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On the Usefulness of Class Analysis in Research on Social Mobility and Socioeconomic Inequality

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The article critically discusses the two main uses of the concept of class in recent stratification research. They are John Goldthorpe's analysis of social mobility from a class formation perspective and Erik O. Wright's analysis of income inequality in the labor market. I argue that the main problem with both efforts is the lack of a satisfactory theory of how class generates inequality within the labor market. The logic of Goldthorpe's argument assumes that class causes inequality generating separate class interests in the labor market, but he does not provide such a theory. Wright provides such a theory. However, his several class schemes either provide explanations for inequality that can be derived from standard internal labor market theory that does not satisfy the requirement of class theory; or, they are based on a concept of exploitation that is unsatisfactory for the identification of class categories within the labor market. I observe that it is not clear why Marxist theory needs a class theory of how inequality is generated within the labor market: standard neo-classical economic theory seems consistent with Marx's own conception of the capitalist economy.

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1. Introduction

It is often claimed, and celebrated by some, that sociology was profoundly changed in the early 1970s. A sociology dominated by functionalist theory was transformed by Marxist or critical theory. The shift supposedly changed fundamentally the nature of sociological inquiry. However, the shift appears to have been limited primarily to the nature of theoretical inquiry. It is difficult to detect profound changes in the nature of most quantitative research. The new theoretical orientations apparently were difficult to use in quantitative research. Perhaps quantitative research is also less useful for the development of this type of scholarship.

There are important exceptions. In two areas of sociology the new theoretical orientations are visible in quantitative research. They are social stratification and political sociology, especially political economy. Marxist and related theoretical orientations have had an important influence in these areas. Especially noteworthy is the importance of Marxist and Weberian ideas in quantitative stratification research. Two scholars have set especially influential examples for other researchers. One is John Goldthorpe with his investigations of social mobility and class structure. The other is Erik Wright using class analysis in the study of socioeconomic attainment processes. The purpose of this article is to discuss critically these and related efforts to make class a central concept in quantitative stratification research.[1]

I ask the question: has class analysis increased our understanding of mobility and income attainment processes? To avoid misunderstandings, it is useful first to clarify this question and the purposes of the following discussion.

First, I am not asking if Goldthorpe and Wright have contributed to our understanding of stratification processes. This is not an issue. Wright and Goldthorpe clearly have made important contributions, and inspired others.[2] They have not only contributed important research findings, they have also made an important contribution of service to the discipline. Their research shows how classical sociological theory may inspire quantitative analysis. Quantitative stratification researchers have been accused of being mindless and inspired by functionalist theory. The uses of classical theory by Goldthorpe and Wright defend against such accusations. However, one may wonder if the use of classical theory did more than legitimize good research, i.e. whether or not the theory is in fact relevant for the processes studied.

Goldthorpe and Wright observe associations between class position and social mobility or income attainment. They explain these associations by properties of the class concept. They argue that class analysis, or a class perspective, is important for our understanding of these processes. There is no doubt that these associations exist. Nevertheless, it is possible that these associations can be explained without making use of properties of the class concept, or class analysis. Class analysis is a useful tool when it results in new insights about mobility and attainment processes. Class analysis is less useful if it produces some, but not all of the insights provided by other theory, and/or if it inspires less fruitful questions and research procedures. This notion of usefulness is my concern, not whether or not Goldthorpe and Wright have advanced stratification research. They have certainly done so, even if their use of class analysis, in fact, is not the main reason for the advance.

Second, an obvious objection to discussing Goldthorpe and Wright together is that their uses of the class concept are very different. The work of Goldthorpe that concerns me here is the analysis of social mobility seen as a part of an analysis of the formation of classes. Class is here the 'dependent' variable. The use of the class concept, by Wright, of interest here is the use of class analysis to explain inequality. Class is here the independent variable. There may be one answer to the question of whether or not social mobility analysis is useful for the analysis of class formation, and a different answer to the question of whether or not class explains individual differences in income and other social rewards.

My main interest is in the latter question. It is nevertheless of interest to include Goldthorpe and associates' focus on class as the dependent variable. I will argue that Goldthorpe's analysis of class formation assumes that class causes inequality. The two major uses of class in recent stratification research are indeed linked.

Finally, one could certainly also object that the class concepts, used by Goldthorpe and Wright, are so different that it hardly makes sense to discuss them together, let alone link their efforts. Goldthorpe is usually said to have a 'Weberian' concept of class (or perhaps even a 'Neo-Weberian' concept). Wright is labelled a structuralist neo-Marxist. The two class concepts result in very different class categories. Therefore, the concepts should and do produce quite different empirical results.

Nevertheless, recent formulations suggest that the theoretical underpinnings of the two concepts are not very different. Wright has abandoned his original concept. He replaced it with a concept very much inspired by the class concept and associated theory of exploitation developed by John Roemer (1982). This change apparently made little or no difference to his theory of income inequality. The Roemer inspired concept is a Weberian concept of class. It defines class by the possession of alienable or inalienable assets.[3]

The empirical class categories of Wright and Goldthorpe remain different. However, these differences do not affect the arguments developed here.

There are important elements common to all the uses of the class concept in quantitative mobility and attainment research. The common elements are important enough to suggest a common concept of class in recent stratification research. I will assume them when evaluating the uses of class in this research. They are:

(a) Classes are sets of structural positions. Social relationships within markets, especially within labor markets, and within firms define these positions. Class positions exist independently of individual occupants of these positions. They are 'empty places' (Simmel 1908).[4]

(b) Class locations are associated with specific interests. The interests of different classes are antagonistic. Class locations may determine the consciousness of incumbents in a manner that mirrors these interests. Consciousness in turn may translate into action. Since class interests are antagonistic, the action is struggle. This struggle may produce a change in class relations that are changes in social structure or social change. In this manner, class is a source of social change endogenous to social structure. Class analysis may therefore produce a theory of history.

(c) Classes do not form a simple vertical hierarchy that can be described by a continuous variable, such as social status.

The description here of property (b) represents the Weberian formulation. The Marxist formulation obtains by replacing 'may' with 'will' in the account of the development of revolutionary class consciousness.

This list leaves out a number of elements that are essential elements of class analysis for some. Most importantly, perhaps, the list omits the notion of exploitation. I define exploitation as a process of appropriation that results in the disadvantage of one class being caused by the advantage of another. Processes of exploitation are essential to Wright's class concept and empirical analysis. The class analysis by Goldthorpe does not mention exploitation. I will show that the concept does become relevant also for Goldthorpe's analysis. This analysis assumes a class theory of inequality that would seem to need an exploitation concept at its basis. However, at the outset, the emphasis on exploitation is specific to Wright.

I will first discuss Goldthorpe's use of class as the 'dependent' variable in investigations of social mobility. Then I will argue the link between this use and class analysis of processes generating inequality. This sets the stage for the discussion of the exploitation based theories of inequality developed by Roemer and Wright.

2. Class and social mobility

Goldthorpe (1984) distinguishes between two perspectives on social mobility. One is the perspective of class analysis. Here the study of social mobility is seen as an important tool for the analysis of the formation of classes. The other perspective uses social mobility to measure inequality of opportunity in society. The former perspective, of course, uses social classes as the entities among which movement occurs. The equality of opportunity perspective tends to group positions according to social status. Goldthorpe shows that the two perspectives go back to Karl Marx and John Stuart Mill. According to Goldthorpe, European stratification researchers favor the class analysis perspective. He lists the German sociologist Theodor Geiger (who also worked in Denmark and Sweden) as the pioneer.[5] The equal opportunity perspective is said to be associated with American sociology.[6] It ultimately produced status attainment research (Blau & Duncan 1967).

The rationale for the class formation perspective on social mobility relies on a simple theory of collective action with three parts. The first part of the theory is the proposition that people are more likely to join in collective action, the longer they associate and the more alike they are. The second part is the proposition that people are more likely to join in collective action when they share common interests. The third part proposes that joining in collective action is a multistage process. First, actors become aware of their situation. Then they realize their interests. In turn, they realize what can be done to improve their situation. Finally, they do something about it. In short, people sharing common interests and being alike in other important respects will form a class, if they stay together. In the language of class analysis, this multistage process is called the formation of class consciousness and the creation of classes as collective actors.[7]

This theory makes social mobility relevant for class action in two ways. Quite obviously, mobility determines who gets into a class and how long they stay there. Thus, mobility governs the composition of different classes. The second manner in which mobility becomes relevant is less obvious. Mobility is relevant also for the formation of class interests according to Goldthorpe.

Consider first the idea that mobility determines the composition of classes. This idea implies a focus on the stability of class occupancy and on recruitment patterns. Stability and recruitment are measured by the actual percentages remaining and joining different classes. Goldthorpe calls them the 'absolute rates' of mobility. These rates determine the 'demographic identity' of classes.

This approach to studying the relation between mobility and class formation poses two important questions: (a) how does one best measure mobility? And (b) how does one best identify the classes that form the categories in the mobility table?

The concern behind the first question is how best to measure the demographic identity of classes, that is, the homogeneity and stability of class membership. A major issue is the choice between intergenerational and intragenerational or career mobility. Goldthorpe analyzes both. He concentrates on the analysis of intergenerational mobility, as do most mobility researchers. The intergenerational rate of mobility is a favorite indicator of equality of opportunity. This is presumably not the reason for focusing on father–son mobility in class analysis.

The reasons for the concentration on father–son mobility are not obvious. It is doubtful that the demographic identity of classes reflects processes of intergenerational mobility. Mayer & Carroll (1987) demonstrate considerable intragenerational mobility among classes (using the Goldthorpe class scheme). The intergenerational rate does not give a very good measure of amount of time spent together by a set of persons in a given class.[8] Perhaps the intergenerational mobility experience is believed to be more salient for class formation than intragenerational mobility. Direct evidence about this is lacking.

The second problem is how best to define the classes that form the entries in the mobility table. One solution to this problem would be to define classes as groupings constructed to minimize the amount of mobility between groupings. This solution seems to follow in a straightforward manner from the logic of using mobility analysis to study class formation. The definition identifies social classes as mobility classes. This is the original Weberian meaning of social class (Weber 1968).[9] However, Goldthorpe explicitly rejects this approach to the construction of class categories (Goldthorpe 1984:23).

Goldthorpe rejects the mobility class approach because it fails to produce class categories differing in advantages and opportunities for advantages. The class formation perspective assumes that classes generate interests in preserving and improving advantage. Mobility classes are not necessarily associated with advantage. They are, therefore, not useful categories for analysis of class formation.[10]

Instead of relying on mobility patterns, Goldthorpe (1987) uses market relations and employment relations to define classes. These relations are seen as characteristic of occupations. The derivation of the scheme is not elaborately described. It results in an appealing scheme with high face validity if the criterion is social homogeneity.[11] In the tradition of Geiger (1951) and Carlsson (1958), the homogeneity is a type of multidimensional homogeneity. Class positions are similarly ranked along several dimensions of inequality. Foremost among these dimensions are authority, income, and status (Goldthorpe 1987:40).

While the criterion of homogeneity may be satisfied, this is not what Goldthorpe would argue should be the main criterion for the validity of the scheme. That should be the chance that the categories may create classes that are collective actors. Goldthorpe proceeds to argue that the patterns of relative rates of mobility associated with the class scheme will inform about formation of classes. Therefore, the analysis of these rates, using log-linear statistical models, occupies the major part of *Social Mobility and Class Structure in Modern Britain*. The analysis of relative rates also occupies the impressive studies of mobility regimes in different countries conducted by Robert Erikson and John Goldthorpe (e.g. Erikson & Goldthorpe 1985, 1987). This work represents a sophisticated and unusually informative use of statistical models of mobility. However, the task here is not to evaluate the statistical analysis. It is to explicate the logic that links relative rates of mobility to class formation.

The relative mobility rates measure the chances of moving to a certain destination, from a particular origin, relative to the chances of moving to this destination from some other origin. Goldthorpe argues that these relative rates measure propensities to move that are relevant for class formation. Mobility propensities, as measured by relative rates, reflect and determine class interests.

The link between relative mobility rates and interests obtains because the mobility propensities reflect: 'the relative desirability of different classes, in terms of the range of rewards available to their incumbents; but also the relative advantages they offer – in economic, cultural and social resources – when considered as origins, and likewise the relative barriers to access . . . when considered as destinations' (Goldthorpe 1984:22). Relative rates reflect the distribution of rewards by class as well as opportunities for access to these advantages. For example, Goldthorpe elsewhere cites Michels: 'the certainty of being condemned to hired labor throughout natural life is one of the most important causes that lead to the rise of anticapitalist movements in the modern masses' (Michels 1965, cited in Goldthorpe 1987:10).

This link between class interests and relative rates of mobility is then the second of the two main ways in which mobility is relevant for class formation. Relative rates express what incumbents of classes will be upset about. Absolute rates govern the homogeneity and stability of class membership. Therefore, they govern the potential for class action realizing these interests.

The relevance of absolute mobility rates for class formation is easy to understand. It is less obvious how relative rates come to be associated with class interests and class formation. It is instructive to try to clarify the idea. Class interests express the need to preserve or improve the privilege or long-term value of being an incumbent of a given class. Denote by v_i the value of being a member of class i. The need to improve or maintain the v_i associated with a position determines class interests. The value of being in a certain class depends on the rewards obtained in that class and on the opportunities for moving to other classes with their rewards. This idea may be expressed as:

$$v_i = \sum_j r_{ij} y_j \qquad (1)$$

Here the r_{ij} would measure the propensity to move from i to j.

The logic of Goldthorpe's class formation perspective suggests that the criterion for the development of a class scheme should be the formation of a set of categories giving distinct values of v_i. The values of v_i have two components. One is the association between class and positional rewards. The other is the opportunities for access to these rewards. Goldthorpe suggests that relative rates of mobility[12] reflect both of these quantities.

Consider first the positional rewards. The rewards associated with a position are in (1) measured by y_j. This would be a multi-dimensional quantity reflecting income, status, authority and the like. A measure of the 'goodness' of a position (Goldthorpe & Hope 1974) would seem useful. This suggests that the analysis of the relation between class and privilege should employ some version of a vertical status scheme. It is quite clear that the class scheme proposed by Goldthorpe forms categories that indeed are homogeneous in terms of measures of y_j, at least in the cross-section.[13] However, the creation of a vertical scheme based on the association between class and rewards would not capture the fact that some of the variation in v_i is due to variation in r_{ij}.

The relevance of the r_{ij}'s for class interests reflects that classes having the same level of rewards, y_j, differ in opportunities for access to the rewards provided by other classes. The opportunity structure in this manner introduces a non-vertical dimension into the class scheme. The idea can be generalized to incorporate the notion that different types of productive assets provide different means of access to rewards. This reasoning would justify the classic Marxist scheme of classes characterized by types of property (industrial capital versus land).[14] The resulting class scheme incorporates the class interests that occupied Marx's empirical work, e.g. in the *18th Brumaire*.

In a class scheme that identifies class specific interests all the variation in v_i

should be between classes and not within classes. This implies that the scheme should be derived from a theory of how class causes variation in y_i and/or r_{ij}. A theory of how class causes unequal opportunities is of less interest than a theory of how class causes positional rewards. There is a simple reason for this. If class is unrelated to inequality, differential mobility propensities are irrelevant for class formation. Unequal access to equal positions upsets nobody.

The class formation project thus needs a class scheme derived from a theory of how class causes the variation in positional rewards. It is important to emphasize that there must be a causal relationship between class and rewards for class interests and classes to form. Goldthorpe's scheme apparently produces a set of quite homogeneous categories in terms of privilege. However, the mere association between class and rewards is not sufficient. Class interests presumably lead to the formation of classes that might overthrow the existing class structure. They do so to change the distribution of advantage. If class does not cause inequality, the revolutionary efforts will be for naught. Only if class causes privilege will changing the class structure by necessity change the distribution of rewards.

The class formation project therefore assumes the causal relationship between class and inequality. This does not mean that the theory accounting for the relationship has been discovered. The development of such a theory is an ambitious project. The multidimensional conception of advantage, measured by y_j, is one difficulty. There exist measures of the overall goodness of positions or their socioeconomic status. However, there are few theories in the sociological literature to explain variation in status. The main one is Davis and Moore's functionalist theory (1945). This would be an unusual candidate for a theory to justify a project on class formation.

There is a better theoretical foundation for explanations of what causes variation in income, or in its components such as wages and earnings. A satisfactory theory of how class causes differences in income would be a very significant part of a theory of how class causes advantage in general. In fact, a theory of income could also explain variation in other rewards if one accepts Adam Smith's principle of compensating differentials. The desired theory of income must be a 'positional' theory. The theory should be consistent with the idea that classes are empty places. These places have properties, including income advantage or disadvantage, that exist independently of the characteristics of persons.

In sum, the study of social mobility from the perspective of class formation is interesting only if the formation of classes has something to do with mobility. Goldthorpe argues that both absolute and relative rates of mobility are relevant for the formation of classes. The relevance of relative rates comes about because these rates reflect the value of classes to incumbents and hence their class interests. However, Goldthorpe has not presented a theory showing how class causes differences in income and/or other job rewards. His class scheme is not based on an explicitly formulated theory of inequality. Therefore, Goldthorpe's class scheme lacks the ultimate justification for the class formation project. This justification would be a demonstration of how changing the class structure changes the distribution of privilege.

Wright has developed, not one, but two such theories of how class determines income. He does not use the same class scheme as Goldthorpe. However, the core elements of the class concept are quite similar, as shown above. Should one of Wright's theories work, it might be possible to justify Goldthorpe's scheme using that theory. Wright's theories will be considered next.

3. Class and income

Some will find it strange to raise the question of what is a good theory of the relation between class and income and other advantages. To many Marxists, the core of Marxist theory is the idea that processes of exploitation create advantage for one class based on the disadvantage of another. There would seem to be no need to reinvent a theory of the relation between class and inequality, in particular income inequality. However, matters are not so simple. The idea of exploitation found in Marxist theory is not one that lends itself easily to the explanation of all income differences in society. The basis for the classic Marxist concept of exploitation is the labor theory of value. This is a theory abandoned by modern economics, including Marxist economics.

Before discussing the specific proposals for a theory of class differences in income, it is useful to note the requirements I will make of such a theory. There are three main ones:

> (1) The theory should be one that explains income differences by properties of social classes defined by relationships of dominance and/or exploitation. A theory is not a genuine class theory if it explains class differences in income by variables, such as occupation, for which class may be a proxy. Nor is a theory a genuine class theory when it explains inequality by attributes of people who happen to occupy certain classes in society.
>
> (2) The theory should attribute income differences to characteristics of positions as empty places. This does not mean that all income differences can be explained by class. However, the theory should show how income differences, caused by class, obtain independently of the personal characteristics of individuals occupying class positions at a moment in time. This requirement logically follows from the idea of class as empty places. It is also needed to achieve the ultimate objective of class analysis, that is, to explain social change by the action of classes. This presupposes that class interests are homogeneous within classes. If this is not so, classes will fragment along lines defined by the personal characteristics.[15]
>
> (3) The theory should be empirically testable. It should provide empirical predictions involving variables that are measurable. Further, it should be possible to differentiate empirically class theory from alternative theory. A class theory that is indistinguishable from some other theory of course still could be useful. As noted above, usefulness here is seen as a matter of the number and variety of predictions a theory generates.

The particular class scheme one chooses is of obvious relevance for a theory ability to satisfy these requirements. There are, of course, two major classes in Marxist theory, the capitalist and the proletariat. Capitalists own means of production, while the proletariat only owns its labor power. It is not difficult to argue that the capitalist in general will be better off than the proletarian. The property owned by the capitalist will produce income. This income will not be available to the proletarian. This difference in income can be explained by the classic Marxist theory of exploitation. The labor theory of value is perhaps too shaky for a satisfactory explanation in terms of the classic concept of exploitation. However, the concept of exploitation proposed by Roemer (1982) meets a number of the standard objections to the labor theory of value. Hence, the first requirement is satisfied with a two-class scheme defined by ownership of property.

The income advantage of the capitalist class over the proletariat presumably exists regardless of the particular characteristics of incumbents of these two classes. Hence, the second requirement is satisfied.

There are certainly other theories than exploitation theory explaining income differences between capitalists and workers. However, Marxists can argue that certain class conflicts (for example the Paris Commune) demonstrate implications of class theory not obtainable from other theory. Hence, the third requirement is satisfied.[16]

A class theory of income differences between owners of capital and others does not pose a major problem for the requirements listed above. However, the class schemes of both Goldthorpe and Wright include several more classes than the two major classes of Marxist theory. The challenge to class analysis is to develop a theory for income differences among propertyless classes. In other words, class analysis should be able to explain the inequality generated within the labor market.

Wright has responded to this challenge. Before discussing this response, it is important to note that the challenge exists only if one believes there is a need for a class theory of inequality within the labor market. It is by no means obvious to a reader of Marx that there is a need for such theory.

Marx saw the essence of capitalist society in the treatment of labor as a commodity, purchased and sold on the market in the manner of other commodities. Consequently, labor is priced according to principles governing prices of ordinary commodities. Labor markets are like other markets. There is, of course, a well developed theory of how wage rates are determined in such a labor market. It is the theory of neoclassical or orthodox labor economics. Such a theory was not available to Marx. Marginalism had not yet been invented. Further, the question of how different prices of labor are created in the labor market seems to have had little interest for him. Thus, we find nowhere in Marx an analysis of wage inequalities similar to the analysis presented by John Stuart Mill. There is, however, nothing that, in my opinion, suggests that Marx would not have accepted the now standard theory about this. In particular, Marx's analysis of the dynamics of capitalist society predicts the development of a labor market satisfying the assumptions made in neoclassical labor economics. As Roemer puts it: 'The neoclassical model of the competitive economy is not a bad place for Marxists to start their study of idealized capitalism' (Roemer 1988:196).

This view of Marx's own 'theory' of the labor market of course implies that Marxist theory will be the same as neoclassical theory about income differences among the employed. Systematic differences in wages among people then reflect differences in their productivity. Some of these productivity differences are due to unique talents and abilities, others are due to differences in human capital.

Requirement (3) suggests there is a need for a special class theory of inequality in the labor market only when class theory produces insights ignored by other theory. Wright argues for such a special class theory.

Wright identifies a set of intermediary classes between the two major classes. He further provides a set of reasons for why income attainment processes are different in these classes. This is more than a descriptive account of what explains variance in income, as is the tradition in most sociological research on income attainment. Wright uses the logic of class analysis to explain income inequality also among propertyless classes. The theory is widely accepted among sociologists studying labor market processes. The theory is often seen as a partial explanation for inequality generated in the labor market explaining some of the variance in wages or earnings. An account of this 'multivariate structuralist' perspective, where class is one of several explanatory variables, is provided by Kalleberg & Berg (1987).[17] However, the reasons given why class matters are the same whether the perspective is univariate or multivariate. Wright (1985) abandons the first formulation of the income attainment theory and the associated class scheme. It is, nevertheless, useful to consider the theory in some detail. The scheme remains very popular in stratification research.

3.1. Class as internal labor market structure

The class scheme developed by Wright (1979) results from a cross-classification of relationships of ownership, dominance, and employment status.[18] This produces the two major classes (capitalist and workers) and a set of so-called 'contradictory class locations'. Some class categories are property classes (capitalists, petit bourgeoisie, small employers), and I shall not deal with them further. Within the labor market, the dimension defining classes is relations of authority. With authority as the dimension, Wright identifies four class categories: managers, supervisors, semiautonomous employees and workers. Managers and supervisors are class locations defined by the presence of more or less authority. Semiautonomous employees are class locations for those not subject to any authority. In research employing class categories[19] (e.g. Kalleberg & Griffin 1980), semiautonomous employees are often ignored.

The incomes of the four classes are now argued to differ both with respect to level of income and with respect to the income returns on education. Managers have higher incomes than workers. Education has a greater effect on their income than on workers' income. The reason argued is the creation of promotion schemes as incentives for managers to work hard and be loyal. Wright sees these incentives as reflecting the need for social control by capitalists. The idea is elaborated by Edwards (1979) as 'bureaucratic control'. The same basic mechanisms are argued to be behind the income advantage accruing to supervisors. For semiautonomous employees the need to exercise social control again leads to the granting of higher wages in order to ensure loyalty to the firm.

Formally, the theory can be expressed as:

$$Y_1 = \sum_i \alpha_i X_{li} + \sum_j \beta_j C_{lj} + \sum_{ij} \delta_{ij} X_{li} C_{lj} \quad (2)$$

Here Y_1 is the income of individual l; X_{li} measures individual level variable i for individual l; C_{lj} is a vector with element 1 if individual l is in class j and zero otherwise; finally, $\sum_{ij} \delta_{ij} X_{lj} C_{lj}$ gives the contribution of a set of interaction terms between class position and individual characteristics. This expression corresponds to the regression equations estimated by Wright & Perrone (1977), Wright (1979), and by others in research on these matters.

It is immediately apparent that this theory violates the second requirement of a satisfactory class theory of income. The income advantage, or disadvantage, a person obtains from occupying a certain class is not obtained independently of the characteristic of the person. The theory proposes that income is a function of individual characteristics in two ways. The first and additive contribution ($\Sigma_i \alpha_i X_{lj}$) might be considered acceptable. It may not be important for class interests that there is income variation within a class, provided there is an additional disadvantage or advantage common to all members of the class. Some type of reference group argument may justify such a claim. However, this does not save the theory. The interaction terms, $\Sigma_{ij} \delta_{ij} X_{lj} C_{lj}$, are a very important part of the theory. In fact, Wright devotes much effort to show that these interaction terms indeed exist. The interaction terms mean that the advantage or disadvantage of being in a certain class depends on characteristics of the person, such as his education. There is, therefore, no advantage, or disadvantage, common to all members of a class. Class interests consequently are fragmented in a systematic pattern. The fragmentation follows the distribution of individual characteristics, such as education, within classes.

The claim here is not that a class theory of income should be a complete theory. It is not a violation of our requirements to allow for other sources of variation in income. However, it should be the case that the class effect on income is the same for all incumbents of a class. When the class effect depends on whom it acts on, a change in the distribution of education would change the distribution of class interests. This would be a clear violation of the empty places concept.

One part of the theory does not clearly violate the second requirement. It is the argument for an income advantage to those in semiautonomous class positions. Wright's argument is, de facto, a version of an efficiency wage argument – you pay workers above the market wage in order to increase loyality and effort. One explanation for this is that the payment of the higher wage is a type of gift exchange arrangement (Akerlof 1981). Workers give the gift of working harder in return for the firm's gift of higher wages. This appears to be the same idea as Wright's loyalty argument. Akerlof's argument is based on evidence provided by a study by Homans (1954). Homans further shows that such an arrangement reduces the amount of variance in wage due to individual characteristics. This implies that semiautonomous employees will have more homogeneous interests than the working class. Thus, a plausible case might be made that the class of semiautonomous employees will have distinct class interests satisfying requirement (2).

There are, however, two problems with such an attempt to maintain part of Wright's class theory of income attainment. First, Wright in later work (1985) unequivocally rejects the use of this class category. He argues, inter alia, that the category is too heterogeneous (it includes professors as well as janitors).[20] Second, the 'loyalty wage' argument does not satisfy the third requirement. It is not possible to differentiate empirically the class theory from the alternative theory. The hypotheses about the classes defined by authority also present this problem. I shall now elaborate this point further.

Wright's (1979) argument for class differences in income among the propertyless classes is identical to arguments found in the non-Marxist economic and sociological literature. Wright's loyalty argument can be derived from efficiency wage theory.[21] It is a major part of economic internal labor market theory (e.g. Williamson 1975) that promotion schemes create incentives. This is also an important idea in the organizational literature in sociology (Stinchcombe 1974). These ideas differ from a narrow and orthodox version of neoclassical economic theory. This theory suggests that because authority and autonomy presumably are desirable attributes of jobs, those with authority or autonomy receive lower wages. This follows from the principles of compensating differentials. While Wright's hypotheses are different from those derived from orthodox neoclassical economic wage theory, they are identical to those derived from neo-institutional, organizational, or in fact recent neoclassical literature (e.g. Lazear & Rosen, 1981). These theories are about the mechanisms of the wage determination process in employment relationships that do not conform to the assumptions of neoclassical theory. There are numerous arguments for why such employment relations are not necessarily inefficient. In fact, they may be more efficient, in certain technical and organizational settings, than the short period contracting relationship assumed in neoclassical theory.

The question is if it is possible to propose a test that would differentiate class theory about efficiency wages and internal labor market structures from other theory. Class theory would rely on the idea that internal labor market structures are designed to exercise social control. Capitalists presumably want social control to extract the most productivity from the worker. This, of course, is no different from being efficient in non-Marxist accounts of the same processes. However, one could include in social control the ability to prevent collective action by the workers. This concern might have different consequences than the maximization of efficiency. Marxists may argue that Capital is willing to sacrifice efficiency to prevent collective action. Such a functionalist argument has never been developed fully (though the historical account by Edwards (1979) has many elements). A rigorous empirical test is not available and would be difficult to design. The test should demonstrate that some supra concern for the preservation of the capitalist system leads to the formation of efficiency wage systems and internal labor markets. This should occur even when it is inefficient for individual firms to do so. The difficulties with the test mean that the third requirement listed above probably is not satisfied.

Wright's first class theory of income attainment is an original and good efficiency and internal labor market theory. However, it is difficult to maintain that it is a theory relying on properties of classes. There is nothing in the first formulation that suggests how relations of exploitation and/or dominance bring about efficiency wages and internal labor market structures. The theory also violates the empty place idea. Finally, the theory does not have empirical implication different from theories not derived from class analysis. These are not the reasons Wright (1985) himself gives for rejecting the first theory, but he does reformulate the theory. The reformulation does not suggest interactions between individual characteristics and class position. It relies on a much more explicit idea of exploitation, a genuine Marxist idea. Thus, one might expect that the reformulated theory satisfies the requirements stated above.

3.2. Class as possession of productive assets

Wright (1979) states that classes are based on relationships of exploitation. Nevertheless, he is not explicit about what constitutes exploitation in his first formulation. A formulation of the exploitation concept became available in Roemer (1982). This formulation had a profound impact on Wright's class conception. In formulating the revised concept. Wright is much less concerned about income attainment than in the first formulation. In fact, almost nothing is said specifically about income. However, this should matter little to a Marxist for whom class presumably is an all purpose concept. Income attainment is, indeed, used to validate the revised concept.

Roemer's (1982) reformulation of the exploitation idea represents a sophisticated use of the mathematical tools of modern economic theory. The qualitative results of this effort are quite simple and persuasive. Inequality in productive assets will produce exploitation. By exploitation is meant that the welfare of one actor (measured, for example, by the number of hours needed to reproduce oneself) depends on the welfare of other actors. Defining classes by absence and presence of property, and by amount of property, produces a class scheme that correlates perfectly with the amount of exploitation. The relationships among class, inequality and exploitation are developed in a persuasive manner in Roemer's theory. However, in most of the theory the focus is on classes defined by ownership of property or alienable productive assets. This is not very useful for the development of a class theory of income differences among the propertyless classes. Roemer does make two proposals for types of exploitation and hence class categories that do not involve physical property. One is called skill exploitation, the other status exploitation. Skill exploitation derives from inequality in productive skills. It is the type of exploitation dominant under socialism where inequality in alien able assets has disappeared. Status exploitation, according to Roemer, derives from inequalities created to produce incentives for effort. It is an important type of exploitation in bureaucratic state-socialist regimes and in internal labor markets. Both types of exploitation become prominent in Wright's revised theory (1985). However, Wright completely changes the concept of status exploitation by removing the incentive reason for this type of exploitation.

The revised theory proposes a class scheme obtained by cross-classifying relationships of exploitation. There are three types of exploitation. Exploitation based on property, or alienable productive assets; exploitation based on skills, or inalienable productive assets; and, exploitation based on authority, or what Wright calls organizational assets (that has replaced Roemer's notion of status exploitation). This class scheme is then validated by showing that it accounts for income variation in the expected manner, i.e. the coefficients to class categories in equation (3) have the expected signs.

$$Y_1 = \sum_j \beta_j C_{lj} \tag{3}$$

This is, of course, a much simpler theory than equation (2). It might seem to satisfy requirements (1) and (2). Indeed, it could be a very powerful theory of inequality in society. Unfortunately, it is problematic to define class categories by skill assets and organizational assets. Using skills to define class creates a serious problem of how to avoid violating the fundamental property of classes being empty places. The procedure also has other problems. Further, it is difficult to understand why authority is related to income when the incentive rationale of Wright's first formulation is removed. I shall first consider the problem of skills.

Roemer's discussion of skill exploitation is not nearly as elaborate as his treatment of exploitation with respect to alienable property. In particular, he does not present a precise definition of skills. In one place he seems to refer to any type of endowment that leads to unequal productivity (1982:111); in another he explicitly states 'let us treat skills as embodied and innate' (1982:24). Personal endowments relevant for productivity have two components: skills obtained through training and innate abilities. The two components have very different consequences for inequality.

In the perfectly competitive economy assumed by Roemer, the returns on skills obtained through training will equalize costs of training, including foregone earnings. This is a standard result of human capital theory (e.g. Becker 1964). In competitive equilibrium, life-time earnings for people with different amounts of skills will be equal, though there will be inequality by skills in the cross-section. It is the life chances or the life-time earnings that should matter for class interests. Hence, returns on skills obtained through training do not result from exploitation. The wage premiums caused by innate abilities (or inadequately supplied training in an imperfect economy) do correspond to rents paid on alienable assets. They, therefore, represent exploitation in the conceptualization of Roemer. Empirically, it is very difficult to distinguish the two components. In any event, both abilities and skills obtained by training are properties of people, that is why they are called inalienable assets. They cannot form class categories that are empty places.

Wright (1985) is aware of the problem of the two components of skills, but his operationalization of the skill dimension of class does not distinguish between the two components. The income differences observed along the skill dimension, therefore, cannot be attributed to rents alone. Wright argues a bit vaguely that skill assets should be seen as credentials needed in a position. This might resurrect the empty place idea. However, in the operationalization of the class concept, he does end up using education as a measure of skill assets. Education is of course the favorite measure of skill in human capital theory that argues for the equalizing returns to skills. It would not have helped to obtain a measure of skills required in a position. The income returns to training to meet these skill requirements would still be equalizing. Only requirements that are rent generating would satisfy the exploitation argument. One may claim it should be possible, in principle, to identify rent generating requirements of position. In practice, it would seem impossible. The exception may be certain positions such as wide receivers or solo flutists where performance is highly dependent on innate abilities.

Coefficients to classes in equation (3), formed by skill assets, presumably only confirm that education is relevant for income. However, this does not prove any exploitation theory or even suggests its plausibility. Wright could argue that he does not accept human capital theory. He would then refute the basic assumptions about the economy employed by Roemer in deriving the reformulated exploitation concept.

Roemer's second type of exploitation, in the absence of private ownership of alienable assets, is status exploitation. Some positions are given a higher wage than others. All compete, in one period, for access to the high wage position in the next period. This is inequality created as an incentive for higher effort. Everybody will work harder either to gain (if they have the low wage) or to keep the higher wage (if they already have it). This is a tournament theory of promotions, not unlike Wright's earlier argument for income returns to authority. However, now Wright rejects the idea. He claims that status is not a productive asset, ignoring that status is not the asset, the incentive is the asset.[22] Wright argues instead that the productive asset is the organization of production in a firm. It is certainly a correct and important observation that organization is an important productive asset. From this Wright deducts that authority should be a measure of the organizational asset. This is not convincing. Those in authority in an organization do not 'own' the organization of production,[23] they execute it. It is difficult, without the incentive argument, to formulate a convincing argument for why those who execute an organization of production should have higher wages than those who produce. Wright does not try. Is it because they have access to petty cash? Wright suggests that the absence of exploitation according to organizational asset would be participatory democracy. Participatory democracy could presumably exist without important changes in the organization of production. It is not clear why there necessarily would be less inequality of income by level of authority in an organization run by employees. These employees would likely decide to rotate managerial positions. Then everybody would profit from having lots of inequality.

In sum, neither exploitation by skill assets, nor exploitation by organizational assets, seems to result in an empirically testable theory of class based inequality within the labor market. The status exploitation idea, though rejected by Wright, might suggest a class theory of income inequality where inequality is created by exploitation based on something other than ownership. This is not likely to be the case, however. First, the incentive theory would encounter the same problem as Wright's earlier theory of classes as internal labor markets. Second, Roemer (1982) shows that exploitation based on status is 'socially necessary' – everybody would be worse off in the absence of this type of exploitation. This is a somewhat paradoxical idea of exploitation. Roemer, in later work, considers several similar problems with the concept of exploitation (1988). His conclusion is 'exploitation theory is a domicile we need no longer maintain: it has provided a home for a vigorous family, who now must move on' (Roemer 1988:262). This is, perhaps, also the epitaph for the attempt to formulate a class theory of income inequality created in the labor market.

4. Conclusion

The two main uses of the concept of class in recent stratification research are Goldthorpe's analysis of mobility from a class formation perspective and Wright's analysis of income inequality generated in the labor market. The main problem with both efforts is that a satisfactory theory of how class generates inequality within the labor market is not available. This may be argued to be irrelevant for the class formation project of research on social mobility. However, I have tried to show that the logic of Goldthorpe's argument assumes that class causes income inequality producing the formation of class specific interests around which classes as collective actors may be formed.

It is not clear that Marxist theory needs a class analytic theory of how inequality is generated in the labor market. The standard economic theory seems consistent with Marx's own conception of the capitalist economy. In any event, the attempts by Wright to formulate non-economic class theories first produced a useful theory about internal labor markets that does not satisfy the requirements of a class theory, and then a theory based on a notion of exploitation that is unsatisfactory.

This negative conclusion does not mean that every element in the uses of the class concept to explain inequality in the labor market should be abandoned. It is a very important idea that positions, independently of the characteristics of the people occupying these positions, are relevant for observed inequality in certain labor market structures. Only, the relevance of positions for inequality comes about through an interaction between individual characteristics and attributes of positions. Such interactions fragment potential class interests formed on the basis of advantage and disadvantage in the labor markets. In general, one does not need to identify positions as classes or in some other manner use class analysis to make use of the idea that positions are relevant.

Further, the general idea of linking interests and inequality is an idea of major importance for the sociological study of inequality. Perhaps, it should be the idea differentiating sociological from economic research on labor markets and inequality. This would move sociological stratification research away from the exclusive concern for individual level processes. However, the idea of a link between positions and interests does not necessarily imply a class formation perspective. It seems impossible to maintain this perspective when positions are elements in labor market structures.

The lack of a persuasive class theory of inequality generated within the labor markets removes the rationale for the class formation perspective on social mobility research, at least when mobility involves class categories within the labor market. This, of course, does not mean that it may not be useful to employ, in social mobility research, occupational categories homogeneous in terms of major dimensions of inequality. The use of such categories, rather than a status ordering of positions, is obviously instructive; for example, showing the special role of the farm category in patterning mobility. The research of Geiger (1951), Carlsson (1958) and Goldthorpe (1987) richly supports the strategy. Of those three, it is only Goldthorpe who justifies the strategy by reference to class formation processes. In contrast, Geiger explicitly rejects that categories identified as homogeneous have something to do with class. Geiger's position is supported by the lack of a theory that would show how separate class interests are generated in the labor market.

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Notes

[1] The clear and thorough statements about both the development of the respective class concepts and the rationale for their uses by Goldthorpe and Wright greatly facilitate this task. The main references are Goldthorpe (1984, 1987/[1980]) and Wright (1979, 1985). For a recent additional contribution see Wright (1990). Representative examples of the research contributions on mobility are found in addition in Erikson, Goldthorpe & Portocarero (1983), Erikson & Goldthorpe (1985), and Erikson & Goldthorpe (1987); on income inequality in Wright, Costello, Hachen & Sprague (1982), and Ahrne & Wright (1983).

[2] See, for example, Kalleberg & Griffin (1980), Kalleberg, Wallace & Althauser (1981), Colbjørnsen (1986), Carroll & Mayer (1986), Mayer & Carroll (1987), Featherman, Selbee & Mayer (1989). All of these contributions rely on either Goldthorpe's or Wright's class scheme, though there are modifications.

[3] This, of course, does not mean that there are not important differences. Though his class concept might have become Weberian, Wright presumably remains a Marxist, that is, someone believing that Marxist theory is basically an effective and important tool for social analysis because its basic insights are correct; while Goldthorpe seems to be the quintessential skeptic in this regard (i.e. he is not a Marxist).

[4] Simmel uses the expression in a discussion of the organization of authority that apparently is not well known by the many who are fond of the empty places imagery (Wright credits the expression to the political scientist Adam Przeworski). Simmel's use of the expression is instructive: 'Arbeitsteilung aber steht überall in Wechselbeziehung mit der Objektivierung des Handelns und der Verhältnisse . . . Das Apriori der Beziehung sind jetzt nicht mehr die Menschen mit ihren Eigenschaften, aus denen der soziale Relation entsteht, sondern diese Relationen als objektive formen, "Stellungen", gleichsam leere Räume und Umrisse, die erst von Individuen "ausgefüllt" werden sollen' (Simmel 1908:236).

[5] Geiger (1951) is usually not listed as a contributor to the international mobility literature, though (or perhaps because) his study of mobility in a Danish city was published in German (in a Danish journal). Geiger's study evidently was an important inspiration for the Swedish sociologist Gösta Carlsson who conducted one of the main studies in what is now often called the 'first generation' of national mobility studies (Carlsson 1958). Like Goldthorpe, Carlsson makes a distinction between a continuous-variable social status approach and a discrete group approach that results in a system of non-hierarchical classes. Carlsson adopts the latter approach. His class scheme is very similar to Geiger's, though independently derived (Carlsson 1958:51). In fact, it is also similar to Goldthorpe's scheme. It should be noted that neither Geiger nor Carlsson are trying to develop an operationalization of a 'Marxist' or a 'Weberian' class concept relevant for the analysis of class formation. The objective is to develop an occupational classification that provides for 'social homogeneity', i.e. similar position on the most important stratification criteria ('multidimensional homogeneity'), cf. Carlsson 1958:51. In fact, Geiger does not employ the term class, but the term 'Gesellschaftsschichten', which may be translated as societal categories or social strata. It surely does not mean class: most of the German discussion about class versus status is formulated as a debate about Klasse versus Schicht.

[6] The US versus European classification is difficult to sustain, at least for the first generation of mobility studies: the best known early examples of the direct use of social status or prestige in mobility research are from the UK (Glass 1954) and from Denmark (Svalastoga 1959), while the pioneering mobility study in the US, by Rogoff (1953), does not employ a prestige measure. But, of course, the US versus European identification permits linking the traditions in mobility research to the celebrated shift in theoretical orientations in the late 1960s, and early 1970s – which many European sociologists saw as a liberation from American sociological domination.

[7] For an explicit description of the stages of development of class consciousness see, for example, Giddens (1973).

[8] See Sørensen (1986) for a critique of the analysis of intergenerational mobility tables. A discussion focusing specifically on Goldthorpe's contributions and positions is presented by Mayer (1990). Life course data provide the opportunities to directly measure the 'demographic identity' of classes as stability of class membership over real time (and not 'generations'), see Featherman, Selbee & Mayer (1989) for one approach to measuring the stability of class membership taking advantage of life history data.

[9] Class categories constructed from patterns of mobility have been developed by Breiger (1981), although he does not use the demographic identity of class categories as the criterion.

[10] As shown below, Goldthorpe's rejection of the mobility class approach is explicitly linked to his wish to justify the use of what he calls relative rates of mobility in the analysis of class formation. However, the wish to employ analysis of relative rates is in itself not a reason to reject the mobility class approach – Breiger (1981) also analyzes relative rates.

[11] Goldthorpe (1987) does not devote much attention to the issue of assessing the validity of his class scheme. He does present a table showing the distribution of votes in two General Elections in Britain that suggests that the class categories do create a distinct pattern of voting. This would have been a direct test of the class formations idea had Goldthorpe shown that changes in these class differentials in voting patterns are related to changes in rates of mobility. However, Goldthorpe does not perform such a direct test. Nor does he compare the voting differentials associated with other class schemes to those obtained by using his own scheme.

[12] It is not obvious why the relative rates are the best measures. The parameters of log-linear models provide measures of departure from statistical independence. This assumes that departure from statistical independence is what motivates people to feel deprived or advantaged. In fact, the absolute rates, measuring the actual probabilities for getting access, might be argued to be the most salient for feelings of deprivation or advantage. Whether parameters in log-linear mobility models or actual probabilities for access are most relevant for the formation of class interests is an empirical question that has not been addressed in current research on mobility tables.

[13] This does not necessarily imply that classes will form a vertical status scheme. Classes that differ in rewards in the cross-section may be part of career ladders and therefore at the same level in terms of overall life chances. There is some evidence for this in Goldthorpe's own analysis of intragenerational mobility patterns (1987). Categories that are involved in career ladders might be argued to form parts of the same class, since life chances presumably are what is relevant.

[14] Compare the famous opening paragraph of the incomplete chapter on classes in Vol. III of *The Capital* (Marx 1959:886) – 'wage labourers, capitalists and landlords constitute the three great social classes'.

[15] It may seem to be an unnecessary and too strong requirement to demand that a class theory of income inequality is consistent with class formation theory. It should be possible for sociology to come up with a theory of inequality that explains inequality by characteristics of position without explaining social change and history. However, such a theory would not be part of class analysis, in my opinion. The concept of class implies more than just position.

[16] The third requirement is not that the theory be true, but that it is possible to distinguish between the class theory and other theory.

[17] A 'multivariate structural' theory of income differences that includes class as one of the variables must fail to satisfy the requirements for a class theory of income listed above. A multivariate theory per definition means that several characteristics of the position a person occupies have effects on the income obtained, making it impossible that requirement (2) be satisfied.

[18] This method for developing a class scheme from the cross-classification relations of ownership, of dominance and of employment status is employed by Ossowski (1963) in his brilliant analysis of the Marxist class concept. He develops a scheme very similar to Wright's. The method also was employed, even earlier, by Bukharin (1925), again with a very similar result.

[19] The semi-autonomous employees did not figure in the first published analysis of class and income attainment by Wright & Perrone (1977) either.

[20] This is actually a rather strange reason for rejecting this category for it introduces a criterion 'occupational homogeneity' that has no rationale in the relationships otherwise employed by Wright in establishing class categories. Homogeneity is, of course, probably the most important 'class' criteria for Goldthorpe.

[21] Wright's ideas were important insights and in particular the 'loyalty wage' argument appeared in print before almost all of the economic literature on efficiency wages.

[22] A main problem for Wright is that status exploitation to him becomes the same as feudal exploitation because social status defines the bases for the exploiters. However, Roemer seems merely to state that status creates an empty place for someone to exploit from, not that it

becomes the means of exploitation. The incentive of promotion and exercising manorial rights are of course very different forms of exploitation.

[23] Wright (1985:80) agrees that managers do not 'own' organizational assets. He says they 'effectively control' them. However, this is not the issue. The issue is that authority does not measure the effectiveness of an organizational arrangement. It is the effectiveness that is the asset, not the single positions that form the organization.

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