and monopoly positions while black workers hold jobs connected to low-capacity and competitive positions. The data bear this out. Controlling for capacities, the expected chance of being attached to positions in the monopoly rather than competitive sector is 1.08 times greater for whites than for blacks. The asso-

TABLE 4

Expected Odds Ratios for Contrasting Categories of Employment Status and Sector Resources

Monopoly vs. Competitive Sector Positions

	Short layoff	Firing	Long layoff	Quit	Employed
Short layoff	_____	2.30	1.01	3.21	1.99
Firing	.43	____	.44	1.40	.86
Long layoff	.99	2.29	____	3.19	1.98
Quit	.31	.72	.31	____	.62
Employed	.50	1.16	.51	1.61	____

Competitive vs. Monopoly Sector Positions

See Table 3 for an explanation of how to read the table.

Note that because of rounding numbers above and below the diagonal are not always exact inverses.

ciation of race and capacities, controlling for sectors, is more dramatic. The expected chance of being in a high-capacity, vacancy-competition position as opposed to a low-capacity, wage-competition position is more than three and a half time greater (3.55) for whites than for blacks. Inversely, the chance of being in a low- rather than high-capacity position is 3.55 times greater for blacks than for whites (Table 5).

It is possible to compute a measure of the size of effect associated with each interaction in the model. This summary measure (see Table 5) is an average effect on different categories of one variable by the different categories of the second variable. Thus the impact of race on distributing workers to positions of high and low capacities can be compared to the impact of race on distributing workers to sector resources. Table 6 presents these comparisons in Tau-parameter and odds-ratio metrics. The effect of race on capacities is 1.37 in the Tau-parameter metric and 3.55 in the odds-ratio metric. The effect of race on sector in the two metrics is 1.07 and 1.19. It is unclear just how to interpret the relative sizes of the effects, especially since a ratio of the effects of the two associations is partly a function of the metric that is employed. Nevertheless, it is clear that the impact of race on distributing workers to capacities is greater than its impact on distributing workers to sectors.

Sector Resources and Capacities. The relationship of resources and capacities is difficult to order causally in a cross-sectional analysis. It can be argued that over time the transformation of positions from low to high capacities leads to the concentration of capital. This might happen, on the one hand, because high-capacity positions exert demands that lower profit and make the firm vulnerable to incorporation by a larger firm and, on the other,

TABLE 5

Expected Odds Ratios for Contrasting Categories of Race and Capacities, and Race and Sector Resources

White vs. Black

	High capacity	Low capacity
Race and Capacities		
High capacity	____	3.55
Low capacity	.28	____

Black vs. White

White vs. Black

	Monopoly sector	Competitive sector	Farm sector	Construction sector
Race and Sector Resource				
Monopoly sector	____	1.08	.74	1.06
Competitive sector	.92	____	.68	.98
Farm sector	1.36	1.47	____	1.43
Construction sector	.95	1.02	.70	____

Black vs. White

See Table 3 for an explanation of how to read the table.
Note that because of rounding numbers above and below the diagonal are not always exact inverses.

TABLE 6

Summary Measures of the Relative Size of Effects of Capacities, Sector Resources, and Race on Employment Status and of Race on Capacities and Sector Resources

Variables	Tau-parameter metric[a]	odds-ratio metric[1]
Sector resources on employment status	1.4272	1.8091
Capacities on employment status	1.1116	1.3026
Race on employment status	1.0863	1.2300
Race on sector resources	1.0678	1.1912
Race on capacities	1.3723	3.5466

[a]The summary measures were calculated according to the following formulae:

Tau-parameter metric:

$$e^{\frac{1}{IJ}\sum_{ij}\left|\ln \tau_{ij}\right|}$$

odds-ratio metric:

$$e^{\frac{1}{(I-1)(J-1)}\sum_{ij}\left|\ln \tau_{ij}\right|}$$

where I and J are the number of categories in the two variables being considered and τ is the log-linear parameter that measures the association between the i-th category of the first variable and the j-th category of the second.

The Tau-parameter and odds-ratio metrics are simply geometric transformations of each other.

because workers in high-capacity positions with higher degrees of job security are willing to assent to the introduction of long-term, capital-intensive technology which permits firms to expand market shares and to concentrate resources.

It can be argued as well that over time monopoly firms produce high-capacity positions by expanded production and by the introduction of technology which-requires on-the-job training, worker interdependence, and other relations which increase the preponderance of vacancy- as opposed to wage-competition positions in the firm.

Such a theory of the relationship of sectors and capacities cannot be tested by the cross-sectional data considered here. Moreover, while capacities and sectors may converge over time so that high-capacity positions are located almost exclusively in the monopoly sector, and low-capacity positions in the competitive sector, this research argues that such has not occurred. The impact of the employment structure on the types of unemployment must, therefore, be decomposed into the effects of capital sectors and capacities.

Table 7 shows that the expected chance of being employed in a monopoly rather than a competitive sector position is 1.50 times greater for workers in high- as opposed to low-capacity positions, but the degree of association is not so high as to lead to the question of whether sectors and capacities actually tap different dimensions of the employment structure. Table 8 presents the cross-classification of the gross relationship of sectors and capacities. High-capacity positions are 85% of the total; but the monopoly sector comprises only 40% of the positions. High-capacity, monopoly positions are 35% of the distribution while high-capacity, competitive positions comprise 50% of the total; monopoly, low-capacity are 5% and competitive, low-capacity are 10%.

TABLE 7

Expected Odds Ratios for Contrasting Categories of Capacities and Sector Resources

	Monopoly sector	Competitive sector	Farm sector	Construction sector
High- vs. Low-Capacity Positions				
Monopoly sector	———	1.50	28.10	1.41
Competitive sector	.67	———	18.77	.94
Farm sector	.04	.05	———	.05
Construction sector	.71	1.06	19.96	———
Low- vs. High-Capacity Positions				

See Table 3 for an explanation of how to read the table. Note that because of rounding numbers above and below the diagonal are not always exact inverses.

TABLE 8

Cross-Tabulations of Monopoly and Competitive Sector Resources by High-and Low-Capacity Positions[a]

Capacities	Sector: Monopoly	Sector: Competitive	Total
High	5009.50[b]	7217.95	12227.45
	.35%	.50%	.85%
	.88%	.83%	
	.41%	.59%	1.00
Low	677.08	1477.07	2144.15
	.05%	.10%	.15%
	.12%	.17%	
	.31%	.69%	1.00
Total	5686.58	8695.02	14371.60
	.40%	.60%	1.00
	1.00	1.00	1.00
			1.00

[a]Each set of cell entries below consists of the following: the first row is the number of cases in the cell; the second row is the total percentage, the third row is the column percentage, the fourth row is the row percentage.

[b]The number of cases in each cell is not an integer since the sample on which the research is based is weighted.

Moreover, rather than finding an overwhelming congruence of monopoly sector with high-capacity positions and competitive sector with low-capacity positions, the data show that less than half (45%) of the positions fall into this diagonal. This lack of convergence as well as the relatively low number of positions designated as low-capacity is a function of the strict definition of low capacities applied in the operationalization of this category. This concurs with Rosenberg's findings (1975) which show that approximately 25-32% of the work force in four major metropolitan areas is in the secondary sector.

Race and unemployment. We now return to Model 6, which augments Model 2 by including a three-way interaction (SCR) among the three independent variables and a two-way effect of race on labor force status (DR), in order to assess the direct impact of race on unemployment. We have already found that race distributes workers to positions of employment. For reasons already discussed, however, it is important also to analyze the statistically more problematic impact of race on labor force status over and above its indirect effect through sector resources and capacities.

Assuming that the marginally significant DR association merits attention, we find that, controlling for capacities and sector resources, the ratio of unemployment likelihood is 1.12.[6] In other words, on the average, the chance of being employed rather than unemployed in any of the designated categories is 1.12 times greater for whites than for blacks. But as with sector resources, the greater chance of a black's being unemployed pertains only to the categories of firings and quits. Whites are 1.10 times more likely than black workers to be unemployed through short layoffs, 1.05 times more likely to be unemployed through long layoffs. Blacks, however, are 1.55 times more likely than whites to be unemployed through firings, 1.18 times more likely to be

unemployed through quits.

This distribution is highlighted by the odds ratio contrasts in Table 9 which summarize the relative chances, for blacks and whites, of being in one category of unemployment rather than another. The expected chance of being in a short layoff as opposed to being fired is 1.70 times greater for whites than for blacks, that of being in a long layoff as opposed to being fired or quitting respectively 1.62 and 1.23 times greater for whites. In contrast, the expected chances of quitting are 1.29 and 1.23 times greater for blacks. And while blacks suffer firings and quits more than whites, blacks are still 1.32 times more likely to be fired than to quit.

DISCUSSION

The general thesis of this research has been that the structure of employment, rather than personal characteristics, constitutes the most significant determinant of the patterns of unemployment--the primary mechanism by which workers are distributed to forms of unemployment.

The general theory presented in the first parts of the paper was evaluated through empirical analysis of a series of specific hypotheses. The findings confirmed the theory, except that the direct effect of race on types of unemployment was shown to merit somewhat more consideration than it originally seemed to deserve.

Theoretically, the results can be discussed in terms of (1) the relationship of the employment structure to forms of unemployment and (2) the effects of race for distributing workers to the employment structure and, directly, to categories of unemployment.

TABLE 9

Expected Odds Ratios for Contrasting Categories of Employment Status and Race

White vs. Black

	Short layoff	Firing	Long layoff	Quit	Employed
Short layoff	____	1.70	1.05	1.29	1.10
Firing	.59	____	.62	.76	.65
Long layoff	.95	1.62	____	1.23	1.05
Quit	.78	1.32	.81	____	.85
Employed	.91	1.55	.96	1.18	____

Black vs. White

The odds ratios in this table are calculated from Model 6.

See Table 3 for an explanation of how to read the table.

Note that because of rounding numbers above and below the diagonal are not always exact inverses.

The findings confirm the theory that the structure of employment is related to a structure of unemployment. It is considered commonplace that workers in lower status jobs receive lower job security and are subject to higher unemployment rates. This research claims that such commonplace understandings are often misleading and, at best, present only a small part of the picture. A more adequate view is generated by distinguishing different types of unemployment and by constructing arguments to explain the relationship between different positions in the employment structure and different types of unemployment.

In this research a series of models was tested to determine the most parsimonious, theoretically informed relationship among the independent variables of race, capacities, and sector resources, and between these independent variables and the dependent variable of labor force status. It was found, as predicted, that the appropriate model is one that suggests that the employment structure rather than the personal characteristic of race distributes workers to unemployment rather than employment and, within unemployment, to particular, predicted types of unemployment. Race distributes workers to capacities and sector resources but has only a marginal direct effect on distributing workers to types of unemployment once the workings of the employment structure are taken into account. Within the employment structure, sector resources have a larger effect than capacities; but capacities have a larger effect than race. This is shown by comparing the sizes of the summary measures of the average effect on different categories of the dependent variable by the different categories of the independent variables. The average effect (in the Tau-parameter metric) is 1.43 for sector resources, 1.11 for capacities, and 1.09 for race (see Table 6).

More specifically, the findings have shown a weak congruence of competitive sector resources with low-capacity positions. Also, as predicted, even though low-capacity positions are associated with a higher likelihood of being unemployed in all four categories, low-capacity positions distribute workers at a still substantially higher rate to the least favorable forms of unemployment such as firings and long layoffs. High-capacity positions, within this same framework, are associated with short layoffs and quits.

Controlling for capacities and race, the impact of sector of employment is smaller and different. Monopoly sector positions are associated with short and long layoffs while competitive sector positions are associated with firings and quits.

The effect of race on labor force status is weaker than that of sectors and capacities, but parallel to that of capacities. That is, for unemployed blacks the chances relative to white of being fired or undergoing long layoffs are greater than the chances of undergoing short layoffs or quitting.

IMPLICATIONS FOR THEORY AND POLICY

On the broadest level, the aim has been to understand the workings of unemployment in advanced capitalism. More particularly, we have sought to examine how different types of unemployment relate systematically to different positions of employment. Such specification is valuable because it at once opens the study of unemployment to Marxist analysis as well as to recent theories of labor market and capital segmentation. It also speaks to the issue of how far high black unemployment is due directly to discrimination rather than to the labor market discrimination through which blacks are allocated least

favorable employment positions. Differentiating types of unemployment and relating them to types of employment positions suggests a way to conceptualize the concept of unemployment that is more theoretically relevant for advanced captialism than either Marx's global notions of the industrial reserve army and relative surplus population or the use in labor economics of official measures and rates of unemployment.

A number of important theoretical implications derive from the foregoing analysis. First, relations of production are crucial not only for an analysis of employment, domination, authority, and other social relations surrounding the unit of production, but also for other outcomes in the political economy such as unemployment. Research must study not only the sources of economic crises and their outcomes for levels of unemployment, but the way in which the segmented structure of employment affects the distribution of workers to specific categories of unemployment.

Second, the subordinate status of blacks in rates and types of unemployment is due in large part not to the direct effect of racial discrimination (although that is a factor) but to the effect of discrimination on allocating blacks to subordinate positions in the structure of employment, especially to low-capacity jobs, and somewhat less so to competitive sector employment. As Masters (1975) also concludes in reference to black-white income differentials, the labor market mediates the effects of racial discrimination. Race disproportionately distributes blacks to low-capacity, competitive sector positions. This stark reality, rather than direct discrimination in unemployment decisions, is the source of black disadvantage in unemployment.

Third, this approach suggests a concrete instance of the proposition that the seeds of resistance to and transformation of particular capitalist social relations of work are embedded in those relations themselves. Developments in

organization, technology, and authority relations of capital represent more than the successful segmentation of labor and a more efficient method for exploitation. The evolution of capitalism creates relations of production which also provide resources and capacities for worker control and resistence. Such resources and capacities alone do not ensure worker power. But structural factors such as workers' interdependence, on-the-job training, the low measurability of individual task, and monopoly resources, when combined with worker's own resistance enable workers to avoid arbitrary dismissal, and to transform firings into layoffs. The evolution of capitalism creates relations of production which result mechanically in neither submission nor benefits for workers. In this way, this paper documents one aspect of the structural evolution of capitalism--the evolution of the employment structure into position of high and low capacities located in monopoly and competitive sectors. It is through the class struggle for control over this employment structure, rather than through capitalist conspiracy or inevitable socialization of production, that the specific forms of social relations of work and unemployment come about and are transformed.

The most straightforward policy implication of the theory considered here is that remedies for unemployment reside not simply in job creation or in upgrading workers but in transforming the structure of employment. Because that structure is the main determinant of the distribution of workers to different types of unemployment, policy proposals which simply allocate more workers to certain types of positions, or which upgrade workers to enable them to enter the employment structure under more favorable conditions, will be short-circuited unless there is simultaneously a transformation of the types of unemployment associated with these new positions or jobs. Assuming that forms of unemployment differ in their degree of harshness for those who suffer them, social policy should strive to decrease the incidence of firings, long layoffs that

are in effect firings, and quits precipitated by low wages and bad working conditions. At present there is discussion about the need to distinguish (and measure in new unemployment statistics) between unemployment that entails economic hardship and that which does not. Similarly, there is need to distinguish and measure the types of unemployment discussed in this paper in order more adequately to formulate policy that will not simply stimulate demand and lower aggregate measures of unemployment but will actually benefit workers, even if some unemployment is structurally inevitable.

Upgrading skills of workers may ease the burden of unemployment for particular fired workers. Stimulating aggregate demand may benefit laid-off workers as well as some of the fired. But these policies still provide little significant protection for workers in low-capacity positions against being fired or from suffering losses in real earnings when high labor supplies bid down wages. I would argue for extending job security guarantees to groups not now protected by unions, government regulation, or the other resources for worker control and job security that are present in high-capacity, vacancy-competition employment.

Regrettably, the politically feasible policies for welfare reform entail a job policy that would weaken rather than strengthen worker protection. Both the unsuccessful Carter and the Ullman welfare reform proposals of 1978 and the version of the Humphrey-Hawkins Full Employment and Balanced Growth Act passed by the 95th Congress in the Fall of 1978 subordinate concern for job protection and the right to employment to the requirements of the free-enterprise economy. The original Equal Opportunity and Full Employment Act called for the creation of large numbers of permanent, special, public sector jobs at prevailing wages; but subsequent modifications have diluted or replaced the

Act's most farreaching proposals for federal planning of production and investment and for "reservoirs of public service and private employment projects" to lower the unemployment rate to 3%. The more elaborate welfare reform proposals contained a small jobs component that allowed for maximum one-year employment in special public sector jobs at minimum wages. These proposals required that workers leave their public sector employment at the end of a year and reapply for a private sector job. Cash benefits, earned income tax credits, and employment tax credits were scheduled in order to create incentives for workers to prefer private sector employment over special public employment and to prefer the latter over welfare benefits.

The consequence of such policy is to provide employment in low-capacity positions and to enforce by legislation a high turnover rate for employment positions. As we have seen, low-capacity jobs in the private sector already suffer high turnover through firings and quits. The proposals for temporary employment in such positions in the public sector mandate a recurrence of the cycle of job entry and job loss already endured by millions of workers at the hands of the private sector. In effect, under the proposals the government will perpetuate the experience of job separation for the group of workers already abundantly endowed with such experience. The government will itself create unemployment, in general, and firings, in particular, in order to provide incentives for workers to enter the lowest positions in the private sector. Workers are in this way goaded by the promise of greater income to undergo at least one more round of job-connected failure and disappointment.

It seems reasonable to assume for now that private sector employment will not expand rapidly enough in the immediate future to provide jobs for

workers coming off special public sector employment. It is also reasonable to assume that such special public employment will be aimed at decreasing welfare rolls and insuring incentives for private sector employment rather than at skill training. Since low-skilled workers are even more likely to be fired than to quit, another effect of present welfare reform plans will be to encourage, by the system of incentives in the welfare reform plans, the increase of vulnerable, low-capacity employment positions in the private sector.

A final implication is more controversial since it runs counter to what many critics of contemporary capitalism hold. The analysis suggests that increased concentration, centralization, and technologically induced specialization may in fact offer more rather than fewer resources for workers to maintain their interests both within the firm (over issues of job security, wages, etc.) and within the larger political arena (over issues of taxation, income supplements, unemployment benefits, and public sector employment). Clearly, the long-run solution to unemployment must entail means to insure a quantity and quality of employment in line with the personal desires of workers and with social need. Such a solution must insure a decrease in the scarcity and undesirability of jobs as well as a tempering of the cyclical crises of capital and the periodic expansion of a surplus supply of workers. Until that day, worker demands and policy proposals should, I believe, focus on eliminating the contingencies of firings, reducing the inadequacies of jobs that induce quits, and alleviating the duration and hardship of layoffs.

NOTES

[1]Although the segmentation of positions into classes is theoretically more fundamental than segmentation within classes according to resources and capacities, the latter are theoretically meaningful across classes, and are applicable to all positions of employment, including those of supervisors, managers, and foremen. Since efforts to translate occupational categories into class categories have so far proved fruitless (cf. Hicks and Fligstein, 1976), this paper will examine the relationship of resources and capacities of positions to types of unemployment for all positions of employment without further distinction between working-class positions and the contradictory, middle positions of managers, supervisors, and foremen.

[2]This literature stresses the disjunction between primary and secondary jobs (Doeringer and Piore, 1971; Piore, 1970; Gordon, 1972); primary and secondary workers (cf. Piore, 1970, 1971); and monopoly, competitive, state, and irregular sectors of economy (cf. Averitt, 1968; O'Connor, 1973; Bluestone, 1970).

[3]Rosenberg (1970) uses Specific Vocational Preparation (SVP) and General Educational Development (GED) as measures of the skill requirements of a job. According to the Department of Labor's Dictionary of Occupational Titles (1965), Specific Vocational Preparation is "the amount of time required to learn the techniques, acquire information and develop the facility needed for average performance in a specific job worker situation" (652). General Educational Development "embraces those aspects of education (formal and informal) which contribute to the worker's (a) reasoning development and ability to follow insturctions and (b) acquisition of 'tool' knowledges, such as language

and mathematical skills" (651). Social relations on the job are defined by a set of variables measuring the degree of independent action or judgment afforded by the job. If a position is below a certain designated level on measures of GED, SVP, and job independence, and not above certain maximum levels, and if a job has an average medium hourly wage rate which provides its incumbents with yearly wages below the Bureau of Labor statistics minimum support level, the job is classified in the secondary sector; all other occupations are then located in the primary sector.

[4]The parameter is raised to the power of $\frac{ij}{(i-1)(j-1)}$

where i is the number of categories of the dependent variable and j is the number of categories in the independent variable. Here i = 5 and j = 2. This produces the power of 5/2.

[5]This ratio is calculated from the Tau-parameters. Tau (employment, competitive) is 1.5591; Tau (employment, monopoly) is 1.3438.

[6]The ratio calculated here is

$$\frac{\tau \text{ employment, white}}{\tau \text{ employment, black.}}^{5/2}$$

The Tau-parameters are: Tau (employment, white) is 1.0469; Tau (employment, black) is .9552.

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APPENDIX A

CENSUS OCCUPATION CODE	OCCUPATION
262	Demonstrators
264	Hucksters and peddlers
266	Newsboys
310	Cashiers
325	File clerks
332	Mail handlers, except post office
333	Messengers and office boys
374	Shipping and receiving clerks
383	Telegraph messengers
385	Telephone operators
391	Typists
501	Millers, grain, flour, feed
602	Assemblers
611	Clothing ironers and pressers
623	Garage workers and gas station attendants
624	Graders and sorters, manufacturing
625	Produce graders and packers, except factory and farm
626	Heaters, metal
630	Laundry and dry cleaning operatives n.e.c.
634	Meat wrappers, retail trade
642	Oilers and greasers, except auto
643	Packers and wrappers, except meat and produce
661	Sailors and deckhands
663	Sewers and stitchers
670	Carding, lapping, and combing operatives
672	Spinners, twisters, and winders
674	Textile operatives, n.e.c.
711	Parking attendants
740	Animal caretakers, excluding farm
770	Warehousemen n.e.c.
780	Miscellaneous laborers
785	Not specified laborers
822	Farm laborers, wage workers
823	Farm laborers, unpaid family workers
824	Farm service laborers, self-employed
901	Chambermaids and maids, except private households
902	Cleaners and charwoman
903	Janitors and sextons
910	Bartenders
911	Busboys
913	Dishwashers
914	Food counter and fountain workers
915	Waiters
916	Food service workers n.e.c., except private household
925	Nursing, aides, orderlies, and attendants
932	Attendants, recreation and amusement
933	Attendants, personal service n.e.c.
934	Baggage porters and bellhops
940	Boarding and lodging house keepers
941	Bootblacks
942	Child care workers
943	Elevator operators
952	School monitors
953	Ushers, recreation and amusement
954	Welfare service aides
960	Crossing guards and bridge tenders
962	Guards and watchmen

APPENDIX A Cont.

CENSUS OCCUPATION CODE	OCCUPATION
750	Carpenter's helper
751	Construction laborers, excluding carpenter's helpers
752	Fisherman and oysterman
754	Garbage collectors
755	Gardeners and groundskeepers
760	Longshoremen and stevedores
762	Stock handler
763	Teamster
764	Vehicle washers and equipment cleaners
980	Child care workers, private household
981	Cooks, private household
982	Housekeepers, private household
983	Laundresses, private household
984	Maids and servants, private household

(From Rosenberg, 1975, pp. 57-59)