The Theory of "Dual" or Segmented Labor Markets

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In our present situation, the task is not, as is sometimes assumed, the relatively easy one of filling "empty boxes" of theory with a content of empirical knowledge about reality. For our theoretical boxes are empty primarily because they are not built in such a way that they can hold reality.

Gunnar Myrdal

What causes un- (and under-) employment and poverty? Economists and other social scientists approach this question from theoretical positions which vary in many important respects. To make matters even more difficult for the policy maker, the disputes among different schools of social scientists about the causes of poverty and underemployment are only partly subject to adjudication by appeal to empirical information, since even the very rules of evidence are at issue. Indeed, some of the disputants

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define as irrelevant those very phenomena which others believe to be central to the debate.¹

Because most scholars believe that the causes of unemployment and poverty lie fundamentally within the labor process, the major theoretical controversies concern labor market operations: wage determination; worker mobility among occupations and industries, across space, and within firms; and the matching of workers seeking jobs with employers seeking labor. By the middle of the 1960s, the prevailing view in Anglo-American social science was represented by the theory of "human capital."

**Human Capital**

Human capital theory argues that individual workers can purchase the means for acquiring enhanced skills, much as consumers choose how many shirts, stereo records, or trips to buy. It is then assumed that workers are free to move from place to place and opportunity to opportunity, and that the economy is sufficiently competitive to ensure that workers, like all other factors of production, will be hired by capitalists to the point at which the productivity of the last worker or person-hour hired just offsets the wage which the capitalist has to lay out. From these two assumptions—that individuals can purchase skill enhancement like any other commodity and that wages are proportional to individual productivities—it follows that increased investment in skill enhancement (so-called general and specific training) will generate higher wages. This, however, directly implies that poor people must be poor because they lack sufficient or appropriate skills. In a high employment expanding economy, those who remain unemployed will be those who are least valuable to employers: the least skilled. Furthermore, since it is assumed that skill enhancement can be bought by anyone, there is at least an implication that much poverty and unemployment are voluntary, the outcome of a process of free choice in which, apparently, some people choose other things instead of training. If there is to be any government intervention, the obvious remedy is publicly subsidized or even wholly provided education and training.

Human capital theory developed alongside two quite different traditions. According to the more historically minded institutionalists, the labor process is one in which outcomes are the result of more or less structured conflict between workers and managers, occurring within the context of civil and property rights and informal standards of equity. Marxists also see conflict as the central dynamic, with capitalists—the owners of
the means of production—controlling the labor process in order to force workers to produce value in excess of their own subsistence needs. The capitalists expropriate this surplus value over the resistance of the working class and use the profits to accumulate more capital, that is, to expand their control over the means of production.

**The Dual/Segmented Theory**

The theory of dual or, more generally, segmented labor markets was developed during the late 1960s and early 1970s by a community of young scholars who were critical of orthodox economic theory [see especially Doeringer et al. 1969; and Harrison 1972]. They had been exposed to institutionalist and/or Marxist analysis in their schooling or in their political activities. Almost all of them shared the experiences of having engaged in research and community work in the inner city ghettos of their respective cities. With experience informing theory, a stylized model was gradually put forth according to which jobs were seen as organized into two institutionally and technologically disparate segments, with the property that labor mobility tends to be greater within than between segments.

The core is dominated by a primary labor market in which employers possess a high degree of market power, have at least part of their sales guaranteed by government contracts, and are usually able to generate sufficient profits to be able to pay nonpoverty wages. Their economic power permits them to pass at least part of any new costs along to consumers in the form of higher prices. Their profitability permits them to invest in both physical and human capital, which in turn increases the productivity of labor, which translates into increased profits, and so forth. The magnitude of the wage level induces workers to value these jobs, while the high fixed costs associated with the aforementioned investments encourage employers to value stable job attachment by their workers. These factors converge to increase the probability that jobs in the primary labor market will be stable as well as relatively high paying. These jobs also tend to be unionized, and unionization tends to reinforce the stability of these labor market structures.

More recently, Michael Piore [1975] has suggested that this primary segment may more usefully be thought of as consisting of an upper and lower tier. In the former, workers tend to have more job control, with individual economic situations more closely related to formal education, personal achievements, and personalities than in the latter, where tasks are likely to be more routinized. The lower tier consists mainly of well-paying blue-collar jobs.
The periphery of the economy contrasts in every respect with the core. It consists of at least four identifiable and at least partly interpenetrating subsectors. The most important of these is the secondary labor market, characterized by a class of employers whose labor-intensive technologies and lack of market power restrict their ability (and their need) to pay high wages. Low wages and the virtual absence of fringe benefits combine with undesirable work conditions to discourage or inhibit stable job attachment by the labor force. Lack of stability also discourages or impedes unionization. Low fixed costs, attributable especially to low rates of human capital investment in the form of specific training, induce a similar lack of concern for stability on the part of employers. These jobs therefore display low pay and high turnover. Unstable product demand, itself partly a result of the relative powerlessness of these firms, translates into unstable or part-year demands for labor. There is also a good deal of seasonal employment in this sector. Inadequate capital formation impairs productivity, which in turn prevents these firms from expanding and, in the process, acquiring market power of the kind possessed by core firms.

Building upon the work of earlier institutionalists, Doeringer and Piore argue that an important difference between primary and secondary labor markets is the extent of the presence of “internal labor markets” within the firm: structures with well-known (if not always literally written) work rules, promotion procedures, and sanctions against unacceptable behavior, all reinforced by the managerial tendencies of modern unions [see also Alexander 1970, 1974; Kelley 1978; Steinberg 1975]. Workers new to the firm tend to enter at the bottom of the pyramid and advance from within. The existence of well-defined career ladders makes promotion more predictable, thus contributing to the relatively high worker stability in such institutions. Secondary labor markets are dominated by firms whose internal labor markets conspicuously lack this degree of structure.

In the secondary labor market, production processes tend to involve simple, repetitive tasks which many of the virtually infinite supply of untrained people can often learn quickly and easily. Anyone may enter this segment of the economy, and young workers typically begin their work careers here. The problem is that many adults are unable to escape from it and spend much or all of their lives there. The relatively greater job turnover in the secondary market is not as costly to employers as it would be to primary employers, because substitute labor is readily available out on the street or through the free placement services of the local offices of the U. S. Employment Service.

Paul Osterman [1977] has recently posited the existence of a class of
jobs that, at least in the older industrial areas of the country, "bridge" the primary and secondary labor markets. These are typically found in metalworking, machine repair, and similar job-shop types of firms. They pay relatively low wages and few, if any, fringe benefits, but they tend not to impose rigid industrial discipline on their (predominantly young) workers. They also offer significant on-the-job training through informal apprenticeships of young men to older, experienced craft and technical workers. These firms are often connected to the primary labor market through both formal subcontracting and informal personnel director information networks, which explains why they are able to facilitate intersegment mobility for at least some young people.3

The Spatial Dimension

Upper tiers, lower tiers, secondary labor markets, bridges—one can see how the model has been extended from its original two sectors to the richer segmented structures, embedded within a matrix of related institutions such as schools and the welfare system. At the same time, some writers have begun to explore the spatial dimension. Bennett Harrison [1974] places the traditional mill-based blue-collar jobs in Massachusetts within Piore's lower primary tier. This is the segment which has been the most severely affected by developments of the last fifty years. Few of the displaced workers or, it appears, their children have gone into upper tier primary jobs, for example, in electronics or health, partly because of skill or credential barriers, but primarily due to the slow growth of these "growth sectors" relative to the supply of displaced labor. It is into the very rapidly growing secondary segment service industries, such as tourism and fast foods, that most of the New England working class has been channeled. The consequences of such structural shifts in the quality of labor demand for the growth of underemployment and welfare caseloads have been examined by Barry Bluestone and his colleagues for Massachusetts [Venti 1975] and for a number of other states [Bluestone et al. 1977]. Harrison and Edward Hill [1979] have shown that, as a result of the changing mix of primary and secondary activities over time, the labor markets of older northeastern cities such as Baltimore display increasingly greater cyclical instability than do those of the younger cities of the Southwest, such as Denver, whose post–World War II economies show remarkably balanced intersectoral growth. A research team at Dalhousie University in Nova Scotia is studying the relationship between primary (or "central work world") and secondary ("marginal work world") jobs in the context of the economic dependency of the Atlantic provinces of Canada.
on the financial and political centers in Toronto and abroad [Clairmont and Wien 1975]. In the project's quantitative work, firms are assigned to segments according to characteristics of their internal labor process—wages, fringe benefits, job ladders, working conditions, and stability of employment. Morphological location (marginal or central) is then explained by factors relating to technology, position in the product market, unionization, locus of ownership (local, national, or foreign), and such environmental factors as the looseness or tightness of local labor markets, community values, and regional economic conditions [MacDonald 1977].

The objective of this approach is to disentangle the firm's need to pay high wages and benefits from its ability to do so. Other Canadian researchers have also become engaged in labor market segmentation studies in the past several years [Brox 1972; Robertson and Bertrand 1975; Smith 1976; and Thompson 1975].

Intersegmented Relationships and Mutual Dependency

When the economy is stimulated by increased consumer demand for, say, durable goods or by federal contracts for transportation or military equipment, it is the primary labor market which benefits directly. Because this segment tends to be relatively more capital intensive, however, and precisely because wages are high, the number of jobs created by any given stimulus tends to be modest. The secondary labor market may pick up subcontracts as a result of this stimulus, but these generally will not soak up much of the excess supply of labor. Moreover, these subcontracts are always the first to be shut down in a recession [Averitt 1968]. The increased incomes and consumer spending of primary workers do create jobs for secondary workers. The very large number of the latter, however, holds wages down, and this in turn diffuses the pressure on employers to upgrade their personnel practices and production organization. The relatively poorer access of secondary market employers to sources of capital and technical assistance reinforces their inability to acquire the scale and power that would enable them to pay higher wages. Without such power, they are in a relatively poor position to deal with the banks and venture capitalists.

Of course, economic growth in the primary labor market can result in periodic labor shortages there. But because of technical, "paper," or ascriptive requirements for admission to that market—for example, specific skill, school credential, or race and sex entry screens—these shortages are only partly relieved by the mobility of secondary workers into the primary
sector. Instead of using their political influence (not to mention their complete control over their own personnel practices) to eliminate these institutional barriers to worker mobility, primary firms may respond to such shortages by importing skilled workers from outside the local economy. For example, one large Massachusetts firm reported that it recruits from as far away as Great Britain, rather than accept "undesirable" or "incompetent" local workers. These institutional obstacles to the free movement of workers from the secondary to the primary labor market seem to be deeply ingrained into American economic life. Many empirical studies have shown that education, training, and geographic relocation are in themselves insufficient to enable workers to make the transition [see Bluestone et al. 1973; Harrison 1972b, 1972c; Wachtel and Betsey 1972]. A major empirical investigation of intersegment mobility is now being conducted by Bluestone.

It is true that greatly increased demand for the products made in the primary labor market will eventually generate some upward (intersectoral) mobility for secondary workers through the trickle-down effect. Certainly, the unemployment rates of unskilled, female, and nonwhite workers declined significantly during the war-induced boom of the Johnson era. But declining unemployment rates do not necessarily indicate mobility from the secondary to the primary labor market. An expansion of the demand for labor within the secondary segment would also show up as a reduction in measured unemployment. This ambiguity of the conventional unemployment rate is precisely why many policy makers are calling for the development of new measures of labor force activity, which would reflect the quality and stability as well as the incidence of employment [see Levitan and Taggart 1974; and Vietorisz et al. 1975].

The frequently heard argument that the major barrier excluding the poor from primary employment is their own lack of motivation to work ignores an important strand in labor market segmentation theory: motivation, in particular, and worker behavior, in general, are formed in response to confinement. In acclimatizing themselves to local work arrangements, some workers may find it psychologically as well as technically difficult to move from one stratum of the economy to another. Embedded in the dual labor market is the hypothesis that productivity and stability increase as wages increase. Thus, at the low wages prevalent in the secondary segment, poor productivity and lack of motivation are to be expected.

In terms of economic development, segmentation theorists see the United States as suffering from inadequate growth of its primary labor market and the continued existence, if not the increasing relative size, of what we call here its secondary labor market. Moreover, there are syste-
matic barriers to the free mobility of workers from a secondary job to one with primary qualities. Public policies often reinforce, or at least do nothing to heal, this split in the structure of the economy. The system provides short-term benefits to primary sector workers, especially white adult males, by artificially restricting competition for their jobs. In the long run, this may backfire by dividing the labor force and therefore weakening it in its continuing struggle for a larger share of the national income. By continually reproducing surplus labor conditions in the secondary labor market, this system depresses all wages and even subsidizes the operation of secondary firms [Feldstein 1973; Fusfeld 1973]. Primary firms are also helped by being able to "subcontract out the business cycle," thus stabilizing their own internal labor-management relations, rather than having to hire and lay off their own workers periodically. Labor market segmentation also pits poor whites against all women and against working-class blacks in a struggle for the secondary jobs to which these groups tend to be confined, thereby weakening tendencies toward interracial union and political organization, preserving the balance of power between capitalists and workers [Bergmann 1971; Reich 1977].

Paradigmatic Contrasts

The segmentationist view of the economy stresses the existence of a job structure within which classes of workers move about, acquiring skills not by individualistic passive consumption, but by collective active participation, that is, informal on-the-job training. Wages and productivities adhere to the jobs themselves, not to the capacities of individual workers per se. Although his particular variant gives more emphasis to the attributes of individuals than do other segmentation theorists, Lester Thurow captures the essence of the distinction by describing the labor process as one of "job competition" rather than the "wage competition" of standard economic theory. Barbara Bergmann's view, according to which classes of jobs tend to be reserved for different "castes" of workers (men or women, blacks or whites), even when the different castes are technically substitutable for one another in production, suggests the same idea. Over significantly long periods, job structures exist, and workers must live with them as best they can.5

It may be easier to grasp the importance of the underlying premises of labor market segmentation theory by examining in detail the premises underlying the conventional wisdom against which that theory is counterposed. According to the human capital–marginal productivity view, labor is a commodity, subject to the same laws of supply and demand as in any
other input into or output of the production process. A corollary is that wage rates are market prices, and these adjust to reflect the relative surplus or scarcity of labor power. What is produced in such an economy is therefore the result of firms responding to the free consumption choices of people, who also—wearing their worker hats—decide how much and where they would like to work. Because choice is the basic behavioral mode, the whole labor process may be said to consist of the working out of essentially harmonious interests between worker/consumers and producers. To the extent that institutions (such as U. S. Steel, the United Auto Workers, or the Texas Railroad Commission) are recognized as having the ability and propensity to wield power in the pursuit of their own (or of their class) interests, such phenomena are treated as aberrations which may distort or modify, but which are assumed not to transform or displace, the basic tenets of orthodox competitive theory. And underlying every aspect is the general tendency to homogenize economic activities rather than accept the existence of systematic differences unrelated to prices or productivities.

In contrast to the Weltanschauung of standard economics, segmented theories are explicitly historical and focus on systematic forces which restrict the options available to [members] of the labor force. The primary unit of analysis is no longer the individual and his free choices, but rather groups or classes who face objectively different labor market situations which systematically condition their "tastes", and restrict their range of effective choices. The antagonism between these groups or classes, specifically between labor and capitalists (or managers), then condition the subsequent development of technology and job structures. The orthodox models [take] institutional parameters [as given] and then analyze the equilibrium which results from the choices of... individuals within those parameters. The segmentation theories attempt to explain the development of the institutions themselves as the result of interactions of groups or classes of individuals with objectively different interests [Carnoy and Rumberger 1977].

Another aspect of segmentation analysis which illuminates its relationship to standard economic theory has been spelled out so eloquently by Mary Stevenson that we quote at length:

Standard economic analyses have focused on the behavior of oligopolies in the product market. They have tried to explain why oligopolists tend to compete on the basis of advertising and product differentiation but not on the basis of price. This need to maintain price discipline without overt collusion (which would be prohibited by antitrust law) has led to practices such as price leadership, in which one firm announces its
price changes and the others play follow-the-leader. By recognizing their mutual interest, oligopolists can maintain price discipline without conspiring and therefore without running afoul of the antitrust laws.

Labor market segmentation theory focuses on the behavior of oligopolies in the factor market, specifically the market in which the corporation hires its labor. In the late nineteenth century, growth in the size of firms and advent of standardization tended to bring together large numbers of workers whose jobs were similar. This contributed to widespread labor militance, which was perceived by corporate owners and managers as a threat to their control. Labor market segmentation theorists argue that, although technological changes themselves would have led to greater similarity of jobs and hence organization of workers, employers imposed hierarchical job categories and fostered racial, ethnic, and sexual antagonisms, to deter the formation of strong, unified employee organizations.

Although some critics of this theory argue that it assumes there was a nefarious capitalist conspiracy, overt collusion between capitalists is not necessary for labor market segmentation to occur, just as collusion is not necessary for oligopoly price discipline to be maintained. As David Gordon writes, "it has not always been necessary for capitalists to conspire in order to perceive their common interests and pursue them."

In the radical view, labor market segmentation benefits employers, helping them to preserve their power over employees. It does so by (1) creating divisions among workers that prevent worker solidarity from developing; (2) limiting workers' own aspirations by creating relatively short job ladders that do not provide for continuous upward occupational mobility; and (3) using institutional sexism and racism to legitimize the authority of white male supervisors over minority subordinates [Stevenson 1978, pp. 94–95].

Sometimes, orthodox and institutional or radical scholars argue about a particular parameter. But usually they talk about—and try to measure—substantially different aspects of reality altogether, which is why it is so difficult for them to engage one another in (say) the scholarly journals. Thomas Victorisz captures this especially well in his birdcage metaphor, originally designed to illustrate the difference between surface and deep structures in ideology. Consider a cube-shaped wire-frame birdcage, covered by a continuous surface of soap film. Focusing on the smooth and immediately apparent soap, one scientist tries to explain the cubic shape by mathematically modeling the physical laws of surface tension. But another scientist pokes his hand inside, discovers the birdcage, and proceeds to identify and describe the rigid wire frame as the important determinant of the shape of the object.

Dual or segmentation theory can be located among the paradigms of
labor theory as a research project within the institutional/historical school. While it does a better job than human capital theory in describing historically specific patterns of labor market (and therefore earnings and employment) structure, other and older institutional/historical concepts and methods are needed to explain why that landscape looks the way it does. Here, then, is the organic intellectual link to the Marxist agenda. Contemporary Marxist scholars seek to understand how labor market structures come into being and how they are reproduced over time by the interaction of productive and social forces in history [see Bowles and Gintis 1976; Braverman 1974; Gintis 1971; Edwards et al. 1975; Marglin 1970; Reich et al. 1975; Stone 1973]. It is precisely this embedding of economic relationships into their social and, therefore, political context that indentifies these approaches as true “political economy” and that distinguishes them from the narrow formulations of standard economics.

Summary

We may summarize the theoretical argument in the form of five propositions.

First, dual/segmented theorists argue that jobs can be sorted, grouped, or reaggregated into clusters, each cluster characterized by highly intercorrelated and causally interrelated variables. These latter include wages, profits, productivities, degrees of specific on-the-job training, market power, the openness or closedness of internal labor markets, turnover, and access to such shelters from competitive forces as government protection or contracts. Workers with particular ascriptive traits, such as age, race, and sex, will not be distributed evenly among these clusters. Nevertheless, the theory’s variables refer mainly to producers’ organizations—establishments or enterprises, firms, industries, government regulatory agencies—rather than to workers’ personal characteristics per se.

Second, there exists an aggregation of these job clusters such that, for several categories of workers, intragenerational and, to some extent, even intergenerational labor mobility is significantly greater within than among these clusters or segments. The argument is that mobility is tracked, not that there is no mobility.

Third, the observed behavior of workers—degree of attachment to jobs, patterns of search, how they value alternative occupational choices, how the pooled labor-time of their families is organized (for example, who does housework)—is the outcome of interactions among ideology, individual aspirations, institutional opportunities, and family, neighbor-
hood, and peer group pressures. In a capitalist society, how capitalists choose to organize production will dominate this interactive process.

Fourth, discrimination (against women, minorities, youth) is an important object of inquiry for all institutionalists. But, contrary to the assertions of some writers, labor market segmentation theory is not a theory of discrimination per se. Inequality and hierarchy are inherent in the job structure. Certainly, ascriptive traits such as age, race, and sex are easily used to assign workers to segments. But discrimination itself does not create the segmentation, although it does help reproduce its concrete manifestations. As Bluestone points out, elimination of racism, for example, would at best transform a racist incidence of poverty and underemployment into a random incidence. The poverty and underemployment would not go away.

Fifth, dual is shorthand for balkanized or segmented. It is a powerful way of emphasizing an important dialectical tension, symbolically analogous to the contrasts between light and darkness, God and the Devil, yin and yang—or perfect competition and monopoly. But, like those others, it is only symbolic. The intellectual origins of contemporary dual theory, in addition to the seminal labor economics of John Dunlop, Clark Kerr, Charles Killingsworth, Richard Lester, and Arthur Ross, include the literature of the 1950s on dualistic economic development in the Third World; the “discovery” of black-white duality in American society made by Gunnar Myrdal in the 1940s (rediscovered by the National Commission on Civil Disorders in 1968); and the internalization of this split experienced as a “twoness” within the souls of black folks, described by W. E. B. DuBois in 1903 and gradually worked out in the soul of Malcolm X. Clearly, duality is a rich symbol. By and large, however, one does not try to conduct scientific tests of the truth or falsity of a symbol.

Certainly, many of the propositions about the segmentation of jobs and the extent and conditions of worker mobility within and among these segments are appropriate subjects for scientific inquiry, conventionally defined. In fact, such inquiry has begun, and there is no shortage of criticism based upon theoretical and empirical consideration. Still, little progress is likely to be made so long as both advocates and critics persist in trying to define—and to “test”—the phenomenon in narrow, strictly quantifiable, reductionist terms. Of course, the practitioners of standard economics will treat such a warning with scorn, seeing it as an unscholarly retreat from the serious business of scientific hypothesis testing. But the very frequency with which such a charge is put forth only underlines the most important thesis of Thomas Kuhn, Jorg Baumberger, and other radical historians of science: One of the major weapons in the struggle
over ideas is the power to define the terms within which the struggle is to take place. Segmentation/stratification is a developmental/transformational process. As such, it will require the application of historical method, appropriately illustrated with numerical descriptions of the changing configurations, to explain what is going on, why it is happening, and in whose interests.

Notes

1. On the methodological difficulties that are encountered when scientists attempt to resolve debates between competing paradigms, see Kuhn [1962], but also Baumberger [1977]. For an application of Kuhn's historical method to the debate within economics over the causes of poverty and underemployment, see Gordon [1972].

2. The three other segments of the periphery consist of activities which, although seemingly far removed from the world of work, have features which are analogous to those of the secondary labor market. Labor market segmentation theorists speak of the "training economy," the "welfare economy," and the "irregular economy" (or the "hustle") (see Fer- man [1978], Fusfeld [1973], Harrison [1978, 1980], Miller and Rein [1970], and Piven and Cloward [1971]). Individuals in each segment receive poverty level wages or grants. The low level of these payments, the high risk of engaging in some of these endeavors, the bureaucratic complexities involved in obtaining the payments, or the social stigma often attached to the role of petitioner, all combine to encourage unstable behavior. Researchers have learned that many of the same people tend to be found moving back and forth, in and out of the various peripheral strata. Many hustlers work periodically in low wage legal jobs, move on and off the welfare rolls, and are not infrequently participants in one or another government training program. Finally, city school and job placement institutions, whose ostensible function is to upgrade the urban poor (or, in terms of the above model, facilitate intersectoral mobility), often perpetuate poverty by recirculating these individuals and their children among the segments of the periphery.

3. All segmentation theorists have experienced difficulty in assigning the construction trades to one or another labor market segment. The conceptual problem lies in the independence of the trades from particular firms, coupled paradoxically with the existence of highly structured labor allocation and work rules managed by very strong unions. The best institutionalist analysis of the construction labor market is Mills [1972].

4. The Dalhousie group stresses the positive value which is placed upon unstructured—even season or casual—work by some rural workers and families. This points to the undeniable urban bias of most labor market segmentation theory, which has been developed almost entirely by "city kids" and has tended to ignore the characteristic features of rural economies.
5. The “crowding” or “caste” theories which are now so widely used by analysts of discrimination in the labor market have a rich intellectual history. John E. Cairnes’s [1874] concept of “non-competing groups” grew out of his earlier analysis of the likely effects of emancipation of the American slaves on the post–Civil War U. S. economy. The formulation was applied to the phenomenon of sex discrimination by such early feminist writers as Millicent Fawcett [1917, 1918], whose work formed the basis for a (at the time) well-known paper by F. Y. Edgeworth [1922]. “Noncompeting groups” surfaced again in the 1946 edition of Frank Taussig’s Principles. Bergmann revived the idea in her 1971 article, which has spawned a host of subsequent inquiries and applications by both institutionalists (see Fusfeld [1973]; Stevenson [1977, 1978]) and neoclassicists (see Madden [1973]).

6. The concept of worker sovereignty is not simply an appealing figure of speech. Like the consumer sovereignty concept to which it is an analogue, it constitutes an important axiom in the orthodox system. And critics charge that, like its analogue, worker sovereignty “is a poor approximation to events in the real . . . world . . . while the [supply of labor to] certain occupations, industries or regions may be largely or even completely insensitive to these [supplies]. To the extent that this is true, the human capital theory of the allocation of labor is incorrect” [Cornwall 1977, p. 23].

7. For example, building on the work of Marx and Engels, and to some extent Gunnar Myrdal, such political economists as David Gordon [1978], Stuart Holland [1976], and David Harvey [1973] are attempting to construct theories of “uneven” urban and regional development in which spatial organization is seen as one aspect of capitalist relations of production. As the latter change their concrete historical form, the former (like all other social relations) also undergoes changes. In another context, Najwa Makhoul [1978] has found a close correlation among rank-orderings of several characteristics of the Israeli economy, including industrial structure, occupation, source of finance capital, habitat, and ethnicity. Thus, for example, the highest ranking industries are those engaged in goods finishing, in general, and the production of military hardware, in particular; the typical work is highly skilled; capital typically comes directly from private foreign investment or indirectly via the state; most employees live in metropolitan areas; and the latter are typically European or American immigrants. At the lowest end of Makhoul’s five scales, industrial activity consists of construction, agriculture, and simple fabrication of consumer goods; labor is unskilled; capital is provided from local Israeli-Jewish savings; workers typically live in Arab villages; and the labor force consists of Palestinian and Israeli-citizen Arabs.

8. The most elaborate theoretical criticisms from a neoclassical perspective are those of Cain [1976] and Wachter [1974]. Empirically grounded challenges to the labor market segmentation perspective have been published by Paul Andrisani [1973], William Kruse [1977], Duane Leigh [1976], Ruth Lowell [1975], and Bradley Schiller [1976, 1977]. The quantitative research that most directly supports the general theme of the theory is that of Arthur Alexander [1974], Barry Bluestone [1978],
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References


