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THE SOCIOLOGY OF LABOR MARKETS

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by

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CONTENTS

The Sociology of Labor Markets

The aim of this essay is to provide a synthesis of empirical and theoretical research in an area that is a point of convergence for much of the literature on social stratification, occupational sociology, industrial sociology, the sociology of organizations, and labor economics. The analysis of labor markets is an important concern for sociological inquiry; it permits an understanding of the way macro forces associated with the economy of a society and elements of social structure impinge on the microrelations between employers and workers in determining various forms of inequality. Since the majority of people in industrial society obtain income and other rewards in exchange for work, labor market processes form the central mechanisms of social distribution in industrial society (Caplow, 1954). We attempt in this review to define the boundaries of the "sociology of labor markets," to indicate the central problems in this area and to evaluate critically the contributions made. Finally, we suggest the future directions of research in this area.

The concept of "labor markets" has a large number of connotations. It has been used to denote geographical areas or occupational and industrial groups, as well as groups of workers defined by ethnicity, race, sex, and levels of education and skill. We define labor markets abstractly, as the arena in which workers exchange their labor power in return for wages, status, and other job rewards. The concept, therefore, refers broadly to the institutions and practices that govern the purchase, sale, and pricing of labor services. These structures include the means by which workers are distributed among jobs and the rules that govern employment, mobility, the acquisition of skills and training, and the distribution of wages and other rewards obtained contingent upon participation in the economic system.[1]

Two hundred years ago Adam Smith stressed the central role of labor in the production of wealth; indeed, Smith can justly be credited with creating the field of labor market analysis. He formulated the basic ideas about the forces that determine remuneration for work in competitive labor markets--that is, the supply of and demand for labor. He also recognized that different types of employments were not equally desirable. This led him to his famous proposition of compensating wage differentials: that wages should be inversely related to the desirability of the work. The apparent falsity of this proposition has often been used since then to motivate modifications of the classic analysis. John Stuart Mill (1926) argued for the existence of "noncompeting groups;" these, by regulating the supply of labor to desirable occupations, would determine the generally observed positive relation between wages and other job rewards. As Cain (1976) pointed out, this modification in the classic assumption of a single, competitive market is the same basic idea that much later led to the concepts of segmented labor markets. A recent extension of the classic analysis, in the form of human capital theory, has attempted to reconcile the proposition of compensating differentials with reality. It keeps the assumption of a single competitive market, but argues that it applies within occupations at a given skill level (e.g., Becker, 1971).

Among the founders of modern sociology, Karl Marx believed that the existence of a competitive labor market where labor was bought and sold freely as a commodity was a fundamental characteristic of capitalist society.

Marxist analysis, with its emphasis on class conflict and change in social structure, has been applied in much recent research on labor markets, including the literature on segmented labor markets. Marx himself, however, treated labor as an abstract homogenous category (as in classical economics) and did not provide a systematic analysis of labor market differentiation within the capitalist system of production. In contrast, Weber's (1947) long analysis of the sociological categories of economic action provided numerous concepts relevant for the analysis of labor market structures, particularly in his treatment of the social division of labor.

Sociologists have tended to be concerned with other aspects of Weber's work than his analysis of labor markets and in general, until recently, have left labor market analysis to the economist.[2] Various sociological subdisciplines such as social stratification, the sociology of occupations, and organizational theory have, of course, generated a literature that is often of relevance for the analysis of labor markets, but this literature has usually not been explicitly labeled as a contribution to this area.

Within labor economics there are two traditions of labor market analysis (see McNulty, 1966, for an historical review of the evolution of labor market analysis within economics). One is a continuation of the classical analysis, that assumes a perfectly competitive market. In the last couple of decades this tradition has developed powerful analytic tools, in the form of marginal productivity theory, which describes the demand side and human capital theory and the theory of the labor-leisure choice, which describe the supply side. Alongside this tradition there has, throughout this century, been a strong traditon, in labor economics, of institutional economics that has emphasized empirical analysis over abstract theorizing and infused psychological, sociological, historical, and legal notions into research on labor markets. Particularly important for recent research on labor markets have been the contributions made by the institutionalists that dominated labor economics in the 1940s and 1950s. The work of the institutional economist resembles the work of the sociologist in its concern for analyzing the structures and processes that differentiate labor markets, and any distinction between the sociology and the economics of labor markets loses its relevance in this context.

The last decade has witnessed a revival of interest in labor market analysis. This resurgence may be attributed to a number of developments within both sociology and economics. Among the most important are: (1) the recognition of persistent poverty, discrimination, and income inequality that seem to call for explanations that deviate from the analysis provided by the orthodox economic labor market theory; (2) a revival of interest both in Marxist political economy and in the application of Marxist methodology in the analysis of labor market phenomena; (3) the increasing interest among sociologists in incorporating institutional and structural variables in the model for the socioeconomic achievement process that originated in Blau and Duncan (1967). These various developments clearly indicate the importance of the study of labor markets, but their diverse origins have created a need to synthesize research and theory in the field. This review will attempt to fill the need, emphasizing in particular the most recent contributions to the field.

IDENTIFYING THE SOCIOLOGY OF LABOR MARKETS

The sociology of labor markets is a sociology of an economic institution. It is, therefore, inconceivable to ignore the important contributions made by institutional economists. Similarly, it is difficult to exclude the work of classical and neoclassical economics, particularly given that so much of the literature outside this tradition has the analytically powerful "orthodox" theory as its reference point. This review will include contributions to the study of labor market structures regardless of whether the contribution originated in sociology or in economics, particularly in institutional and neoinstitutional economics. Further, we have incorporated literature on labor market institutions from various subdisciplines of sociology (social stratification and mobility, organizations, sociology of occupations and professions) that may not have been explicitly labeled as contributions to the sociology of labor markets.

The analysis of labor market structures and processes involves a great many institutions and actors. Parnes (1968), for example, identified five principal actors as involved in labor market processes: the individual worker, the individual employer, workers' organizations, associations of employers, and the government. Rather than focussing on such a list of actors and institutions, we have chosen to organize this review around a set of research questions, briefly outlined below, that we believe to be representative of recent developments in the area. Our discussion of the literature will follow this topical outline.

1. Conceptions of Labor Markets. Neoclassical economics, as has been mentioned, developed a powerful analytic theory that relies on the

assumption of a perfectly competitive labor market. This assumption has repeatedly been challenged, on the ground that it is too unrealistic for an adequate understanding of empirical processes and for policy formulation. A number of alternative conceptions of labor markets have been developed--Kerr (1950) provides an early example of such a typology. These attempts at identifying the dimensions along which labor markets are differentiated or segmented have recently generated an extensive literature. The different conceptions determine how specific research questions are addressed, which variables are examined, and how observed relationships are interpreted.

2. Labor Market Outcomes. Much of the literature on labor market structures and processes has developed around specific research questions such as the earnings determination process, employment discrimination, job mobility, etc. We have chosen for inclusion in this review research on what appears to have been the three main topics:

(a) The distribution of job rewards. This is perhaps the most important subject of labor market research, since a major part of conceptual and empirical analysis of labor markets is justified by its relevance for our understanding of the processes that generate inequality in society. Most attention here has been focussed on the processes that determine earnings or wage inequality in different structural settings, but there has also been a considerable interest in understanding inequalities in such job rewards as prestige, job security, and various psychological benefits.

(b) Mobility and careers. Job mobility is important because of what it reveals about the adjustment of changes in the supply and demand for labor. Reynolds (1951) argues that the single most important problem in labor market analysis is to explore the factors that attach workers to a particular firm and condition their movement among firms. In sociological research, mobility is important in the analysis of achievement processes and careers. Mobility patterns, accompanied by changes in job rewards, reveal how structural factors associated with labor markets facilitate or hinder the socioeconomic achievement of individuals.

(c) Labor market segmentation of population groups. A recent theme of much of the literature on labor market processes has been the differential distribution of population groups, defined by race, sex, and ethnicity, among segments of the labor market, and the consequent differences in job rewards and/or career trajectories. A considerable body of literature has here focussed on the role of discrimination and segregation of minorities in explaining these differential outcomes.

3. Social Change in Labor Market Structures. Finally, we focus on changes in labor market structures produced by changes in technology and by the interactions and conflicts among the main actors in the labor market. Included in this section are studies dealing with class conflict in the labor market, the forces that change job structures and the relation of change in labor markets to change in the social and economic structure of society.

1. CONCEPTIONS OF LABOR MARKETS

A common point of departure for much of the literature on the nature of labor markets is the model implied in the "orthodox" classical economic conception. Here the market is assumed to be perfectly competitive: the actors, workers and firms, have perfect information, maximize utilities in particular earnings, and are unable individually to influence the prices given by the market. Further, wages respond to changes in supply and demand, and workers can freely move in response to changes in supply and demand in different parts of the market. Thus the labor market is conceived as resembling a market for other goods. A well-developed price theory can then be applied to the analysis of a number of labor market phenomena, in particular the earnings determination process.

With this conception of the labor market, neoclassical economics has developed a powerful deductive apparatus that explains a number of observed features of labor market processes. It explains: (a) the observed association between individual characteristics of workers, such as their education and ability, and the earnings they obtain; (b) the basic shape--concave to the time axis--of observed career lines or age-earnings profiles; (c) voluntary unemployment in terms of the labor-leisure choice. These and other explanations for labor market processes provided by the marginal productivity/human capital theory will be discussed more fully in later sections.

The economic theory permits the formulation of a number of predictions that are relevant for policy. In particular, the theory predicts that training and educational programs will be successful in reducing poverty and inequality, and in removing minorities from poverty status. The theory predicts that discrimination will be a transient phenomenon in competitive labor markets, and that the removal of minimum wage laws will be of major importance for the reduction of unemployment, especially among the young and the disadvantaged. Such policy implications have been a major inspiration for the alternative conceptions of the labor market that we present below.

The issue here is not one of whether perfectly competitive markets actually exist in reality. Few, if any, will disagree with the observation that competition in empirical labor markets is at best imperfect. Empirical examples of labor markets that closely resemble the neoclassical scenario are scarce. Fisher (1953) argues that only special markets, such as the migrant labor market in California, have the required properties. Scoville (1974) presents the labor market in Afghanistan as fitting the competitive model reasonably well, in that wages are relatively uniform, mobility is not restricted, and institutional forces have a relatively low influence.

The disagreement between those who maintain the assumption of a perfectly competitive market in theoretical analysis and those who reject this conception resides, instead, in the question of the usefulness of the classic conception. Neoclassical economists will agree that there are imperfections and institutions that interfere with the free operation of the market. However, they will claim that these imperfections do not systematically invalidate predictions from the theory, at least not in the long run. Further, there is a tendency to turn positive theory into normative theory when dealing with labor market institutions that interfere with the free operation of the market. Against this position, there are those who argue that the imperfections are of major empirical importance both for research and policy, and that the resulting departures from the perfect model of competition systematically invalidate the predictions of the neoclassical theory. Further, they will argue that the normative use of the theory in policy formulation has serious social costs.

Within the neoclassical framework there have been modifications of basic assumptions, particularly the assumption of perfect information (Arrow, 1973a; Spence, 1974; Wickens, 1974). These developments shall not be emphasized here. Instead we shall concentrate on those conceptions of labor markets that see deviations not as "imperfections" that are nuisance factors for analysis, but that emphasize these labor market structures and their consequences for empirically observed labor market processes. These conceptions are most appealing to sociologists, for whom economic theory is not necessarily the framework that generates the most fruitful sociological research.

There are several approaches to developing labor-market typologies and classifications. One is to propose a list of the dimensions of markets that may be used to characterize empirical markets. In turn, the relevance of these dimensions for labor market processes may be analyzed. This approach is exemplified by Stinchcombe (1965) who suggests characterizing labor markets according to the organization of licensing practices and agencies, the nature and quality of preparation for work roles outside employing organizations, the nature of the organized groups that determine the employment contract, job ladders and careers, and the structure of competition for labor or the opportunity structure for individuals. Such an approach would not necessarily result in an exhaustive typology of labor markets, since it is an empirical question as to the extent to which these dimensions intercorrelate.

Such an approach identifying the crucial variables characterizing labor markets would seem fruitful, but it has not been much followed. Instead, the major part of the literature suggests partitioning labor markets into various segments or sectors, each defined by the simultaneous presence or absence of a number of characteristics. There are two traditions, one emphasizing the segmentation of the national labor market into two or three distinct markets, with barriers to mobility between segments, the other emphasizing the specific institutional setting for labor market processes; the latter makes a fundamental distinction between external and internal (within-firm) markets. We shall review these two approaches separately, though some overlap between the segmented and the internal labor market literature exists.

There are, finally, those who attempt to conceive of labor markets (in the tradition of Stinchcombe) as differentiated according to the social or power relations between the various labor market actors, particularly employers and workers. In this approach, one of the possible dimensions of labor markets is singled out as especially important for labor market processes.

Dual and Other Segmented Labor Market Conceptions

In this section we discuss the "dual labor market" theory and related work on labor market segmentation in the "radical/Marxist" tradition.

Overviews of some central elements of this literature are provided in Gordon (1972a) and Montagna (1977, ch. 4). Critical reviews of this literature are provided by Wachter (1974) and Cain (1976).

The "dual labor market" theory has been empirical or descriptive in nature, and primarily directed towards the specific policy problems of poverty and underemployment. It was developed by a number of economists in the late 1960s, initially from a series of qualitative studies of ghetto and local labor markets (e.g., Harrison, 1972). Its chief spokesman has been Piore (1969, 1970, 1975). The basic hypothesis of the dual labor market is that the labor market is divided into two distinct sectors with little mobility between them.

> The former (i.e., primary sector) offers jobs with relatively high wages, good working conditions, chances of advancement, equity and due process in the administration of work rules, and above all, employment stability. Jobs in the secondary sector, by contrast, tend to be low-paying, with poorer working conditions and little chance of advancement; to have a highly personalized relationship between workers and supervisors which leaves wide latitude for favoritism and is conducive to harsh and capricious work discipline; and to be characterized by considerable instability in jobs and a high turnover among the labor force [Piore, 1975, p. 126].

Piore (1975) has further distinguished upper-tier and lower-tier primary jobs, which are identified by such characteristics as status, pay, opportunities for promotion, and autonomy.

The theory thus argues that the important distinction for analyzing the economy is that between good and bad jobs rather than between skilled and unskilled workers. It argues that the secondary sector operates according to processes that are very different from those postulated by neoclassical economics (Vietorisz and Harrison, 1973), and that workers are barred from leaving this sector not so much by their own lack of human capital as by institutional constraints and by a lack of good jobs. Therefore, workers in the secondary sector experience underemployment, and attempts to alleviate this problem must focus on the creation of jobs rather than on giving workers more skills and training.

Evidence in support of various aspects of the dual labor market theory has been presented by Gordon, 1971; Andrisani, 1973; and Rosenberg, 1975. Gordon (1971), for example, used factor analysis to assess market duality, and found a factor which appeared to differentiate jobs along the lines suggested by the theory. Bosanquet and Doeringer (1973), in an extension of the argument to Great Britain, found that workers in the primary sector had relatively low turnover, higher earnings, good advancement opportunities, and chances to obtain on-the-job training, in contrast to those in the secondary sector, which had lower levels of these characteristics.

The dual labor market theory is related to a more general set of concerns--the analysis of economic structures in terms of dualism and/or tripartism. One use of the dualistic concept is found in the literature on developing countries. Singer (1970), for example, discussed the tendencies toward dualism that characterize both the world economy and the internal differentiation within developing societies. He attributed this internal dualism to factors associated with the cleavage between the limited sector, where modern regular-wage employment obtains, and the sector where unemployment or various forms of underemployment persist. He further argued that the differences are not merely transitional, nor do they show signs of rapidly diminishing. Bluestone (1970) identified the core, peripheral, and irregular economies as producing segmentation of the structure of industries, and thus assumed to affect labor market structures. His argument parallelled that of "dual labor market" reasoning in some respects, and was motivated by similar concerns about poverty, but did not explicitly deal with job characteristics. Similarly, O'Connor (1973) suggested a distinction among the monopoly, competitive, and state sectors of production. These economic sectors are assumed to be associated with characteristics which will affect the structures of the labor markets within them, and the processes associated with those labor markets. Unfortunately, these authors did not well develop this link between labor markets and industrial sectors.

The analysis of these links is an explicit feature of the work of a number of "radical" political economists, who have approached the analysis of labor markets from a Marxist perspective. A sampling of this literature may be found in Edwards, Reich, and Gordon (1975), who considered questions of labor market "segmentation" to include both the analyses of labor market institutions and explanations for how and why the activity of production is organized the way it is. Reich, Gordon, and Edwards (1973) adopted the "dual labor market" theory's classification of job structures into upper- and lower-tier, primary and secondary sectors, but also placed great emphasis on race and sex as factors generating labor market segmentation. Their historical analysis attempted to explain the origins of these divisions of the labor market in terms of the dynamics of monopoly capitalism; they argued that these divisions persist because they facilitate the operation of capitalist institutions. Their approach provided an alternative to the assumption that labor markets are governed by freely acting forces of supply and demand, but also attempted to integrate a consideration of labor markets and basic features of the social structure.

Because of its descriptive nature, and its claim that it is not "neoclassical," the dual labor market theory has been the subject of considerable debate. Rosen (1974) emphasized its roots in the basic postulates of economic theory, and Wachter (1974) argued that many of its findings could be fitted into a neoclassical framework. In particular, he stressed that high-wage and low-wage sectors do, of course, exist in the economy. Such a dichotomization, however, should be used only as a simplifying device: there is evidence of considerable mobility between primary and secondary sectors. Further, it has not been established that there exist in the various sectors different processes, as opposed to differences in the parameters that characterize the populations occupying these sectors. A well-developed critique of this literature was also provided by Cain (1975, 1976), who saw fewer disagreements between the segmented labor market approach and neoclassical economics than the segmented literature suggested. Cain argued that dualistic theories too often have been sketchy, vague, and diverse if not internally conflicting, and have failed to provide an analytic theory that is equally as powerful as the orthodox theory.

There is a central empirical problem that characterizes the segmented conceptions of labor markets: Evans (1973) argued that although the concept has proved useful for the analysis of labor markets in developing countries and in such countries as Japan, it oversimplifies the complexity of the U.S. economy. He stressed that the proponents of the dual theory had failed to explain satisfactorily the origins and maintenance of the two labor market sectors. Instead, he suggested that a more useful construct for analyzing the economy was the "internal labor market."

Internal Labor Markets

The concept of the internal labor market was proposed by Kerr (1954) and further developed by institutional economists in the 1950s in an attempt to account for the varieties of market structure imposed by such groups as employers, the government, unions, and other organizations of workers. The internal labor market refers to "the complex of rules which determines the movement of workers among job classifications within administrative units, such as enterprises, companies, or hiring halls" (Dunlop, 1966, p. 32). These markets are to be distinguished from the "external labor market" where pricing, allocating, and training decisions are controlled directly by market forces. These two types of markets are interconnected via certain job classifications which constitute ports of entry and exit to and from the internal labor market.

The concept of internal labor market has been related to the "dual labor market" theory by Doeringer and Piore (1971). They argue that the primary sector consists of a series of internal markets. Most secondary-sector jobs, in contrast, do not belong to the internal labor markets: they lie in markets which possess many entry ports, short mobility clusters, and low-paid or unpleasant work. The relations between these two sets of concepts have led to some confusion in the literature, as differences between primary and secondary sectors are frequently explained on the basis of characteristics associated with the presence or absence of internal labor markets.

Internal labor markets are generally understood to be of two major types (Kerr, 1954; Doeringer and Piore, 1971). In the first, the internal market is usually equated with a particular firm or establishment. Entry is controlled by the firm, and workers tend to be promoted from the entry job classifications to higher-level jobs in the firm along orderly lines of progression. The second identifies the internal market with a particular occupational group, usually a craft occupation. Here, entry is generally controlled by members of the occupational group and mobility occurs among employers within the occupational group. In these markets, the worker gets his security not from the individual employer but from his skill, the competitive supply of which is controlled by the occupational group. These types of internal labor markets may be contrasted with labor markets which are not contained within well-defined administrative units and for which the process of allocating and pricing occurs in a competitive fashion.

Elaborations of the internal labor market concept have focused on the structural features that define such markets. Doeringer (1967), for example, argues that administrative units such as firms are often divided into internal submarkets for different occupational groups, each governed by its own specific set of rules. This suggests that internal labor markets of the first type described above should not be equated with the entire firm, but with subsets of the firm. Such considerations have led some to focus on structures that are distinctive to internal labor markets. One frequently stressed element of internal labor market structure is the job ladder, derived from Doeringer and Piore's (1971) broad definition of "line of progression," where "work on one job develops the skills required for the more complex tasks on the job above it, and those at one point in the line constitute the natural source of supply for the next job along the line" (p. 58). Another structural characteristic is seniority entitlements. Spilerman (1977, p. 583) for example, suggests: "if we identify an internal labor market with a situation in which seniority entitlements bind a firm to its workers and workers to the firm, internal labor markets will exist even where the potential for earnings growth and promotion is no better than in the secondary sector." The literature on these structural characteristics of internal labor markets is analyzed by Althauser and Kalleberg (1977), who propose a typology of five labor markets which overcomes many of the problems evident in previous work.

In contrast to research in the "dual" tradition, the empirical literature on internal labor markets has not sought to classify the economy as a whole into sectors but has taken a more disaggregated approach and has examined specific internal markets. Studies in the institutional tradition have focused on such specific settings as manufacturing plants, union hiring halls, craft markets, scientific institutions, etc.;

of less concern has been the integration of these into a general "model" of how internal labor markets relate to the operation of the economy as a whole. When combined with a number of other elements of labor market structure, however, the internal labor market concept is an important unit in such a general explanation.

Conceptions of Labor Markets in Terms of Social Relations

The classical economic theory conceives of labor market processes as outcomes of free exchange in the market. It is often pointed out that the theory ignores the social and political variables that interfere with the free exchange. Several conceptions of labor market differentiation have been proposed in which the social and power relations between labor market actors are crucial for the nature of the market. Some of the conceptions focus on the employment relationship, specifically the bargaining power of employers vs. employees, others focus on the power of occupational groups; finally, class relations have been emphasized.

An early conception emphasizing the employment relationship was that of Phelps (1957). He delineated different types of labor markets in the United States on the basis of their formal employment rules and employee rights. This led to a classification of labor markets into those where employers have unilateral rules, those which are primarily regulated by the government, and those characterized by various union-management agreements.

Thurow (1975) emphasized the relative bargaining power of employers vs. employees over the employment contract. This led to a distinction between a "wage-competition" sector where access to jobs is determined by competition among workers over wages, and a job-competition sector where workers in jobs are insulated from competition, and where access to vacant jobs and training opportunities is determined by the relative position of job candidates in the labor queue. This conception was further elaborated by Sørensen and Kalleberg (1977), who argued for other sources of employee bargaining power than training requirements.

A conception of labor markets originating in the occupational sociology literature views occupations as having differing levels of control over labor markets. Occupations represent groups of individuals who perform similar activities and therefore have similar skills and training, as well as similar amounts of social power deriving from these positions in the social division of labor. Differences among occupations thus represent differences in the degree to which workers are able to determine the terms of the employment relationship. Form and Huber (1976), for example, define a number of sectors on the basis of this criterion: markets may be self-controlled (owners, managers, directors of large firms), traditional (professional, craft), administered (white-collar workers in government and military bureaucracies), and contested (occupations which engage in formal collective bargaining). Differences among the power held by these groups reflect differences in the ability of the occupation to defend itself against the incursions of others, and to maintain or obtain advantages with respect to a variety of labor market outcomes.

Finally, Wright (1976), from a Marxist perspective, emphasized class position as a source of differentiation of labor markets. He focussed attention on what he called "contradictory" class positions managers who do not own means of production but direct the work of others; semi-autonomous employees who have autonomy over their own work; petit bourgeois who own their own means of production but do not employ labor. From survey data he obtained estimates of the sizes of these various class positions and, of course, the pure working class to provide a picture of the class structure of the United States. Further research by Wright and Perrone (1977) investigated the income determination process in the various class positions.

THE DISTRIBUTION OF JOB REWARDS

Annual earnings and wage rates are the most easily quantified job rewards, and perhaps the most frequently studied in the literature on labor market processes. A comprehensive assessment of the benefits obtained in return for work in the labor market should, however, also consider a range of nonmonetary rewards that provide individuals with status and psychological benefits. Employment conditions such as job security should also be considered. The literature on the variables that determine such rewards is enormous, and we shall concentrate our review here on attempts to examine the differences in job rewards among firms, occupations, industries, and other labor market structures. We focus mainly on the earnings determination process, and exclude from consideration the large literature on psychic rewards, i.e., job satisfaction. (See Kalleberg, 1977 for a discussion.)

<u>The Orthodox Economic Approach</u>

The dominant perspective on the distribution of economic rewards in labor economics is, as mentioned, the neoclassical theory. Here wages are seen as jointly determined by supply and demand. Firms will be in competitive equilibrium when they pay workers the marginal products that are determined by their productivity, the prices for the firm's output, and the costs of other factors of production. While the latter will vary from firm to firm, the economic literature on the earnings determination process has tended to treat demand fluctuations as short-run disturbances and to emphasize stable differences in productivity that reside in the workers themselves as sources of differences in earnings. In other words, the supply side described by the human capital theory and the theory of the labor-leisure choice have been emphasized. Further, in human capital theory, differences in the kind of work supplied are usually considered more important for rewards than is the amount of work supplied. The differences in the kind of work supplied that are relevant to individual productivity (and hence to earnings differences) are described in terms of the individual's education, ability, experience, and training received on the job. Education and training, it is argued, represent investments made by individuals. The earnings differences accounted for by these variables hence represent compensations for the cost of obtaining the skills that form a person's human capital. A major component of these costs is earnings forgone.

A comprehensive statement of human capital theory may be found in Becker (1971), which is a revision of Becker's pioneering statement of

1964. A major empirical study using the theory is presented in Mincer (1974). A review of the literature is given by Blaug (1976); surveys of achievements are presented by Mincer (1970) and by Welch (1975). A critique of the theory from a Marxian perspective is provided by Bowles and Gintis (1975).

In sociology, research on the distribution of job rewards has been dominated by the causal modeling approach pioneered in Blau and Duncan (1967). The sociological literature has tended to focus on occupational status as the job reward of interest, and to stress the role of education in the transmission of parental status to the next generation. A direct extension of the model views income as determined by occupational status attained and by the education and backgrounds of individuals (e.g., Sewell and Hauser, 1975). In contrast to the approach taken in economics, however, there has been little emphasis in sociological research on formulating a conceptual framework that will explain the observed association between individual characteristics and job rewards.

The human capital literature is a major theoretical reference point for this section; it is relevant to sociological research to the extent that it focusses on conceptual issues concerning the distribution of rewards. It clearly is successful in explaining basic features of the earnings determination process. In fact, the theory may be extended to include other rewards beside earnings. Juster and Duncan (1975) argue that fringe benefits, the quality of work and conditions, stability of employment, and control over time should be included for an adequate test of the theory. Duncan (1976), in fact, finds that the explanatory power of the simple human capital earnings model increases as the nonmonetary benefits are added to the earnings measure.

The interpretations provided by human capital theory are not the only possible ones. In particular there has been some attention focussed on providing alternative interpretations to the relationship between education and job rewards. These interpretations argue that schooling does not necessarily confer productive skills but may serve as a screening device (Arrow, 1973a) or a signal (Spence, 1974) that reveals (or is believed to reveal) differences in ability. Another interpretation of the observed association of education to job rewards is that education is a ranking or credentialing criterion in allocating persons to jobs (Berg, 1970; Thurow, 1972; Boudon, 1974).

In apparent disagreement with the human capital approach, several studies have attempted to show that there are sources of differences in earnings other than individual characteristics. Bibb and Form (1977), for example, examined the effects of industrial, occupational, and organizational characteristics additively for a national sample of blue-collar workers. They provided evidence for a "structural" theory of income by demonstrating that their "social structural" variables had greater effects on income than their "human capital" variables. A similar approach was taken by Wachtel and Betsey (1972), who represented the effects of both personal characteristics and a variety of occupational-industrial factors, in a linear and additive regression model estimated for a national sample. They found substantial variation in wages among these structural characteristics, and regarded them as evidence for a model of the labor market which integrates both supply and demand characteristics. Spaeth (1976) examined the linear and additive effects of a variety of job characteristics on income for a national sample of men and found that these had significant net effects on income. A similar analysis was presented by Thurow and Lucas (1972). Finally, Dalton and Ford (1977), in a recent study that adhered to the traditions established by economists interested in wage differences arising from industrial characteristics, found a significant relationship between market concentration and wages after adjusting for the human capital of workers.

This last line of research is however not necessarily inconsistent with human capital interpretations. Kalachek and Raines (1976), for example, found similar effects on wages produced by occupational and industrial characteristics, but interpreted these as a result of "market imperfections" due to persisting disequilibriums in the market. They further argued that since such human capital variables as education affect an individual's placement in various occupational-industrial structures, the total effect (direct effect and indirect effect via the structural variables) should be interpreted as the "returns" to human capital. Consistent with neoclassical economic reasoning, these "structural" factors should be interpreted as ways in which human capital gets translated into rewards. In any event, the fact that there are differences in earnings due to demand differences does not invalidate human capital theory, though there may have been a tendency to ignore the demand side in applying the theory. The results of two studies illustrate the utility of a human capital explanation despite the inclusion of nonindividual variables. In a study in Japan, for example, Stoikov (1973) found that interfirm wage differences among Japanese manufacturing firms were explained almost entirely by differences in the skills and knowledge possessed by workers. Similarly, Mueller (1974) found that the processes by which occupational status and income are achieved are relatively homogeneous across large American communities, though the levels of attainment varied among communities.

While it may be the case that most empirical findings about the distribution of job rewards can be accommodated within the neoclassical theory, findings that indicate persistent disequilibria and other imperfections in the labor market reduce the usefulness of the orthodox theory for empirical research and policy. A considerable and growing body of literature argues that the "imperfections" of the competitive market are too important to ignore. This literature analyzes differences among labor market segments in the processes by which job rewards are distributed to individuals. Whether the findings of this research will be integrated into an alternative theory of the process that determines earnings and other job rewards is an open question. However, there is no doubt about the existence of such differences and their empirical importance.

There have been two general approaches in the research on the attainment process in different labor markets. One focusses on the labor force as a whole and attempts to identify labor market segments on the basis of, for example, occupations and industries. The other approach focusses on specific local or internal labor markets because of their intrinsic interest or theoretical relevance.

Sector Approach

The units chosen to represent labor market segments differ among researchers, but all generally define labor markets on the basis of job characteristics as opposed to variables associated with individuals. The major ways of defining sectors that we will consider here are: occupations, industries, organizational characteristics, and classes.

Stolzenberg (1975b) argues that such variables as specificity of skills and training create barriers to mobility among occupational "labor markets" and that processes of wage attainment will differ among occupational groups. He presents illustrative evidence to suggest that age-earnings profiles, for example, will differ among occupational groups.

Occupations furthermore form the basis for a number of attempts to operationalize the sectors postulated by the dual labor market theory. Osterman (1975) divides the occupational structure into upper and lower primary tiers and secondary sectors on the basis of his judgment concerning the levels of stability, autonomy, and economic rewards associated with various occupational groups. (This is consistent with Gordon's [1972b] discussion of the rewards available to workers in different occupational sectors.) He finds that human capital variables have greater effects on earnings in the primary as opposed to the secondary sectors, and interprets this as due to differences in the wage-setting processes associated with these sectors (e.g., Piore, 1973).[3] An alternative explanation for this finding, however, is that the differences are due to different levels of earnings and personal characteristics among the occupational sectors (see the exchange between Kruse, 1977, and Osterman, 1977, and also the methodological critique of such analyses presented by Cain, 1976).

An alternative way of defining sectors is to focus on characteristics of firms and their relationships to product markets, and to use industries as the sectoral units. Wendt (1978) used detailed Census industrial categories as the units of analysis and assessed differences in the income returns to education across industries. He then explained these interactions in terms of differences in the needs of particular organizations with respect to recruiting and maintaining a supply of workers. Others have used various groupings of these detailed industry classifications. Smith (1976) compared wage determinations among federal and private-sector workers; she found that federal workers are paid more than comparable private-sector workers and that this difference is not attributable to differences in productivity or stability of employment. In addition, Beck, Horan, and Tolbert (1978) aggregated industry groups into "core" and "peripheral" industrial sectors and found that sectors differ in the factors that are strongly related to earnings. Similarly, Hodson (1978) aggregated detailed industries into "monopoly," "competitive," and "state" sectors of production and found differences among sectors with respect to labor force composition and labor market outcomes that are explicable in terms of a Marxist analysis. The approaches of Wendt, and of Beck, et al., and Hodson are examples of two general ways of looking at differences among wage determination processes in industrial groups. They originate in different traditions (organizational vs. Marxist) that lead the authors to favor either a continuous or a discrete view of the industrial structure. Empirically, Wendt's approach is more general, as it leaves open the question of whether a discrete grouping of industries succeeds in capturing the variation among these categories that is important for understanding labor market phenomena.

Others have used occupation and industry simultaneously to define sectors. Freedman (1976) used a statistical procedure (AID) to combine 270 occupation-by-industry cells into fewer discrete groups. Andrisani (1973) used this sort of matrix to define sectors of the job structure in his empirical assessment of dual labor market theory. (Like Freedman, he also used annual earnings as the criterion for differentiating groups of occupation-industry cells.) Hodson (1978) looked at differences between primary and secondary occupations within his three industrial sectors. And Bluestone, Murphy, and Stevenson (1973, p. 80), who argued that "the wage of an individual worker can probably be best described in terms of occupation and industry," found a number of differences in the effects of personal characteristics on wages among occupation and industry groups.

An important variable that stratifies industries is organization size. Stolzenberg (1978) examined this directly by stratifying a national sample of white males into five categories depending on the size of the establishment for which they worked. He found that the effects of education on income increased with the logarithm of size.

Finally, Wright and Peronne (1977) examined differences in the processes of income attainment within different class positions. They found that employers, managers, and workers differ both in their levels of income and in the processes by which such variables as education are related to income.

The above literature provides considerable support for the importance of institutional factors in introducing heterogeneity into the processes by which rewards are distributed. We next consider some of the literature which has examined these processes within specific contexts.

Internal and Local Labor Markets

A major advantage of the disaggregated approach is that it permits the researcher to control for sources of heterogeneity in order to examine particular relationships more precisely. Rees and Shultz (1970), for example, restricted their sample to six counties near Chicago in order to examine the determinants of wages. They further stratified their analysis by occupation in order to assess the relative influences of personal characteristics and establishment variables. Bridges and Berk (1974) also sampled companies within Chicago, focussing on white-collar employees. The disaggregated nature of their sample allowed them to assess the impact of contextual and compositional effects of various personal and job characteristics; they found that the type of work performed by an individual is of minor importance in determining earnings, but that such factors as sex and marital status explain considerable variance.

Talbert and Bose (1977) restricted their sample to a single occupation (retail clerks) in a single Standard Metropolitan Statistical Area (SMSA) in order to assess the effects of organizational variables on wage determination processes. Their analysis showed that work routinization and organization dependence on environmental segments influence wages independently of individual characteristics and of labor market factors. Pfeffer (1977) also examined organizational effects using a disaggregated sample. From a survey of graduates from one school of business, he found differences, both in levels of earnings and in the effects of ascriptive characteristics on earnings, for organizations with different characteristics. Finally, Fogel and Lewin (1974) focussed on the public sector for their analysis of wage determination processes. They found that wages in the public sector are higher than in the private sector for most blue-collar and lower-level white-collar occupations, but that they are lower for managerial and professional occupations. These findings are interpreted as resulting from factors unique to public employment, such as the political forces that affect government wage decisions.

MOBILITY AND CAREERS

Studies of mobility and of careers have originated in a variety of subdisciplines. Spilerman (1977) attempted to integrate many of these concerns via the notion of the career as a strategic link between the structural features of the labor market and the socioeconomic attainments of individuals. He defined "career line" or "job trajectory" as a work history that is common to a portion of the labor force. He then considered the principal task of career-line analysis to be elucidating the properties of these job sequences--their entry portals, the number of constituent positions, the availability of transfer options to alternative career lines, and shapes of their returns in earnings, status, and work satisfaction as a function of age. He illustrated these features of career-line analysis by an examination of mobility patterns among cells in an occupation-industry matrix. He finally attempted to explain observed patterns in terms of the labor market structures that are assumed to underlie these career-lines.

Past research in the human capital tradition has focussed on one aspect of careers, the analysis of age variation in earnings. Differentials in these earnings curves by age or time in the labor force have received considerable attention, in terms of both their shape and their relationship to educational attainments (e.g., David, 1969; Mincer, 1974). This emphasis is consistent with the explanation for the income attainment process derived from human capital theory: that the attainment of income reflects a person's productivity as determined by his/her ability and skills and the skills, it is argued, are augmented with time in the labor force as a result of training on the job. The structure of labor markets is not viewed as fundamental to an explanation of the distribution of rewards to individuals over the course of their working lives. Nor are these structures explicitly considered in the status attainment approach to the analysis of careers. While some studies in this tradition have attempted to examine the relationships between a person's levels of job rewards at different points in time (e.g., Featherman, 1971; Kelley, 1973), little attention has been paid to the linkages among these jobs and the variability in career lines in the American economy.

The dual labor market theory, on the other hand, posits an important relationship between career mobility and the sectoral divisions within the labor force. The empirical evidence on this question, however, does not lend strong support for the theory's prediction that there is little intersectoral mobility. Rosenberg (1975), for example, divided his sample of low-income workers in four cities into "primary" and "secondary" occupations and found considerable between-sector mobility. Leigh (1976a; 1976b) indirectly tested the hypothesis of racial differentials in mobility and career advancement implied by the dual theory. He found little evidence for the presence of such systematic racial differences. Equating racial differences with different labor market sectors may be problematic, but it is nevertheless apparent that support for the dual labor market theory is still lacking.

The vast majority of studies of the relationship of mobility and careers to labor market structure rely on variants of the "internal labor market" concept. Alexander (1974) classified internal labor market structure in terms of mobility: industries are grouped into "manorial" (low interfirm mobility,) "unstructured" (high probability of firm and industry mobility), and "guild" types (large positive difference between the probability of leaving the firm and the probability of leaving the industry). He then estimated income equations within these three structures in order to assess differences among types of internal markets; he found that differences among structures are due primarily to differences in composition rather than in the relative importance of experience. Steinberg (1975) defined internal labor markets in terms of whether the worker remained with the same employer in the same industry over a five-year period. He found that there was greater attachment to the internal labor market for women than men, though men experienced greater upward mobility than women. Finally, Kalleberg and Hudis (1979) investigated four types of mobility patterns defined by cross-classifying patterns of occupational and employer change and stability over a five-year interval. These categories were assumed to reflect the probability that the worker was in an internal labor market during the time interval; persons not changing either occupation or employer have the highest probability and those changing both the lowest probability of participating in an internal labor market. The authors found that the determinants of career advancement (i.e., wage change) differ among these groups, that differences between black and white men exist only in certain contexts, and that workers (especially blacks) who change both occupations and employers exhibit many features of "disorderly" career lines.

A number of studies have examined mobility and career processes within specific organizations. In a unique study, Gitelman (1966) examined mobility over a 30-year period (1860-90) within the Waltham Watch Company. He found that intrafirm mobility is influenced by such factors as the technology employed, external labor market conditions, and changes in the composition of output. Beattie and Spencer (1971) examined several hypotheses concerning the influence of age, seniority, education and informal factors on the salary attainment of men in bureaucratic careers in the Canadian federal administration. They argued that career discrimination is the primary factor accounting for salary differentials between Francophones and Anglophones in a Canadian context. In a study of British managers and technical specialists, Sofer (1970) examined the sources of mobility blockage in organizations.

Studies of careers and mobility in Japan provide further insights into the workings of internal labor markets. Cole (1972) found that ports of entry and exit are more limited in Japan than in the U.S.; he interprets this as reflecting the decisions made by Japanese employers to maximize the benefits obtained from employees' commitments to an internal labor market, as opposed to the benefits they would obtain from a more flexible labor supply. Marsh and Mannari (1971) found that Japanese employees are considerably less likely than American employees to change firms. They explained this difference in terms of the cumulative advantage for enhancing one's status that is obtained from participation in an internal labor market, rather than in terms of such values as loyalty to the company.

Data on internal labor markets have further been used to test a variety of mathematical models of system mobility. White (1970) applied his pioneering reconceptualization of the mobility process as a vacancy chain to the clergy. Stewman (1975) developed several Markov models of occupational mobility and applied them to data for a 43-year period in a state police system. He found that his stochastic model had a high utility in the internal labor market analyzed. Such specific internal markets are particularly useful in making feasible the collection of data on mobility for a continuous period of time. The authority and stratification systems of the markets are relatively clearly defined, and there exists a high degree of endogenous determination of the mobility process.

Models for the way that the structure of a system of stratification affects the career process have been developed more generally by Sørensen (1974; 1975; 1977), who presented (1974) a model for age variations in earnings and occupational prestige that was based on the outcomes of job shifts. In this model, the career profile is governed by a parameter which is interpreted as the degree to which the occupational structure provides opportunities for gains in achievement, assuming unchanged resources for the individual. Sørensen (1975) integrated the model for the attainment process with the intragenerational mobility processes. Finally, in 1977 he further integrated these various processes in a model for attainment where changes in achievement are generated by the creation of vacant positions in the society. This approach may be contrasted to the human capital approach where gain in job rewards are seen as governed by change in personal resources, not by the utilization of opportunities for gains with unchanged resources (that is, skills and ability).

SEGMENTATION OF POPULATION GROUPS

A complete explanation for the way job rewards are distributed among individuals in different structural locations over their working lives should, of course, include an explanation of the reasons that certain groups are relatively disadvantaged compared to other groups. We have discussed race and sex differences in labor market processes separately, since a considerable literature has been devoted to understanding these group differences per se, but have restricted our scope in this review to studies which examine race and sex differences with respect to aspects of labor market segmentation.

Discrimination is commonly viewed as existing when workers of equal productivity in different groups do not receive equal levels of job rewards. A number of studies have found income differences between groups when such productivity-relevant characteristics as age, education, and occupation are controlled (for a recent analysis of differences between black and white men, see Johnson and Sell, 1976). (While it is not usually done, this analysis could be extended to include noneconomic rewards as well. Lucas, 1974, found that blacks, for example, have lower "psychic wages" than whites.) An explanation for these residual differences generally relies on arguments concerning discrimination, though this variable is generally not measured directly.

Attempts have been made to incorporate a theory of discrimination within the framework of neoclassical economics (e.g., Arrow, 1973b). The problem here is to resolve the apparent contradiction between the neoclassical conception of competitive labor markets with the existence of persistent group differences in rewards that are not explicable on the basis of productivity. Explanations within this framework often posit the importance of employer "tastes for discrimination," though a variety of alternative assumptions regarding the decision-making behavior of employers have been used (e.g., Phelps, 1972). A review of a number of the economic theories of discrimination was provided by Marshall (1974) and Aigner and Cain (1977). One sociological analysis which has a number of features in common with economic conceptions was Hodge's (1973) analysis of black-white unemployment rates using a framework derived from notions of labor queues. Blacks and whites are assumed to be ranked in queues according to their desirability; assumptions concerning the behavior of employers in selecting workers from these queues may be used to explain differentials in unemployment.

The segmented labor market approach argues that blacks and women are disproportionately distributed into secondary jobs at the beginnings of their careers and that once placed in these sectors, they find it difficult to leave. The hypothesis is that this is due not to deficiencies in the demand for labor, skills, and motivation but to such institutional forces as systemic discrimination by white employers and labor unions; discrimination may thus operate by assigning individuals to "bad" contexts rather than by overt means. A major disadvantage that secondary workers experience, for example, is that they do not have access to specific on-the-job training (Flanagan, 1973). The characteristics often attributed to employment in the secondary sector are also useful for explaining differences in the unemployment rates for blacks and whites; these differences may be attributed to differences in the job turnover experienced by members of these groups (Barrett and Morgenstern, 1974).

A number of Marxists have studied the historical factors which segment groups in the labor market. Bonacich (1972) defined a "split labor market" as one in which there is a large differential in the price of labor for the same occupation. The differential price of labor is not seen as a response to the race or ethnicity of those entering the market, but results from differences in resources and motives which are correlated with ethnicity, such as the attempts of employers to displace higher paid by cheaper labor. Bonacich (1976) attempted to explain the relatively high unemployment and underemployment faced by blacks in contemporary American society on the basis of a split labor market interpretation. She argued that while blacks initially had advantages over whites, historical developments led employers to seek cheaper labor elsewhere and left pockets of ghetto blacks with high unemployment rates. Baron (1975) attempted to develop a theory to explain the system of racial domination as it operates within the United States today. He argued that a new, mutually reinforcing relationship has developed between the American racial system and the segmentation that is characteristic of labor markets under advanced capitalism. Burawoy (1976) examined the role of migrant labor in the capitalist economy; his focus was on the nature of labor market institutions and their mode of organization rather than on individual actors. He argued that racism is a particular mode of reproduction of labor power and that the powerlessness of migrant groups is a necessary condition for racism. Szymanski (1976) argued that sexism operates much like racism to produce similar results. His analysis suggests that racial and sexual discrimination are inversely related at the state level; he interprets this as indicating that the capitalist system needs a specially oppressed group of menial laborers to perform its most menial, low-paying tasks.

Several analyses have studied various group differences among aggregated units that are viewed as representing different labor markets. Hill (1974) for example, examined the relationship between unionization and income differences among blacks and whites, in a sample of large metropolitan areas in the United States in 1960. He found evidence consistent with a neo-Marxist class interpretation: industrial unionization, he pointed out, is inversely related to black-white income inequality in urban labor markets. Others have used occupations as the unit of analysis, in line with the assumption that labor markets are segmented along occupational lines. Stolzenberg (1975a) examined differences in the income returns to education between blacks and whites within detailed occupational categories; he found that these are not substantial enough to produce marked racial income differences. Synder and Hudis (1976) examined arguments concerning the negative relationship between white male occupational income and the presence of concentrations of minority (female and black male) workers, using longitudinal data on detailed occupations. They found that competition and segregation are race- or sex-specific processes. That is, females appear to compete with white males, but there is no supporting evidence for wage segregation of women; and their data show segregation but not competition in the case of black men. Finally, Synder, Hayward, and Hudis (1978) examined changes in the gender composition of occupations. They found that primary sector occupations generally maintain stable, and heavily male, sex composition (due to the structural controls over entry ports that maintain stability), while occupations identified as in the "secondary" sector are more likely to experience both male and female increases.

Other studies of group differences are more directly rooted in the analysis of specific internal labor markets. Butler (1976) analyzed black-white differences in promotion rates in the military; he argued that universalistic criteria are not sufficient to explain racial differences in promotion time. In a critique of Butler, Hauser (1978) argued that the military does not constitute a closed population, with respect either to movement out of the military into the civilian population, or to movement between ranks. His argument suggested that we need to consider different opportunities available to group members outside internal labor markets, in order to assess differences in processes occurring within these markets. Cassell, Director, and Doctors (1975) examined three types of discrimination within three companies: entry level discrimination, discrimination in the rate of wage increases once hired, and discrimination in the rate of advance up the organizational hierarchy. They found some racial and considerable sex discrimination, but admitted this could be due to unmeasured productivity characteristics—a general problem for those studies that interpret a residual in terms of such phenomena as "discrimination." Finally, Malkiel and Malkiel (1973) analyzed sex differences in salary for scientific and technical employees of a large corporation. They concluded that the source of any discrimination against women was in job assignments rather than in pay differences, by sex, for the same job: women with the same training, experience, etc. as men tended to be assigned to lower job levels, but earned the same as men in the same job levels.

SOCIAL CHANGE IN LABOR MARKET STRUCTURES

The conceptions of labor markets and associated phenomena that we have discussed in previous sections rest upon certain assumptions concerning the existence of concrete jobs; little discussion, however, has been devoted to analyses of the forces which determine the nature and distribution of jobs, upon which these structures depend. In this section, we review some of the studies which have attempted to deal with the creation of job structures and their interrelationships.

In contrast to the common assumption among economists that job design is determined by technology, Scoville (1972) argued that technology only defines the broad parameters of the form which work will take: there are a variety of options available within any given technology. High specialization is not always desirable, but may lead to higher supervisory costs, lowered work quality, and decreased worker stability. Scoville's model of the determination of job breadth assumed that employers attempt to optimize the costs associated with job designs of varying types, while workers attempt to maximize their preferences. That neoclassical forces alone do not determine job design is a view supported by Piore (1968), who found that while the procedures used to select productive techniques within the manufacturing plant were consistent with the assumption of cost minimization, the relative scarcities of different types of labor in the external market did not have much influence on job design. Thus, plants "mold men to jobs, not jobs to men."

A number of recent studies in the Marxist tradition have stressed the importance of the social relations of production in determining job structures. Braverman (1974) focussed on the "degradation" associated with the detailed division of labor and argued that jobs are structured so as to maximize the control that employers may exert over the workforce. Edwards (1975) claimed that the system of control relations in the firm is central to an explanation of labor market structure and reflects the position of the firm in the larger economy. Stone (1974) argued that the creation of job structures within the steel industry was a response to the needs of employers for greater control over the definition of jobs. Greenbaum (1976) presented a similar argument for the development of the computer field. Marglin's analysis (1974) suggested that the detailed division of labor and the centralized organization of the factory system did not occur mainly for reasons of technical efficiency but because of the needs of capitalists to increase surplus. Gordon (1976) discussed this issue of efficiency versus control; he distinguished between quantitative efficiency (the degree to which a production process produces the greatest possible useful physical outputs for a given set of physical inputs) and qualitative efficiency (the degree to which a production process reproduces the class relations of a mode of production). Capitalist production processes thus seek to maximize both of these, subject to various constraints. (For a consideration of the product market characteristics that are relevant to these issues, see Scherer, 1970).

The relative roles of the control exercised by labor market actors and "technological" features of the production process in determining (and changing) labor market structure constitute an important question for sociological analysis--a question that is difficult to answer abstractly. Chandler (1977) provided numerous examples of the changing processes of production and distribution in the United States and the ways in which they have been managed. This book suggested the complexity of the relations among groups of workers, groups of employers, and the state. In this vein, Averitt (1968) distinguished "center" from "periphery" firms and provided a basis for differentiating the economy with respect to the relative power of employers. The relationship of these economic sectors to the state was developed more fully by O'Connor (1973), who analyzed the role of the state in perpetuating these differences. In a study of changes in worker power, Kahn (1976) demonstrated how the coastwide longshoreman's union movement transformed longshoring in San Francisco from a secondary to a primary job market.

The organizational literature is relevant here, insofar as it relates the analysis of organizations and their properties to the economic structure. Williamson (1975), an institutional economist, discussed in detail the organization of economic activity within and between markets and hierarchies. Van de Ven, Delbecq, and Koenig (1976) examined the way in which alternative mechanisms for coordinating work activities within organizations vary by task uncertainty, interdependence, and unit size. Their findings suggested that there are differences in the degree and kind of influence that each determining factor exerts on the mix of coordination mechanisms used within organizational units. Tracy and Azumi (1976) examined these questions for a sample of Japanese manufacturing plants, and found that many relationships which link factors such as organizational size and work variability with structure are quite similar to those found in British and American organizations, despite the historical and cultural factors which may be unique to Japanese firms. Finally, Cole (1973) suggested that different economies may develop organizational labor market forms that are functional alternatives for each other. As an example of this, he contrasted the Japanese system of permanent employment with the American system of relatively high interfirm mobility as a response to changing business conditions. He argued that insofar as the choices made in both nations successfully remove labor constraints on the utilization of technology, they may serve as functional alternatives.

In concluding this section we should note that the examination of organizational structures in relation to macro economic factors has developed apart from a concern from relating these to the more micro structures that characterize labor markets. A comprehensive theory must consider a number of levels of analysis: micro relations between individual workers and employers must be seen in the context of the organizational structures within which these relations exist, and these in turn must be systematically related to broader features of the economic structure.

FUTURE DIRECTIONS FOR THE SOCIOLOGY OF LABOR MARKETS

As we have suggested in this review, the sociological study of labor markets has not yet reached a consensus on a theoretical framework which would provide an organizing paradigm for the field. While there is agreement that the theory based on neoclassical conceptions of competitive markets and structures may be empirically inadequate, an alternative general theory has yet to emerge. Nor is this likely to occur in the near future. Rather, the conceptions of labor market structures that are likely to be developed may deal with specific problems and issues associated with the analysis of these markets. The types of labor market processes discussed in this review appear to be the likely foci of such work in the future. We briefly suggest below a number of immediate concerns which should facilitate future work in this area.

1. A pressing concern is the specification and identification of the range of labor markets and associated structures currently existing in the American economy. The markets need to be operationalized on the basis of their essential defining characteristics and their hypothesized consequences for mobility and wage determination processes should be assessed in relation to these contexts. In seeking to represent the economy as a whole, one may approach this problem through partitioning cells of a matrix defined by Census occupation and industry categories into more aggregated and internally homogeneous "sectors." This has certain difficulties, especially the fact that current Census codes do not necessarily group occupations and industries on the basis of those dimensions that are the most relevant for understanding labor market structures. Nevertheless, the approach has the advantage of generality, and existing data sets could be used to assess the psychological, social, and economic consequences of labor markets constructed on this basis. This

would also facilitate the incorporation of organizational and macroeconomic explanations into theories of labor market structures, to the extent that the former may be usefully represented by differences among industries and the firms these industries comprise.

2. While the representation of the economy as a whole in terms of labor market sectors is an important goal, a more fruitful approach to the development of theories of labor markets may be the study of specifically selected markets. Such a disaggregated approach implies the need to study the actual workings of markets between and within particular organizations, occupations, and industries. In order for the results of such specific studies to lead to an accumulation of knowledge, however, it is necessary to have an overall conception of the variability among markets and theoretically to sample markets that differ along major dimensions of interest. Thus, while studies of labor markets in particular cities or organizations should not be faulted, a priori, for not being "representative" of the economy as a whole, it is necessary for the researcher to justify the selection of these disaggregated units in terms of their theoretical relevance to the study of labor markets.

3. Finally, more emphasis must be paid to analyzing these labor market structures and phenomena using longitudinal data. The difficulties associated with making dynamic inferences from cross-sectional data, such as the assumption that the process is in equilibrium, are becoming well known. Differences in the distribution of job rewards among workers should be examined for different structural locations and at numerous points in

the individual's career. And one must specify these locations both to indicate their structural interrelationships and to study how these change over time.

We finally note that the resurgence of interest in the sociology of labor markets in recent years reflects a growing interest in studying generally the relationship between economy and society. Such basic elements of economic theory as rationality and competition have merged with structural analyses of the locations within a society that are relevant to economic analysis to provide a fruitful point of convergence for theories of social structures. At the same time, the study of labor markets relates these theories to the psychological functioning of individuals who participate in the labor force. The theoretical appeal and empirical implications of these concepts are thus likely to lead, in the next decades, to considerable research that will broaden considerably the scope of what we have considered, in this review, as representing the "sociology of labor markets."

FOOTNOTES

[1]The concept of the labor market may also be useful for analyzing the economy of societies in which the development and distribution of the labor force is managed by planning rather than by the sale and purchase of labor power. See, for example, the discussion of the Soviet labor market in Brown (1970).

[2]An early exception to this trend is the functional analysis of the institutional structure of labor markets by Parsons and Smelser (1956).

[3]The dual labor market theory has been particularly useful in explaining differences in unemployment among occupational groups. The processes affecting unemployment are also argued to differ among sectors, with unemployment in the secondary sector arising from the high turnover associated with worker-job instability; different policies are therefore necessary to deal with this problem in the different sectors (Doeringer and Piore, 1975; Klitgaard, 1971).

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