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CLASS AND OCCUPATION

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Sociologists have generally regarded "class" and "occupation" as occupying essentially the same theoretical terrain. Indeed, the most common operationalization of class is explicitly in terms of a typology of occupations: professional and technical occupations constitute the upper-middle class, other white collar occupations comprise the middle class proper, and manual occupations make up the working class. Even when classes are not seen as *defined* simply by a typology of occupations, classes are generally viewed as largely *determined* by occupations. Frank Parkin expresses this view when he writes: "The backbone of the class structure, and indeed of the entire reward system of modern Western society, is the occupational order. Other sources of economic and symbolic advantage do coexist alongside the occupational order, but for the vast majority of the population these tend, at best, to be secondary to those deriving from the division of labor."[1] While the expression "backbone" is rather vague, nevertheless the basic proposition is clear: the occupational structure fundamentally determines the class structure. For practical purposes, therefore, the empirical investigation of class can revolve around the investigation of occupational groupings.

Marxist theory adopts a totally different stance towards the relationship between occupation and class. Occupations are understood as positions defined within the *technical* relations of production; classes, on the other hand, are defined by the *social* relations of production. Occupations are thus defined by an array of technical functions or activities: a carpenter transforms lumber into buildings; a doctor transforms sick people into healthy people; a typist transforms blank paper into paper with words on it, etc. Classes, on the other hand, can only be defined in terms of their social relationship to other classes, or in more precise terms, by their location within the social relations of production. Workers sell their labor power to capitalists and have their labor controlled by capital within production; capitalists buy the labor power of workers and control

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that labor within the labor process. Workers are thus definable only in terms of their social relationship to capitalists, not in terms of the technical content of their laboring activity. A carpenter, for example, could be located in any of a number of different class positions: worker-carpenters are wage-laborers for capital who lack any significant control over their labor process; petty bourgeois carpenters are self-employed artisans who sell carpentry services directly to consumers; manager-carpenters are wage laborers who control the labor of other carpenters within production (e.g., foremen). Within marxist theory, therefore, it is impossible to define classes as clusters of occupations; class and occupation occupy basically different theoretical spaces.

This paper will explore the complex relationship between class and occupation from a marxist perspective. While there will be periodic references to the contrast with nonmarxist conceptions of class, the central objective is not to engage in a battle of definitions with nonmarxists, but to clarify these concepts within marxist theory itself. The heart of the analysis, therefore, will be abstract and conceptual. This may give the paper a rather formal and schematic flavor. The underlying premise is that this kind of conceptual clarification is essential if empirical and historical research is to procede in a clear and coherent way.

Before developing the theoretical argument itself, however, it will be useful to examine the empirical relationship between class and occupation. While data can never directly validate or invalidate a definition, nevertheless an examination of the actual distributions of occupations within classes may add credibility to the theoretical claim that these constitute distinct dimensions of social structure. This will be the task of part one of the paper.

In part two, I will then elaborate more systematically the conceptual relationship between class and occupation. This analysis will revolve around the ways in which classes and occupations intersect organizations. In order to grasp this structure of relations it will be necessary to discuss at least briefly the logic of causation within marxist theory, since in certain fundamental ways this logic departs from that of conventional sociology. Once we have developed this notion of causation, it will then be possible to construct a formal model of determination of the relationships among class, occupation and organization.

An Empirical Investigation of Class and Occupation

In order to study the empirical relationship between class positions and occupational positions, it is first necessary to specify and operationalize the concept of class within marxist theory. This is not such a simple task, since there is such little consensus among marxists over the very meaning of the concept "class," let alone over the definitions of specific classes. For some theorists, "class" above all designates an historical process, and any formal discussion of class structure is seen as theoretically invalid.[2] For other marxists, any discussion of classes as historical actors or subjects is inadmissble, and "class" is used exclusively to designate the structure of relations of exploitation and domination.[3] Many marxists define the working class very broadly to include virtually all wage-laborers regardless of their function within the production process. Others restrict the definition of the working class to productive labor,[4] and still others even more narrowly to manual, nonsupervisory productive labor.[5] Since I have intensively discussed these debates over the conceptualization of class elsewhere,[6] I will not review them here. What I will do is present in a very condensed form one specific conceptualization of class within these debates. This conceptualization, it should be noted, is not (yet) widely accepted among contemporary marxist theorists. The analysis which follows, therefore, should not be read as *the* marxist account of class structure, but as one possible account within the marxist tradition. Following this brief discussion of class, we will examine some provisional data on the empirical relationship between class and occupation in the United States.

Theoretical Criteria for Class Locations

The claim that classes are defined by the social relations of production does not, by itself, provide an adequate basis for defining specific classes within a specific social organization of production. The social relations of production have many different aspects and can be characterized in many different ways. Some more general principle for the decoding of the social relations of production, therefore, is needed if we are to be able specify the criteria for the classes which those relations determine.

Within marxist theory that overarching principle is the concept of "exploitation". At the most abstract level, exploitation is defined as a relationship within which the people in one social location are able to appropriate at least part of the products of labor of people in another

social location. To emphasize that such exploitation involves the appropriation of the products of labor, rather than simply the products of nature, exploitation is generally referred to as the appropriation of "surplus labor," or, in the specific case of capitalism, "surplus value".[7] In these terms, the pivotal difference between different class structures centers on the different mechanisms by which such surplus labor is "pumped out" of the direct producers (to use Marx's expression). In feudalism for example, this mechanism is based on forcing the direct producers to work a certain number of days a year on the land of the feudal overlord. In capitalism, the mechanism is based on the capacity of capitalists to force workers to perform more hours of labor on the job than is embodied in the products which they can purchase with their wages.[8] In the broadest terms, then, classes are defined by their location within such relations of exploitation.

Given this understanding of class and exploitation, the task of decoding the social relations of production involves specifying the ways in which those relations constitute the mechanism of exploitation. In the case of capitalist relations of production, such a decoding generates three essential interdependent dimensions of production relations:[9]

(a) Social relations of control over *money capital,* i.e., control over the flow of investments and the capital accumulation process.
(b) Social relations of control over *physical capital,* i.e., control over the use of the physical means of production.
(c) Social relations of control over *labor,* i.e., control over supervision and discipline within the labor process.

The word "control" in each of these dimensions must be understood in terms of social *relations* of control. Control is not, strictly speaking, an attribute of a position per se, but a dimension of the relationship between positions. Thus, the claim that a given position within the social relations of production involves control over money capital is a statement about its relationship to other social positions (those which are excluded from such control), not simply its relationship to a thing (money).[10]

The distinctive capitalist mechanism of exploitation operates through the exclusion of workers from all three of these relations of control and the monopolization of such control by capitalists. The capacity to extract surplus labor from workers within the labor process, in other words, requires (a) that workers do not own money capital, for otherwise they would not need to come to work (they could themselves invest such

money as capital); (b) that they do not control physical capital, for if they did they could use that physical capital to produce products for their own use; (c) that they do not control the labor process itself, for if they did they could reduce the pace of work to the point that no surplus labor would be performed. Capitalist exploitation, and the class structure which such relations of exploitation determine, is thus the specific consequence of this combination of these three dimensions of social relations of production.

If the capitalist social system is analyzed at the highest level of abstraction – which marxists refer to as the level of the mode of production – then the class structure is defined by a perfect polarization on all three of these dimensions of the social relations of production. Capitalists and workers thus constitute the only class locations. If we move to a more concrete level of analysis, however, other class locations must enter the story for two basic reasons. First, no concrete capitalist society is characterized only by the pure capitalist mode of production. In particular, simple commodity production – production for the market by self-employed producers who employ no workers – continues to be a reality in all capitalist societies. Such producers define the *petty bourgeois* class location.

Secondly, the simple model of polarized class locations is inadequate for understanding concrete capitalist societies because the three dimensions of social relations of production need not perfectly coincide in actual

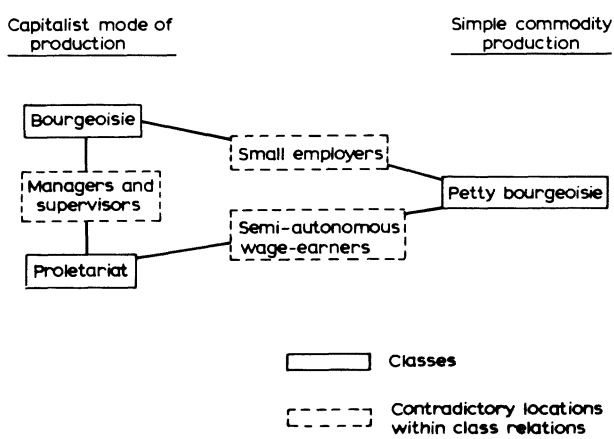


Figure 1: The basic class relations of capitalist society.

units of production. Such situations of noncorrespondence between the three dimensions generates a series of additional class locations which we will refer to as *contradictory locations within class relations.* These are illustrated schematically in Figure 1.

Three such contradictory locations are particularly important in advanced capitalist societies: (1) *managers and supervisors* occupy a contradictory location between the working class and the capitalist class: like capitalists they control the labor of workers and at least some of the physical means of production, but like workers they are excluded from control over the accumulation process as a whole and are dominated within production by capital; (2) *small employers* occupy a contradictory location between the petty bourgeoisie and the capitalist class: like the petty bourgeoisie they are directly engaged in the process of production and own their own means of production, but like capitalists they employ and exploit wage labor, although in sufficiently limited quantities to be unable to accumulate capital; (3) *semi-autonomous* employees occupy a contradictory location between the petty bourgeoisie and the working class: like workers they are employed by capital and dominated by capital within the production process, but like the petty bourgeoisie they retain real control over certain key aspects of the labor process, particularly over aspects of *what* they produce (not merely *how* they produce). Designers or engineers, in these terms, would generally be semi-autonomous employees since they typically have some real control over the design of products, whereas a draughtsman whose job consists of the precise translation of design specifications from one medium to another, would be a worker. (Note that the distinction between semi-autonomous employees and workers is not based on *skill*-level, or on income. A draughtsman or an airline pilot is an extremely skilled position and may be quite well paid, but they both lack any meaningful control over what they produce and thus would generally be located within the working class.[11])

It is important to understand why these positions are called "contradictory locations" within class relations and not simply "ambiguous" locations or "intermediate strata" or "middle classes." They are contradictory in the precise sense that they are located simultaneously in two classes and thus share basic class interests with both of these classes. (Strictly speaking, therefore, the spacial metaphor in Figure 1 is somewhat misleading since it suggests that the various contradictory locations are "between" other classes rather than located in more than one class.) Managers/supervisors have one foot in the bourgeoisie and one in the working class, and this means that their class interests are objectively torn

between these two classes. Similarly, semi-autonomous employees share class interests with the petty bourgeoisie and the working class. The contradictory quality of the class location of such positions implies that they will play an especially ambiguous role in class struggle, at times siding with the working class, at times opposing it.[12] Any complete analysis of the class structure of advanced capitalist societies must thus not simply investigate the size of the working class and the bourgeoisie, but the shape and magnitude of these contradictory locations within class relations as well.

Operationalizing Class Relations

It is one thing to elaborate a definition of classes; it is quite another to develop an adequate operationalization of that definition. Two problems are immediately apparent. First, it should be clear from the above discussion of contradictory class locations that the precise boundary criteria between contradictory locations and the proper class locations of capitalist society are rather ambiguous. For example, how much "autonomy" is necessary to define a worker as semi-autonomous, as occupying a contradictory location between the working class and the petty bourgeoisie? Surely the criterion of absolutely any autonomy is too broad. While historical data on the labor process are rather meager, it is unlikely that more than a small fraction of the working class was ever characterized by the classic image of the fully proletarianized worker, totally under the control of the capitalist through a minutely subdividing labor process governed by principles of scientific management. Most workers, most of the time, have been able to maintain at least some residual control over their immediate labor process. Similarly, it would be inappropriate to restrict the concept of "semi-autonomy" to positions which, like university professors, have extremely high levels of control over the pace of work, the scheduling of work, the content of work, etc. The difficulty is that there is no absolute criterion which defines how much control is sufficient to exclude a position from the proletariat. A certain arbitrariness, therefore, will inevitably enter into any attempt to measure this semi-autonomous class location. Similar problems occur in specifying the boundaries of the other contradictory locations. While this does not imply that it is impossible to operationalize such class locations – any more than it is impossible to define "mammals" because of the existence of the platypus – it does mean that any estimate of the size of a given class location will involve upper and lower bounds rather than a single figure.

Apart from the problem of the arbitrariness of formal criteria for boun-

daries, a second problem in operationalizing class relations centers on the difficulty of getting any data on the relevant dimensions of social relations of production. The United States census asks virtually no questions which tap social relations of production other than the formal criterion of being self-employed or not. Certainly no explicit questions are asked about autonomy, control over the labor process, control over physical means of production, etc. Beyond the census, I am aware of no data sets based on national random samples which include systematic, objective data on all the dimensions of social relations of production needed to define class locations.[13]

In order to investigate the relationship between class locations and occupation, therefore, it will be necessary to rely on data which only approximates the theoretical schema laid out above. One such data set is the 1969 Institute of Social Research Survey of Working Conditions, a national random sample of 1,533 adults active in the labor force. The central purpose of this survey was to investigate such questions as job satisfaction, job stress, and other quality of life issues. The questionnaire, however, contained a number of items which make possible a rough operationalization of the classes in Figure 1. The criteria used in this operationalization are indicated in Table 1. (All Tables appear at the end of the article.) Several comments on these criteria are necessary: (a) *Employers.* Nearly 80% of the employers in the sample employed less than 10 workers. In effect, nearly all of these employers fall within the contradictory location between the bourgeoisie and the petty bourgeoisie. Throughout the rest of this analysis, therefore, I will refer to them as "small employers".

(b) *Managers/supervisors.* This category is operationalized by the simple question: "Do you supervise anybody as part of your job?" This is clearly an extremely vague supervision criterion, and will certainly include at least some people who are nominal supervisors with essentially no genuine authority. One of the difficulties with this question is that a majority of teachers respond "yes" to the question. From the point of view of marxist theory, the supervision of students and the supervision of labor are qualitatively different kinds of social relationships, and teachers should not be placed in the same position as managers (unless, of course, they actually occupy administrative posts as well).[14] As a result, I have placed all teachers in the nonsupervisory category. While this will undoubtedly result in the misclassification of some teachers who are genuine managers/supervisors it is unavoidable with the available data.

(c) *Semi-autonomous employees.* Respondents were given a list of descriptions of jobs, and asked to indicate whether the description was "a lot," "somewhat," "a little," or "not at all" like their job. Two of these job descriptions will be used to define the semi-autonomous class location: (1) "a job that allows you a lot of freedom as to how you do your work"; (2) "a job that allows you to make a lot of decisions on your own." These questions are obviously extremely subjective, since it is up to each respondent to define what "a lot" means, what "freedom" means, what "decisions" means, and so on. The fact that 46% of the respondents say that having a lot of freedom characterizes their job "a lot," and 49% say that making a lot of decisions describes their job "a lot" reflects the subjective quality of the questions. There appears to be a tendency for people to answer such questions relative to the range of possible freedom and decision-making for their type of job, rather than relative to all jobs. For purposes of the present analysis, I will assume that individuals within positions which are genuinely semi-autonomous will answer "a lot" to *both* of these subjective job descriptions. If anything, given the vagueness of these autonomy questions, this will probably overestimate the number of people in the semi-autonomous category.

These operational measures of class are obviously fraught with difficulties. In particular, the criterion for the managerial location is far too vague and inclusive, and the criterion for the semi-autonomous employee class location is too subjective. As a result, therefore, all of the findings which follow must be interpreted as entirely provisional. At most they enable us to get a general sense of the contours of the class structure and its relationship to the occupational structure.

The Size of Class Locations

Before turning to the occupational-class distributions, it will be useful to examine the overall shape of the American class structure. Figure 2 presents estimates of the size of different class locations within the economically active working population.[15] Table 2 indicates the criteria used for the high and low estimates in Figure 2. These data indicate that even when the most restrictive definition of the working class is adopted – i.e., a definition which excludes from the working class all employees who indicate that they have any real autonomy on the job whatsoever or that they in any way supervise someone else on the job – over 40% of the economically active population still falls within the working class. If this definition is slightly relaxed, this proportion increases to around 50%. Contrary to the claims of many post-industrial theorists, the working

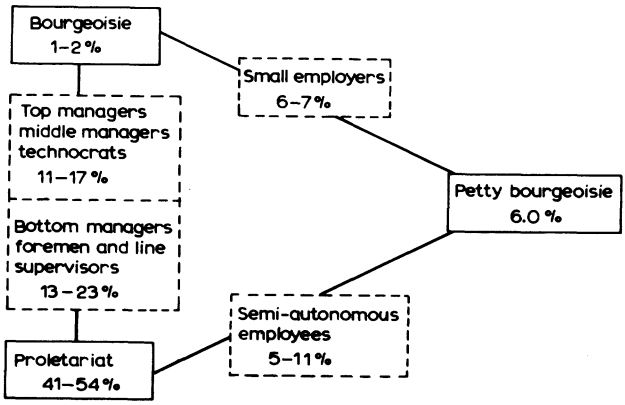


Figure 2: Distribution of the economically active population into contradictory class locations.
Data Source: Survey of Working Conditions (1969).
Note: See Table 2 for explanations of high and low estimates.

class, when understood in terms of common positions within the social relations of production, remains by far the largest class within the United States, and in all probability constitutes an absolute majority of the population.[16]

Class and Occupation

Table 3 presents the distributions of occupations within class categories and the distributions of classes within occupational categories.

Several general conclusions can be drawn from this table. First, the results indicate that most broad occupational categories have rather heterogeneous class competitions (see Table 3.B). Some occupational categories, indeed, have class distributions very similar to the population as a whole. This is most notably the case among crafts occupations. Within the technical division of labor, knowing that an individual is a craftsperson tells you that they physically transform nature into products through the application of skilled labor. This technical function, however, can be performed in a variety of positions within social relations of production: 39% of all craftspersons are workers, 38% are managers/supervisors, 15% are semi-autonomous employees, 5% are petty bourgeois and 3% are actually small employers. These results support the general theoretical claim that class and occupation are different aspects of social structure, different dimensions of the social relations which define the "empty places" within social production.

This is not to say that the relationship between class and occupation is random. Our second general conclusion is that there are very different occupational distributions within different classes. The working class is clearly dominated by manual occupations: over 60% of all workers are in manual occupations, compared to 48% of semi-autonomous employees, 45% of managers/supervisors, 52% of petty bourgeois (including farmers) and 22% of all employers. On the other hand, only 11% of the working class are in upper white collar occupations compared to 31% of semi-autonomous employees, 35% of managers/supervisors, 40% of petty bourgeois and 76% of employers.

This uneven distribution of occupations and classes is even more strikingly revealed if we look at the distribution of classes within occupations: 71% of all unskilled laborers are in the working class, whereas only 14% of all professionals are workers. In contrast, only 17% of all laborers are managers/supervisors compared to 69% of all professionals.

The common association of the working class with manual occupations, and nonmanual occupations with the "middle" class, is thus not a totally unrealistic picture. The process of proletarianization within the labor process has certainly moved much more rapidly among most manual occupations than among white collar occupations. Whether or not nonmanual occupations will undergo as pervasive a process of proletarianization in the future remains to be seen, but for the moment it is clear that the heart of the working class remains embedded in manual occupations within the technical relations of production.

However, it is important not to take this observation too far. The data in Table 3B also indicate that there are very different levels of proletarianization among white collar occupations and among manual occupations. Our third general conclusion is that lower white collar occupations are much more like lower blue collar occupations in their class distributions than they are like upper white collar occupations, and that crafts blue collar occupations are much more like technician white collar occupations than they are like lower blue collar occupations. Nearly 60% of all people in clerical occupations and 64% of people in lower blue collar occupations fall into the working class, compared to only 17% of people in upper white collar occupations. Among both craftspersons and technicians, on the other hand, approximately 39% are workers; 12% of all technicians and 15% of craftspersons are semi-autonomous employees; and 45% of technicians and 38% of craftspersons are managers/supervisors.

Taking these various findings together, it is clearly inappropriate to globally identify manual labor with the working class and nonmanual labor with the "middle class" (contradictory class locations). If one wants to make a general statement about the class character of specific occupational categories, then one would have to say that clerical occupations tend to be working class along with semi-skilled and unskilled manual occupations, while crafts occupations along with technical occupations tend to be much more concentrated in contradictory class locations.[17]

A final general conclusion from these data centers on differences between men and women (see Tables 4 and 5): in every occupational category, women are more proletarianized than men. Whereas only 26% of all salesmen fall into the working class, 63% of all saleswomen are workers. Similarly, 53% of all male operatives compared to nearly 80% of female operatives fall into the working class. Much of this sex difference in proletarianization centers on the managerial/supervisory category. While approximately 11% of all men and 11% of all women fall into the semi-autonomous employee category, 38% of all men compared to only 26% of all women fall into the managerial/supervisory class location. This same result generally holds within each broad occupational category (with the exception of the managerial occupation, in which 42% of both men and women are in managerial class locations). These results suggest that much of the greater proletarianization of women in the labor force is a consequence of sexist patterns in recruitment into and promotion up authority structures within the social relations of production. These results also suggest that the relationship between the technical and social relations of production is itself variable. A given technical function (position) may be more or less proletarianized depending upon its relationship to the sexual division of labor.[18] This lends further support to the general conceptual claim that classes and occupations are qualitatively different aspects of social structure and that the former cannot be viewed as aggregations of the latter.

A Model of Determination of Class and Occupation

While the decoding and analysis of class structure plays an important role in marxist theory, marxism is not primarily a theory about class structure per se. Rather, its central preoccupations are class formation, class struggle and social change.[19] The account of class structures enters into the theory primarily as part of the explanation of the constraints on

social change and the structural foundations of class formations. The conceptual distinction between class and occupation, therefore, is of substantive interest largely to the extent that it can inform discussions of class formation and conflict.

The rest of this paper will try to chart out a general framework for studying the relationship of class structure and the occupational structure to the process of class formation. This effort should be read as part of a larger theoretical project of specifying the structure of determination of class formation and class struggle in contemporary capitalism. This broader project includes investigations of ideology and consciousness formation, contradictions of accumulation, the state and politics. In the present discussion we will largely ignore these issues and focus instead on the narrower question of the ways in which the social and technical division of labor intersect in the determination of class formation.

To explore this intersection, we will need to add two additional elements to our theoretical analysis. First, we will need to introduce the concept of "organization" into the discussion, and then examine the relationship between classes and occupations on the one hand and organizations on the other. Second, we will need to discuss in some detail the concept of "determination" within marxist theory in order to adequately specify the content of the causal relationships between class, occupation and organization. Once we have done this we will be able to develop a formal model of determination among these concepts.

Class and Organization

One of the fundamental distinctions within classical marxist theory has been between a class-in-itself and a class-for-itself. The former is generally understood as structurally defined locations within the social relations of production. The latter, on the other hand, implies classes organized as social forces, as collective actors in history.[20]

This distinction between a class-in-itself and for-itself can be recast in terms of the concept of organization. A class-in-itself can be defined as classes within organizations; a class-for-itself as organizations within classes. The social relations of production which define class positions are located within organizations, principally enterprises (i.e., capitalist economic organizations), but also political and ideological organizations (i.e., state apparatuses). The "empty places" defined by those social relations of production – to use Adam Przeworski's apt expression – are

therefore empty places within organizations. A class-for-itself, on the other hand, presupposes that these empty places have been formed into class organizations in their own right. In the case of a fully developed class-for-itself, such organizations are formed at the societal level and are capable of concentrated political struggles. The transformation of a class-in-itself into a class-for-itself (or what is often called the process of class formation) can thus be viewed as the process by which class positions within organizations are formed into organizations within classes.[21]

This way of understanding the intersection of class and organization undermines the traditional distinction in the sociology of organizations between the "organization" and its "environment". Classes are simultaneously situated within organizations (class positions or a class-in-itself) and organized across enterprises (class formation or a class-for-itself). Classes are therefore neither internal nor external to organizations; they intersect organizations. Any simple dualistic conception of organizations facing an external social environment obscures this interconnection.[22]

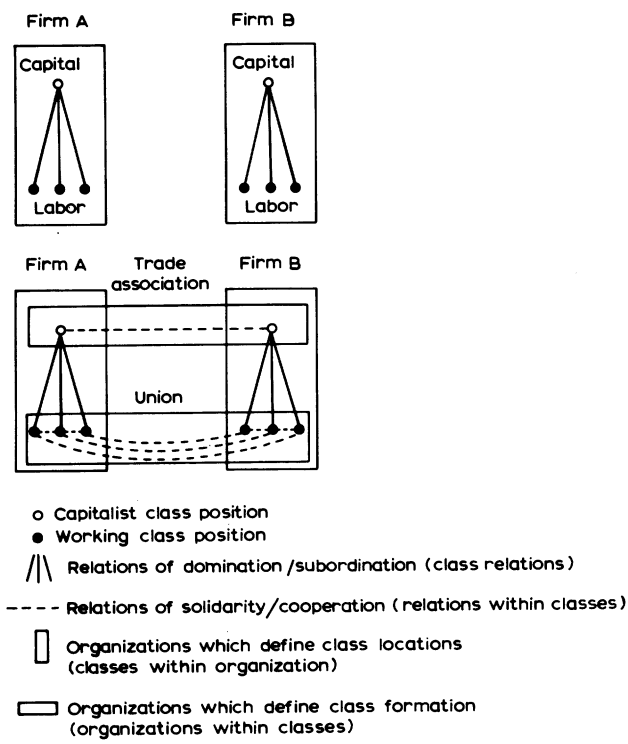


Figure 3: Classes within organizations and organizations within classes.

A simple illustration may help to clarify this conception of class formation intersecting organizations (see Figure 3). Capitalist firms are the site of the social relations of production, of the social relations which define the basic class structure of capitalist society. Unions, on the other hand, are the site of certain important social relations within the working class, and thus of social relations which determine aspects of the class formation of workers. The intersection of these two structures of relations can be represented in a spacial metaphor, using vertical lines to designate social relations between classes and horizontal lines to represent social relations within classes.

In Figure 3A classes have been determined within capitalist firms, but no social relations within classes have yet been forged. Such a situation represents the formal model of perfect competition between units of capital and complete atomization of the working class. Each worker has a strictly individual relationship to capital and is related to other workers only through market competition and technical cooperation. In Figure 3B social relations within classes have been formed through the creation of organizations-within-classes. Unions create a structure of social relations among working class positions; trade associations create a structure of social relations among capitalist class positions.[23] Whereas in Figure 3A working class positions are located within a single nexus of relations relations of domination/subordination to capital in Figure 3B they are located within a double nexus of relations. In this context it becomes impossible to sustain the formal distinction between an organization and its environment. Unions – class formations of the working class – are neither internal nor external to the firm; they intersect the firm.[24]

Occupations and Organizations

In the analysis of the process by which classes within organizations are formed into organizations within classes, the relationship between class and occupation plays a particularly important role. Capitalist organizations (enterprises and bureaucracies) are not only structured by the social relations of production, but by the technical relations of production as well. The "empty places" within production which are filled by individual incumbents are therefore determined by occupational relations as well as class relations. This dual character of positions within organizations as simultaneously structured by class relations and occupational relations has several possible effects on the process of class formation.

(1) Occupational positions form the potential basis for persistent divisions within the working class. In spite of occupying a common location within the social relations of production, significant internal divisions exist within all working classes. There are a number of different structural bases for these internal divisions: racial and ethnic divisions; employment in monopoly, competitive or state sectors of the economy;[25] unionized versus ununionized employment; levels of skill, income, education, status of different categories of workers. One of the central problems of a class analysis is to sort out the relative salience of these different sources of fractionation of the working class and analyse the conditions under which such divisions may be transcended.

The occupational structure is implicated in many of these sources of segmentation within the working class. In particular, the technical division of labor is closely tied to income and status divisions within the working class.

Certain occupational positions have much more favorable market situations than others, and thus are able to command higher wages within exchange relations. In part this may reflect the additional costs of producing skills required by the technical functions of that occupation, but higher incomes may also be the result of the capacity of the incumbents of that occupation to restrict the supply of people able to fill the occupational positions. Such situations of persistent undersupply of labor power keep the wages associated with those positions permanently above the "value of labor power". This is characteristic of many professional and semi-professional occupations, but it also occurs in certain skilled crafts occupations at the heart of the working class. Such income privileges associated with different positions in the technical division of labor tend to underwrite divisions within the working class along occupational lines.[26]

Such occupational divisions are further reinforced when advantages in market situations overlap ideological divisions within classes. Occupations, as every sociologist knows, differ markedly in their social status, and such status differentials have the effect of intensifying the divisions within classes on the basis of occupation. Indeed, the relative sharpness of the status difference between white collar (or mental labor) occupations and blue collar (manual labor) occupations has led many sociologists to treat this division as a fundamental division between classes rather than an internal division within the working class.

As a result of the intersection of market and ideological relations with the technical division of labor, occupational positions have frequently formed the basis for significant strata within the working class in capitalist societies.[27]

(2) *Occupational strata within classes may systematically reinforce other sources of intra-class cleavage.* Racial, ethnic, national, linguistic and/or religious cleavages are pervasive realities in nearly all capitalist societies.[28] But they do not always form the basis of intra-class divisions. To the extent that such social divisions systematically overlap salient divisions in the technical division of labor, the likelihood that they would become the basis for sharp divisions within the working class would be expected to increase. At times, in fact, the race and ethnic typing of jobs has been a self-conscious strategy of the capitalist class to accentuate divisions within the working class. But even where it is not a collective strategy of the capitalist class, the linkage between social cleavage and the technical division of labor tends to undermine unity within the working class.

(3) Occupational positions may not simply form a structural basis for segments or strata within classes; *they may also compete with class as the basis for organizing the empty places within production.* To the extent that they are formed into collective organizations, occupational groups can serve to obscure class issues, class divisions, class conflicts. The classic example of this is the formation of farmers into collective organizations which obscure the qualitatively different class situation of sharecroppers, small family farms, corporate farms, etc. Similarly, the formation of all physicians into professional associations such as the AMA obscures the quite different class situation of physicians in the state sector, in large hospitals and in private practice. Such professional-occupational formation probably contributes to the general lack of support for strikes by hospital workers and nurses on the part of physicians.

(4) *Occupational groupings may, under certain circumstances, function as a vehicle for class formation rather than as a competitor to class formation.* So far we have examined various ways in which the structure of occupations undermines the process of class formation. But this is not inevitably the case. In certain conditions in early capitalism, for example, the occupational identities of artisans served as a basis for solidarities which could be mobilized for class conflicts, not simply occupational conflicts. Aminzade[29] shows how artisans in factories in Toulouse in the nineteenth century could mobilize resources from traditional artisanal

occupational associations for factory-wide struggles of workers. In contemporary capitalism, the occasional support given by union members in one trade for the strikes of workers in another also reflects the use of occupationally rooted resources for class-based conflicts.

These complex ways in which the technical division of labor impinges on the process of class formation show that it is impossible to deduce forms of class struggle and class formation directly from an analysis of class structure. The same essential class structure will support widely different forms of struggle and formation depending upon its interconnection with the occupational structure and other aspects of social structure.

I will now try to take these general observations and restate them more systematically in terms of a formal model of determination.

A Model of Determination of Class, Occupation and Organization

To briefly recapitulate the argument thus far: classes are defined by the social relations of production, occupations by the technical relations of production. Both of these relations are decisive dimensions of the internal structure of capitalist organizations of production, and both of them determine the empty places within production. In the process by which classes within organizations (a class-in-itself) are transformed into organizations within classes (a class-for-itself), the precise relationship between class and occupation plays an important role, by creating internal strata within classes, by potentially obscuring basic class divisions, and, under certain conditions, by providing resources for class conflict.

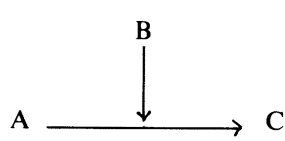
In order to recast this argument as a formal model of determination, it is necessary to introduce the concept of "mode of determination".[30] From its inception, marxist social science has rejected the narrow temporal notion of causation which is dominant in the social sciences, in which causes and effects are all arranged in a simple temporal sequence. While Marx himself never systematically elaborated the logic of causation in his own work, subsequent marxists have spent considerable energy in developing a methodology based on a heterogeneous conception of determination. Sometimes this is referred to as "dialectical causation," other times as "structural causation". I will use the expression "modes of determination" in order to emphasize the plurality of types of causes within marxist theory.

In our present discussion, four different modes of determination are particularly important: structural limitation; selection; mediation; and transformation. A complete typology of determination would include several other modes of determination as well, but for the present purposes, we can restrict the analysis to these four.

Structural limitation. Structural limitation is a mode of determination in which one structure or process establishes *limits of variation* on another structure or process. Given a particular form of the determining structure, the determined structure can only vary within specific limits. It should be noted that there is no necessary temporal ordering in this relation. The limiting structure is not in any sense temporally prior to the limited structure. Thus, while I will argue that the class structure sets limits on the occupational structure (i.e., the social relations of production limit the technical relations of production), this does not imply that the class structure exists prior to the occupational structure.

Selection. Selection can be thought of as the determination of limits within limits. It is the mode of determination in which one structure "selects" specific outcomes or ranges of outcomes within limits established by some other process. In our present analysis, the occupational structure has a selection effect on class formation within limits established by class structure. That is, the basic structure of class relations determines the broadest limits on the forms of organization of classes, but within those limits the occupational structure can have a significant influence on class formation.

Mediation. Mediation constitutes a mode of determintion in which one structure or process shapes the causal relationship between two other processes. This must not be confused with the conventional notion of an "intervening variable" in which a variable functions as an intermediate cause between some antecedent cause and a final effect. An intervening variable can be schematically pictured as follows: A ---> B ---> C where B intervenes between A and C. A relationship of mediation, in contrast, would be represented in the following way:



In this case B determines the effects of A on C. In our analysis of class and occupation, both limitation and selection determinations are themselves

mode of determination which we will consider. Transformation constitutes a relation of determination through which the structures which establish different limits on the occupational structure as well as different limits on forms of class organization. Class struggle also mediates the selection effects of the occupational structure on class organization. Such mediation relationships are of decisive importance, for they imply that the conscious forms of struggle by organized classes can alter the ways in which social structures have their effects.

Transformation. Class consciousness also plays a central role in the final mode of determination which we will consider. Transformation constitutes a relation of determination through which the structures which establish limits and selections are themselves modified. This is different from mediation, in which the structure remains unchanged but its effects are influenced. Transformation involves the direct restructuring of social structures themselves. When marxists say that the object of class struggle is ultimately class structure, they are referring to transformation as a mode of determination.

If we take these four modes of determination together, we can use them to construct a model of determination which links class structure, occupational structure, class organization and class struggle. This model of determination is presented in Figure 4. This model, of course, is radically incomplete in a number of crucial respects. Ideology, politics, the state, accumulation – none of these explicitly appear in the relations of determinations depicted in Figure 4. In order to be complete, the specific model in this figure would have to intersect a number of parallel models which contained these elements as well. This model, therefore,

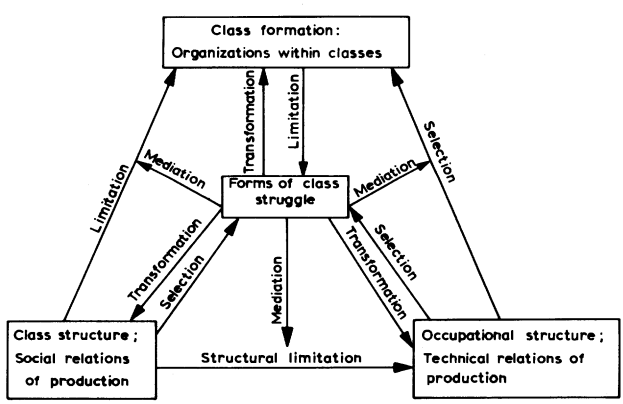


Figure 4: Model of determination of class, occupation and organization.

must be read as a schematic representation of some of the salient determinations in the process of class formation, not as an exhaustive map of those determinations.[31]

Several facets of this model are especially important to note: (1) *Class Structure Limits Occupational Structure.* The class structure (social relations of production) sets the basic limits of variation on the occupational structure (technical relations of production). This limiting relationship should be understood in two ways. First, statically, certain forms of the technical division of labor are simply impossible by virtue of a given structure of class relations. For example, the class relations of advanced monopoly capitalism involve the systematic proletarianization of wage-laborers, and in particular the general separation of planning activities (control over allocation of resources) and execution activities. This implies that with rare exceptions, occupational positions (i.e., clusters of technical functions within a single job) will tend not to combine mental and manual labor. The specific contours of the technical division of labor, therefore, are logically constrained by the nature of the social division of labor. Second, historically, as the class structure changes, the possible forms of the technical division of labor also change. As the size and density of the working class expanded with industrial capitalism, for example, the scope for a detailed technical division of labor also expanded.

(2) *Class Structure Limits Class Formation.* The social relations of production also set the basic limits on the formations of organizations within classes. For example, as long as capitalist social relations of production were primarily organized in small shops and cottage industry, the formation of industrial trade unions was basically outside of the limits of structural possibility. Or, to take a different sort of example, where there is a large proportion of all wage laborers in contradictory locations within class relations, it may be much more difficult to organize the working class itself into a class party (either a revolutionary or reformist party), since it will be more difficult for individual workers to see the class structure as a polarized, antagonistic structure of class domination. To the extent that the existence of contradictory locations obscures class interests, they may place real limits on the possibility of working class formation at the political level.[32]

(3) *Occupational Structure Selects Class Formation and Class Struggle.* The occupational structure operates as a selection determinant of both class formation and class struggle. Depending upon the specific relation-

ship between the technical relations of production and the social relations of production, this selection process may either strengthen or undermine working class formation. For example, where the occupational structure generates a privileged strata of workers, it may be much more difficult in general to forge a broad unity within the working class than in situations where occupational divisions are not tied to sharp differences in income, job security, etc. Similarly, the more closely linked are occupational divisions to other sources of social cleavage (race, ethnicity, religion, etc.), the more difficult it will be to create broad, class-wide organizations of the working class. On the other hand, to the extent that the technical division of labor does not demarcate significant divisions within the working class, class formation will be easier, and the forms of class struggle may revolve more consistently around fundamental class issues. Within the limits established by the underlying class structure of the society, therefore, the occupational structure may effect (select) forms of class struggle and class formation.

(4) *Class Formation Limits Class Struggle.* The basic limits on class struggle are not set directly by the class structure but rather by the forms of organization of classes. Without certain forms of organization, certain types of struggle are simply impossible, regardless of the underlying class structure. Collective bargaining over economistic demands as a form of struggle presupposes union organizations; electoral struggles over immediate class interests presuppose the existence of working class parties.[33] This is precisely why many of the bitterest forms of class struggle center on the establishment and legitimation of different organizations of the working class. The struggle for the creation of unions, for example, is typically much sharper and bloodier than the struggle over various objectives once unions are in place. The introduction of new forms of organization of classes transforms the terrain upon which subsequent struggles are fought and thus often meets with the staunchest resistance by ruling classes.

(5) *Class Structure Selects Class Struggle.* Within the limits established by the forms of organizations-within-class, the class structure, like the occupational structure, acts as a selection determinant on forms of class struggle. The extent to which a working class political party, for example, organizes its activity around immediate or fundamental class interests may be shaped by the relative size of the contradictory locations within class relations among wage-laborers. Fundamental class interests would tend to highlight the contradictory character of the potential alliances between workers and people in contradictory class locations near the working class, and thus make electoral gains more difficult. As Adam

Przeworski[34] has brilliantly argued, working class electoral parties always face the dilemma of choosing between strategies which maximize their overall vote and strategies, which maximize their working class base. Where contradictory locations are large, this dilemma is intensified. In this way the class structure acts as a selection process on forms of class struggle.[35]

(6) *Class Struggle Mediations.* Class struggle mediates all of the relations of determination between the structural elements of the model. The consequences of a given structure of production relations for the technical relations of production or for class organization, therefore, cannot be considered directly given by the class structure itself. Those consequences – the ways in which the class structure limits the occupational structure and class formation – are themselves shaped by the actual, historical forms of struggle that exist within those structures. For example, if capital attempts to deal with economic crisis through a general assault on the living standards of all wage-earners, this may increase the possibilities of class alliances between the working class and contradictory class locations. If on the other hand, an attempt is made by the capitalist class to concentrate the effects of crisis on the weakest segments of the working class, it is possible that it could deepen the conflict of interest between certain contradictory locations and workers. The strategies of capital – its practices within the class struggle – thus mediate the effects of class structure on working class formation. But equally, the strategies of the working class within the class struggle mediate those effects. Where workers organize their demands around fundamental class interests, interests which call into question the capitalist mode of production itself, the possibilities of a cohesive class organization of the *dominant* class increases. When workers are either relatively passive or restrict their demands to immediate interests, on the other hand, the various fractions of the capitalist class are much more likely to be hostile to each other and engaged in serious political and economic conflict. The effects of the class structure on the class formation of the bourgeoisie is thus mediated by the forms of struggle of the working class.

(7) *Class Struggle Transformations.* Finally, and in the end perhaps most critically, class struggle acts as a transformation determinant directly on each of the structural elements in the model. When marxists say that class struggle is the "motor" of history, it is largely because of the transformative role that class struggle plays in shaping and reshaping the social structure itself. In every period of capitalist development, the determination of the very form of working class organizations has been a

decisive object of class struggle. This has included such things as struggles over union rights, over freedom of political parties, and periodically over new forms of class organization within production itself (workers' councils and the like). Transformations of the occupational structure have also been objects of struggle. From the working class' point of view, such struggles have often centered on preventing changes in the technical division of labor which eliminate skilled jobs; from the capitalist class' point of view, such struggles have centered on using technology and the occupational structure as part of a strategy of social control.[36] In both cases, the structure of occupations has been an object of struggle. Finally, struggles over the class structure itself constitute in some sense the ultimate objective of class conflict. A socialist revolution is above all a revolutionary restructuring of the class structure. But struggles over the class structure are not limited to revolutionary transformation: they also comprise a central aspect of capitalist development itself. The classic example of such struggle is the destruction of the petty bourgeoisie in the course of capitalist development, first through such things as enclosures which destroyed much of the agrarian petty bourgeoisie, and later through capitalist competition which destroyed the artisanal petty bourgeoisie and is now making considerable inroads on the retail trade petty bourgeoisie as well. Perhaps more importantly in the present context, class struggles have directly influenced the shape and size of the contradictory class locations near the working class. On the one hand, the expansion and differentiation of a managerial structure is at least in part a response to the imperatives of domination within large scale capitalist production (and not simply the imperatives of technical coordination).[37] On the other hand, the need of capital to control the labor process has probably led to a systematic attempt at reducing the degree of control over the labor process and thus to a contraction of the semi-autonomous employee category.[38]

Taking all of these relations of determination together generates the dialectical model of determination symbolically represented in Figure 4. This model is a dialectical model, not simply a structuralist model, since class struggle has the critical capacity of transforming the conditions of its own determination. The structural determinations systematically impose constraints – limits and selections – but those constraints are not statically fixed and they do not define a unique course of social development. Conscious practices of classes – the class struggle in its broadest sense – act on those structures, displacing and transforming those constraints and thus changing the possible forms of class practices in the future.

Toward A Model of Class Formation

The overarching thesis of this essay has been that class structure cannot be considered simply a typology of occupational categories, regardless of how refined that typology attempts to be. Class and occupation are different dimensions of social structure, and any serious attempt at understanding the dynamics of social change must try to theorize the relationship between these dimensions rather than collapsing one onto the other. Once the distinction is rigorously made between class and occupation, between the social relations of production and the technical division of labor, we can then embark on the task of linking the two within a general model of determination of class formation.

The schematization in Figure 4 is only a preliminary step at elaborating such a model. As it stands, this model should be viewed as a kind of road map for empirical/historical research, a guide to the salient questions that must be posed rather than an inventory of the substantive answers to those questions. In particular, as a formal model the account fails to specify the actual contents of the limits, selections, mediations and transformations. Research is needed to establish how broadly or narrowly class structures constrain forms of class formation, and how those limits vary systematically with the shape of the class structure. We need to know under what conditions the occupational structure acts as a selection determinant that reinforces class formation or undermines it, and precisely how the occupational structure selects forms of class struggle from within the limits established by class formation. And, of course, it is only through actual historical investigation that we can grasp the ways in which class struggles concretely transform each of the structural determinants in the model. The model in Figure 4 is thus not a substitute for research, but a way of organizing a research agenda in a theoretically coherent manner.

TABLE 1:

Operational Criteria for Class Locations

	Self-Employed	Have Employees	Have Subordinates[2]	Job Characterized by a Lot of Freedom and Decisions[3]
Employers[1]	yes	yes		
Petty bourgeoisie	yes	no		
Managers/supervisors	no	no	yes	
Workers	no	no	no	no
Semi-autonomous employees	no	no	no	yes

[1] Since 80% of all employers in the sample employed less than ten workers, it was not possible to study a proper capitalist class location. Throughout most of the analysis which follows, therefore, I will treat all employers as occupying a contradictory location between the petty bourgeoisie and the capitalist class.

[2] All teachers were classified as nonsupervisors regardless of their response to this criterion (see text for explanation).

[3] Jobs which the respondent claims are characterized "a lot" by *both* of the following descriptions:

a) "a job that allows a lot of freedom as to how you do your work"

b) "a job that allows you to make a lot of decisions on your own".

TABLE 2:

Criteria Used in High and Low Estimates for Sizes of Classes

	HIGH ESTIMATE	LOW ESTIMATE
Semi-autonomous Employees	All nonsupervisory employees who score high on both questions concerning subjective autonomy	Those nonsupervisory employees who score high on the subjective autonomy questions and whose occupation is classified as having a complex relation to data and things by the Dictionary of Occupational Titles (DOT) job classification scheme.[1]
Small Employers	Less than 50 workers.	Less than 10 workers.
Managers/Supervisors		
Top/middle managers	All supervisors who also report that they have some "say in the pay and promotions" of their subordinates.[2]	Supervisors with say in pay and promotions whose occupation is classified as professional, technical, managerial, or official.
Bottom managers/supervisors	All supervisors who do not have a say in pay and promotions, plus those with say in pay and promotions who are not in upper white collar occupations.	Supervisors without say in pay and promotions except for those whose occupation is laborer, or operative.
Workers	All nonsupervisory employees plus semi-autonomous employees whose occupations are classified as noncomplex by the DOT plus supervisors whose occupations are operatives or laborers.	Nonsupervisory employees who score low on either subjective autonomy question.

[1] The Dictionary of Occupational Titles codes occupations in terms of their relationship to data and to things in the following way:
relationship to things: 0. setting up; 1. precision working; 2. operating-controlling; 3. driving-operating; 4. manipulating; 5. tending; 6. feeding-offbearing; 7. handling; 8. no significant relationship to things.
relationship to data: 0. synthesizing; 1. coordinating; 2. analysing; 3. compiling; 4. computing; 5. copying; 6. comparing; 7 - 8. no significant relationship to data.
An individual whose occupation scored 0 - 2 on data and 0 - 2 or 8 on things, or who scored 0 - 2 on things and 7 - 8 on data, was classified as having a "complex" job.

[2] The division between top and middle managers on the one hand, and bottom managers and supervisors on the other was made on the basis of data from the I.S.R.Panel Study of Income Dynamics (1975 wave of the panel). In that study, all respondents who stated that they had subordinates were asked whether or not they had any say in the pay or promotions of their subordinates. Middle/top managers are defined as those supervisors who have some say in pay and promotions; bottom-managers/supervisors are defined as those who do not. The ratio between top-middle managers and bottom-manager/supervisors in the Panel Study of Income Dynamics within occupational categories was used to make these estimates for the Survey of Working Conditions data.

TABLE 3:

Class-Occupation Distribution for Economically Active Population

A. Distribution of Occupations Within Classes (Percentages Sum Vertically)[1]							
	Employers	Petty Bourgeoisie	Managers/ Supervisors	Semi-Autonomous Employees	Workers	All	(N)
Upper white collar							
Professionals	4.5	9.8	16.2	4.7	2.7	8.1	(124)
Technicians	0.9	0.0	2.7	2.4	1.9	2.1	(33)
Managers, proprietors, and officials	70.5	30.4	16.6	3.6	0.9	13.4	(206)
Teachers[2]	0.0	0.0	0.0	20.2	5.7	4.6	(70)
Total	75.9	40.2	35.5	30.9	11.2	28.2	(433)
Lower white collar							
Clerical	0.0	2.2	15.3	10.1	22.9	16.0	(245)
Sales	2.7	5.4	4.4	10.7	4.9	5.2	(80)
Total	2.7	7.6	19.7	20.8	27.9	21.2	(325)
Upper blue collar							
Craftspeople	5.4	9.8	13.4	16.7	11.3	12.1	(185)
Foremen	0.9	0.0	7.3	0.0	0.0	2.5	(39)
Total	6.3	9.8	20.7	16.7	11.3	14.6	(224)
Lower blue collar							
Operatives	0.9	8.7	13.6	18.5	28.7	19.2	(294)
Laborers[3]	0.9	2.2	2.2	3.0	7.4	4.3	(66)
Total	1.8	10.9	15.8	21.5	36.1	23.5	(360)
Services	1.8	3.3	7.8	9.6	13.5	9.6	(147)
Farmers[4]	11.6	28.3	0.6	0.6	0.2	2.9	(44)
Total	100.0	100.0	100.0	100.0	100.0	100.0	
(N)	(112)	(92)	(524)	(168)	(637)		(1533)

TABLE 3, continued

B. Distribution of Classes Within Occupations (Percentages Sum Horizontally)	Employers	Petty Bourgeoisie	Managers/ Supervisors	Semi-Autonomous Employees	Workers	Total
Upper white collar						
Professionals	4.0	7.3	68.5	6.5	13.7	100.0
Technicians	3.0	0.0	45.4	12.2	39.3	100.0
Managers, proprietors, and officials	38.5	13.6	42.2	2.9	2.9	100.0
Teachers[2]	0.0	0.0	0.0	48.6	51.5	100.0
Total	19.7	8.6	43.2	12.1	16.5	100.0
Lower white colar						
Clerical	0.0	0.8	32.7	6.9	59.5	100.0
Sales	3.8	6.3	28.8	22.5	38.8	100.0
Total	0.9	2.2	31.7	10.7	54.4	100.0
Upper blue collar						
Craftspeople	3.2	4.9	37.8	15.1	38.9	100.0
Foremen	2.6	0.0	97.4	0.0	0.0	100.0
Total	3.1	4.0	48.2	12.5	32.1	100.0
Lower blue collar						
Operatives	0.3	2.7	24.2	10.5	62.2	100.0
Laborers[3]	1.5	3.0	16.7	7.6	71.2	100.0
Total	.5	2.8	22.8	10.0	63.9	100.0
Services	1.4	2.0	27.9	10.9	57.8	100.0
Farmers[4]	29.5	59.1	6.8	2.3	2.3	100.0
All	7.3	6.0	34.2	11.0	41.6	100.0

[1] See Table 1 for operationalization of class.
[2] All teachers were classified as nonsupervisors regardless of their response to the supervision question (see text for explanation).
[3] Includes farm laborers.
[4] Includes farm managers and farm owners.

TABLE 4:

Class-Occupation Distribution for Economically Active Population, Men Only

A. Distribution of Occupations Within Classes (Percentages Sum Vertically)[1]							
	Employers	Petty Bourgeoisie	Managers/ Supervisors	Semi-Autonomous Employees	Workers	All	(N)
Upper white collar							
Professionals	4.0	6.7	16.8	3.6	3.1	8.8	(87)
Technicians	1.0	0.0	2.9	3.6	2.8	2.5	(25)
Managers, proprietors, and officials	69.0	0.0	18.3	2.7	1.2	16.7	(166)
Teachers[2]	0.0	26.7	0.0	15.5	4.6	3.2	(32)
Total	74.0	33.3	38.0	25.4	11.7	31.2	(303)
Lower white collar							
Clerical	0.0	0.0	6.5	1.8	8.9	5.6	(56)
Sales	3.0	6.7	30.2	13.6	4.3	5.3	(53)
Total	3.0	6.7	36.7	15.4	13.2	11.0	(105)
Upper blue collar							
Craftspeople	6.0	12.0	18.3	25.5	21.5	18.4	(183)
Foremen	1.0	0.0	9.7	0.0	0.0	3.8	(38)
Total	7.0	12.0	28.0	25.5	21.5	22.3	(221)
Lower blue collar							
Operatives	1.0	9.3	15.2	23.6	33.7	20.3	(202)
Laborers[3]	1.0	2.7	2.9	4.6	13.2	6.2	(62)
Total	2.0	12.0	18.1	28.2	46.9	26.5	(264)
Services	1.0	1.3	4.5	4.6	6.7	4.6	(46)
Farmers[4]	13.0	34.7	0.8	0.9	0.0	4.3	(43)
Total	100.0	100.0	100.0	100.0	100.0	100.0	
(N)	(100)	(75)	(382)	(110)	(326)		(993)

TABLE 4, continued

B. Distribution of Classes Within Occupations (Percentages Sum Horizontally)	Employers	Petty Bourgeoisie	Managers/ Supervisors	Semi-Autonomous Employees	Workers	Total
Upper white collar						
Professionals	4.6	5.7	73.6	4.6	11.5	100.0
Technicians	4.0	0.0	44.0	16.0	36.0	100.0
Managers, proprietors, and officials	41.6	12.1	42.2	1.8	2.4	100.0
Teachers[2]	0.0	0.0	0.0	53.1	46.9	100.0
Total	23.9	8.1	46.8	9.0	12.3	100.0
Lower white collar						
Clerical	0.0	0.0	44.6	3.6	51.8	100.0
Sales	5.7	9.4	30.2	28.3	26.4	100.0
Total	2.8	4.6	38.6	15.6	39.4	100.0
Upper blue collar						
Craftspeople	3.3	4.9	38.3	15.3	38.3	100.0
Foremen	2.6	0.0	97.4	0.0	0.0	100.0
Total	3.2	4.1	48.4	12.7	31.7	100.0
Lower blue collar						
Operatives	0.5	3.5	28.7	12.9	54.5	100.0
Laborers[3]	1.6	3.2	17.7	8.0	69.4	100.0
Total	0.8	3.4	26.1	11.7	58.0	100.0
Services	2.2	2.2	37.0	10.9	47.8	100.0
Farmers[4]	30.2	60.5	7.0	0.0	2.3	100.0
All	10.1	7.6	38.5	11.1	32.8	100.0

[1] See Table 1 for operationalization of class.
[2] All teachers were classified as nonsupervisors regardless of their response to the supervision question (see test for explanation).
[3] Includes farm laborers.
[4] Includes farm managers and farm owners.

TABLE 5:

Class-Occupation Distribution for Economically Active Population, Women Only

A. Distribution of Occupations Within Classes[1] (Percentages Sum Vertically)							
	Employers	Petty Bourgeoisie	Managers/ Supervisors	Semi-Autonomous Employees	Workers	All	(N)
Upper white collar							
Professionals	8.3	23.5	14.8	6.9	2.3	6.9	(37)
Technicians	0.0	0.0	2.8	0.0	1.3	1.5	(8)
Managers, proprietors, and officials	83.3	47.1	12.0	5.2	.6	7.4	(40)
Teachers[2]	0.0	0.0	0.0	29.3	6.8	7.0	(38)
Total	91.6	70.6	29.6	41.4	11.0	22.8	(123)
Lower white collar							
Clerical	0.0	11.8	38.7	25.9	37.9	35.0	(189)
Sales	0.0	0.0	4.9	5.2	5.5	5.0	(27)
Total	0.0	11.8	43.6	31.1	43.4	40.0	(216)
Upper blue collar	0.0	0.0	0.7	0.0	0.6	0.6	(3)
Lower blue collar							
Operatives	0.0	5.9	9.2	8.6	23.5	17.0	(92)
Laborers[3]	0.0	0.0	0.0	0.0	1.3	0.7	(4)
Total	0.0	5.9	9.2	8.6	24.8	17.7	(96)
Services	8.3	11.8	16.9	19.0	20.4	18.5	(101)
Farm Managers	0.0	0.0	0.0	0.0	0.3	0.2	(1)
Total	100.0	100.0	100.0	100.0	100.0	100.0	
(N)	(12)	(17)	(142)	(58)	(311)		(540)

TABLE 5, continued

B. Distribution of Classes Within Occupations (Percentages Sum Horizontally)	Employers	Petty Bourgeoisie	Managers/ Supervisors	Semi-Autonomous Employees	Workers	Total
Upper white collar						
Professionals	2.7	10.8	56.8	10.8	18.9	100.0
Technicians	0.0	0.0	50.0	0.0	50.0	100.0
Managers, proprietors, and officials	25.0	20.0	42.5	7.5	5.0	100.0
Teachers[2]	0.0	0.0	0.0	44.7	55.3	100.0
Total	8.9	9.8	34.1	19.5	27.6	100.0
Lower white collar						
Clerical	0.0	1.1	29.1	7.9	61.9	100.0
Sales	0.0	0.0	25.9	11.1	63.0	100.0
Total	0.0	0.9	28.7	8.3	62.0	100.0
Upper blue collar	0.0	0.0	33.3	0.0	66.7	100.0
Lower blue collar						
Operatives	0.0	1.1	14.1	5.4	79.4	100.0
Laborers[3]	0.0	0.0	0.0	0.0	100.0	100.0
Total	0.0	1.0	13.5	5.2	80.2	100.0
Services	1.0	2.0	23.8	10.9	62.4	100.0
Managers	0.0	0.0	0.0	0.0	100.0	100.0
All	2.2	3.2	26.3	10.7	57.6	100.0

[1] See Table 1 for operationalization of class.
[2] All teachers were classified as nonsupervisors regardless of their responses to the supervision question (see text for explanation).
[3] Includes farm laborers.

NOTES

1. Frank Parkin, *Class Inequality and the Political Order* (New York: Praeger, 1971), p. 18.
2. For example, E. P. Thompson, *The Making of the English Working Class* (New York: Random House, 1966).
3. For example, Nicos Poulantzas, *Classes in Contemporary Capitalism* (London: New Left Books, 1975).
4. Martin Nicolaus, "Proletariat and Middle Class in Marx," *Studies on the Left,* no. 7, 1967; and John Urry, "Towards a Structural Theory of the Middle Class," *Acta Sociologica,* Vol. 16, no. 3, 1973.
5. Poulantzas, *Classes in Contemporary Capitalism.*
6. Erik Olin Wright, *Class Structure and Income Inequality,* unpublished Ph.D. dissertation, University of California, Berkeley, 1976; "Class Boundaries in Advanced Capitalist Societies," *New Left Review,* no. 98, pp. 3 – 43; *Class, Crisis, and the State* (London: New Left Books, 1978), ch. 2; *Class Structure and Income Determination* (New York: Academic Press, 1979), ch. 1; "Alternative Perspectives on the Marxist Concept of Class," *Politics & Society,* Vol. 9/3, 1979.
7. "Surplus labor" is the general category, applicable to all class societies. It is only in a capitalist society, however, that such labor is embodied in commodities as "exchange values," and that the surplus labor represented in the surplus product takes the form of "surplus value." Much of Marx's discussion of capitalism in Volume I of *Capital* is devoted to explaining precisely how surplus labor takes the form of surplus value in capitalism.
8. The technical defense of this account is at the heart of Marx's labor theory of value. The basic claim that surplus labor is appropriated through the difference between the labor embodied in the wage bundle and the labor embodied in the social product, however, does not hinge on the general adequacy of the labor theory of value as a framework for understanding the rate of profit and other aspects of the accumulation process. All that is necessary to defend the description of this mechanism as a mechanism of exploitation is to demonstrate that the wage bundle in fact embodies a certain quantity of social labor and that this is less than the social labor embodied in the total social product. The very fact of the existence of a surplus product controlled by the capitalist class which was produced by the labor of workers establishes this. For a general discussion of the labor theory of value and its relationship to the analysis of class, see Wright, "Current debates on the Labor Theory of Value," *New Left Review* (forthcoming).
9. Note that these are referred to as *aspects* of production relations, not *types* of relations. There is no meaningful sense in which they can exist independently of each other. They represent three intrinsically interlinked aspects of the social relations of production, forming a unity, albeit an internally differentiated (or structured) unity.
10. Relational concepts of class and inequality should be contrasted to gradational notions. In gradational notions, classes differ in the degree of various attributes such as income, status, education, wealth. The names of classes thus reflect purely quantitative locations: upper class, upper middle class, middle class, lower middle class, lower class, etc. In relational notions, on the other hand, classes are defined by virtue of their location within social relations of domination/subordination. The names of classes, therefore, reflect the qualitative nature of the locations within such relations: lord and serf; slavemaster and slave; capitalist and worker. For extended discussions of the distinction between relational and gradational conceptions of class, see S. Ossowski, *Class Structure in the Social Consciousness* (London: Routledge & Kegan Paul, 1963), and Wright, *Class Structure and Income Determination,* Ch. 1.
11. Commercial airline pilots pose an additional problem for a class analysis. Their incomes may be sufficiently high that they can no longer be seen as "exploited" in the convention-

al marxist sense of the term. In such cases there is a contradiction between their location within production relations and their location within exchange relations. Such nonexploited wage-laborers should not be considered part of the working class, even if at the level of production relations they have no meaningful control over their labor process. For the purposes of this paper this additional complication will be ignored, and we will examine class locations as they are determined solely at the level of the social relations of production.

12. The complex relationship of intellectuals to working class social movements reflects this contradictory determination of their class location. For a discussion of the relationship of intellectuals to the working class, see Wright, "Race, Class and Income Inequality," *American Journal of Sociology*, May, 1978.
13. I am currently engaged in a large scale, cross-national study of class structure in the United States, Italy, Sweden and Great Britain which will generate systematic data on class relations directly based on the theoretical categories discussed above. Results from this research should be available by late 1981.
14. The central issue here is that teachers (in most circumstances) are not engaged in the exploitation of labor power. While they do control the activity of students, they do not control the labor of direct producers (workers).
15. Since this chart is based on data limited to the economically active, working population, it cannot be considered a complete class map of the American population. Unemployed people, students, retired people, and nonworking housewives are not included in the data. It is, of course, an important theoretical and empirical problem to understand the relationship of such positions outside the market to class relations in capitalist society. The data available for the present study, however, do not allow such questions to be investigated. See Wright, *Class Crisis and the State*, 91 – 96, for a discussion of the class location of these positions.
16. Since so-called "discouraged workers" as well as temporarily unemployed workers are not included in the Survey of Working Conditions, and since most such people would be drawn from the working class, these estimates almost certainly underestimate the size of the American working class, even if we assume that all of the other criteria are adequate.
17. These results are quite consistent with the findings of Reeve Vanneman, "The Occupational Composition of American Classes," *American Journal of Sociology*, 82, 4, 1977, pp. 783 – 808, in a statistical study of the occupational composition of "classes." Vanneman used cluster analysis to establish the closeness of different occupational categories to each other in terms of two basic variables: residential segregation and intergeneral mobility. While, as Vanneman admits, these clusters of occupations cannot be considered "classes" in analytical terms since they are purely statistical aggregations, nevertheless his results are very suggestive. He found that lower white vollar occupations are much "closer" to traditional blue collar occupations in terms of both residential segregation and intergenerational mobility than they were to other white collar occupations. To the extent that location within the social relations of production establishes limits of variation on such things as intergenerational mobility, it would be expected that occupations with similar class distributions would have similar mobility patterns. Vanneman's study supports such a proposition.
18. It is always possible, of course, that the differences between men and women in Tables 4 and 5 are a consequence of the level of aggregation of occupations. With more detailed distinctions within broad occupational categories it could turn out that while men and women have different occupational distributions, within a given occupational category (position within the technical division of labor) they have the same class distribution. The observation that occupational levels of proletarianization vary with sex, therefore, must be seen as tentative until more elaborate data on class and occupation is available.
19. In some ways, "class struggle" is even more difficult to define rigorously than class structure. Throughout this discussion I will use the term in its broadest possible sense to

include both social conflicts between self-consciously organized classes and conflicts which are directly implicated in the formation and transformation of classes, even if the "combatants" in the conflict are not strictly speaking class actors. To use Przeworski's formulation, class struggle must be understood as involving both the struggle between classes and the struggle over class. It should also be noted that throughout this discussion I will use the terms class struggle and class conflict interchangeably. See Adam Przeworski, "The Process of Class Formation: From Karl Kautsky's *The Class Struggle* to Recent Debates," *Politics and Society,* 7, 4, 1977.

20. There has been considerable debate in recent years over this distinction. Traditionally, marxists have tended to identify a class-in-itself with the economic location of classes, and a class-for-itself with the political and ideological formation of classes. This has lead some marxists, most notably Nicos Poulantzas to reject the distinction between in-itself and for-itself altogether. As Poulantzas has correctly emphasized, even the structural definition of classes requires political and ideological elements. the distinction class-in-itself/for-itself, however, does not hinge on the distinction between political-ideological relations and economic relations. Rather, the theoretical impulse for the distinction is to distinguish classes as positions from classes as organized social forces. It is perfectly consistent to sustain this distinction and to argue that class positions themselves need to be analyzed in terms of political and ideological dimensions. For Poulantzas' position, see his *Political Power and Social Class* (London; New Left Books, 1973) and *Classes in Contemporary Capitalism* (London: New Left Books, 1975).
21. Stated in somewhat different terms, a class-in-itself is defined fundamentally by the social relations between classes; class-for-itself by the social relations within a class. The social relations between classes define the essential structure within capitalist enterprises; the social relations within classes define the essential structures of the class organizations across enterprises.
22. Goran Therbon develops a notion of organizations which is very similar to the one argued here, in the context of an analysis of the capitalist state. He writes: "In order to understand the class character of the state apparatus, then, we must begin to develop a new approach to the study of organization. We should view it not as a goal-oriented subject in an environment but as a formally bounded system of structured processes within a global system of societal processes." See *What Does the Ruling Class Do When It Rules?* (London: New Left Books, 1978), p. 37.
23. Note that these social relations are still relations between positions rather than simply between individual persons. Of course, the positions are filled by real people, and it would be absurd to argue that the subjective orientation of the actors within positions is unimportant for understanding the character of the relations themselves. But to the extent that these relations are structured systematically, they must be understood as constituting relations among "empty places" as such.
24. The conventional device of treating organizations as "actors" analogous to human organisms becomes very difficult to sustain when the organization-environment dichotomy is undermined. If the world were really structured as depicted in neoclassical economics – pure competition plus atomistic individuals – then perhaps organizations could be viewed as organisms interacting with an external environment, but once organizations interpenetrate each other and social relations cross-cut organizational boundaries, the metaphor begins to obscure more than it clarifies.
25. See James O'Connor, *The Fiscal Crisis of the State* (New York: St. Martin's Press, 1973).
26. For an extended discussion of income determination and class relations, see Wright, *Class Structure and Income Determination,* chs. 3 and 4; Wright, "Race, Class and Income Inequality," *AJS;* and Wright and Luca Perrone, "Marxist Class Categories and Income Inequality," *American Sociological Review* 42, 1977.
27. There is a fundamental difference between talking about strata within classes and strata within society. "Status groups" in the Weberian sense are always conceived as categories

within the society at large. Occupational strata in the sense discussed above must be understood as the structural basis for divisions within classes. Their efficacy in society is derived from the location *within* classes, not *alongside* classes.

28. Sexual divisions also are heavily implicated in divisions within the technical division of labor. Sex-typing of occupations is if anything a more pervasive feature of capitalist societies than race- and ethnic-typing. However, such sexual divisions do not create the same kinds of fractioning of classes as do racial and ethnic divisions, since men and women workers are bound together within family units. While the linkage between the occupational structure and the sexual division of labor is certainly important for many theoretical and political issues, it is of less relevance in the present context.
29. Ronald Aminzade, *Class Struggle and Social Change in 19th Century Toulouse,* Ph. D. Dissertation, Dept. of Sociology, University of Michigan, 1978.
30. For a much more extended discussion of modes of determination, see Wright, *Class, Crisis and the State,* ch. 1. For an application of them to the analysis of income inequality, see Wright, *Class Structure and Income Determination,* ch. 3.
31. For illustrations of models which include some of these additional elements, see Wright, *Class, Crisis and the State,* pp. 27, 165, 223.
32. This is an example where the present discussion is seriously incomplete. While it may be true that the class structure places broad limits on the forms of political class formation, the role of political and ideological factors as selections within those limits may be of much more theoretical interest than the limits themselves. For example, while it may be true that the existence of large numbers of people in contradictory class locations may make the political formation of the working class as a revolutionary class more difficult, it is probably the case that the forms of the state and ideology constitute the decisive factors which turn that difficulty into an impossibility. Thus, from the point of view of socialist strategy, it may be more important to attempt to shift the selection processes than expand the structural limits within which those selections take place.
33. It should be noted that this formulation is slightly different from my earlier discussions of class formation and class struggle, in which I argued that class structure directly limited class struggle while class formation simply acted as a selection mechanism.
34. Adam Przeworski, "A History of Western European Socialism," Unpublished manuscript, Political Science Dept., University of Chicago, 1978.
35. Gösta Esping-Andersen, in *Social Democracy and Working-Class Politics in the Modern Welfare State: Denmark and Sweden,* University of Wisconsin-Madison, Ph.D. thesis, Department of Sociology, 1978, an extremely interesting comparison of the Danish and Swedish Social Democratic Parties, has argued that the critical differences in the strategies of the two parties can be explained by the different class structures which they faced. The Danish party, he argues, faced a much larger traditional petty bourgeoisie and was therefore forced to make a number of important compromises in its policies in order to obtain petty bourgeois votes. The Swedish Party, on the other hand, could rely more exclusively on a strictly working class electoral base and thus could pursue a more consistently working class (although reformist) politics. The result of these differences, according to Esping-Anderson, was that the Danish Party was forced to adopt policies which ultimately eroded part of its working class support, whereas the Swedish Party was able to sustain its working class base in a much more stable manner. This is a good example of how class structure acts as a selection determination of class struggles within limits set by the forms of class organization (reformist working class party politics).
36. See Michael Burawoy, "Towards a Marxist Theory of the Labor Process," *Politics & Society,* 8: 3 - 4, 1978; Harry Braverman, *Labor and Monopoly Capital* (New York: Monthly Review Press, 1974); Katherine Stone, "The Origins of Job Structures in the Steel Industry," *Review of Radcal Political Economics,* Summer, 1974; and Steven Marglin, "What Do Bosses Do?" *Review of Radical Political Economics,* Summer, 1974.

37. For a discussion of the elaboration of managerial structures as part of a response to class struggle, see Dan Clawson, *Class Struggle and the Rise of Bureaucracy,* unpublished Ph.D. dissertation, Sociology Dept., SUNY, Stonybrook, 1978; Richards Edwards, *Contested Terrain* (New York: Basic Books, 1979); and Wright, *Class, Crisis and the State,* pp. 67 - 71.
38. To my knowledge no really good systematic data exists on changes in the degree of control of workers over the labor process over time. As should be clear from the discussion of occupation and class earlier, it is impossible to use occupational statistics to answer this question. However, some indirect measures, as discussed in Wright and J. Singlemann, "Proletarianization in Advanced Capitalist Societies," *Institute for Research on Poverty Discussion Paper,* University of Wisconsin, 1978, do indicate that within specific sectors of the economy, there seems to be a tendency for autonomy to be reduced over time.

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