

Part Two

Empirical Investigations

Empirically Adjudicating Contending Class Definitions

In this chapter we will attempt to adjudicate empirically between contending definitions within the Marxist theory of class. As I argued in chapter two, the problem of the 'middle class' has been at the centre of the contemporary rethinking of Marxist concepts of class structure. The empirical investigation in this chapter will therefore focus on the debates over the line of demarcation between the working class and 'middle-class' wage earners.¹ More specifically, I will propose a strategy for the empirical assessment of the relative merits of the approach to specifying the working class elaborated in chapter three and two important alternatives: the simple identification of the working class with manual wage-labor; and the more complex conceptualization of the working class proposed by Poulantzas. These are not, of course, the only existing alternatives. Many Marxist sociologists adopt a fairly loose definition of the working class that includes all non-supervisory manual labourers plus 'proletarianized' white collar workers (clerical workers especially). Such a definition comes extremely close to the exploitation-centred concept I have proposed in chapter three, and in practical terms they are almost indistinguishable. I have decided to focus on these two particular alternatives, therefore, partly because an empirical intervention into the debate is likely to produce relatively robust and interpretable results.²

In the first section of this chapter I will lay out the basic logic of my empirical strategy. This will be followed by a discussion of the practical task of operationalizing the variables to be used in this strategy. The final section of the chapter will examine the results of a statistical study using these operationalizations.

The Empirical Strategy

Definitions of specific classes can be regarded as a particular kind of proposition. All things being equal, all units (individuals and/or families, depending upon the specific issues under discussion) within a given class should be more like each other than like units in other classes *with respect to whatever it is that class is meant to explain*. The proviso 'with respect to whatever it is that class is meant to explain' is equivalent to saying that these kinds of definitional-propositions are always with respect to a given theoretical object. The disputes in question are not over how best to use *words*, although such issues may be important to avoid confusion in theoretical discussions. The debates are over how best to define a concept given that it designates a theoretical object that is subject to basic agreement. Class is not necessarily meant to explain dietary preferences, for example. There is therefore no reason to believe that individuals in the same class but in different ethnic groups will be more like each other with respect to such preferences than they will be like people who are in the same ethnic group but in different classes. On the other hand, class structure is meant to explain (along with other mechanisms) class conflict. A particular definition of the working class is thus a proposition about the lines of demarcation in the conflict producing process. This is *not* equivalent, it must be emphasized, to saying that all workers will act in identical ways, since the claim is not that class location is the *only* mechanism affecting class action. There may be ethnic or gender or other mechanisms that vary among workers and produce empirically heterogeneous outcomes in spite of a homogeneous class determinant. What is being claimed, however, is that all other things being equal, two people who fall within these lines of class demarcation will have a higher probability of behaving in a similar fashion within class conflicts than will two people falling on different sides of the line of demarcation. Accordingly, each contending definition of the same class is an implicit proposition about the homogeneity of effects generated by the structure which the definition attempts to specify.

If definitions are propositions about lines of demarcation for homogeneous effects, then this suggests that the appropriate strategy for adjudicating disputes over definitions of class is to focus on those cases where one definition places two positions on different sides of the line of demarcation whereas the rival definition

treats them as homogeneous. These are the cases where the differences in definitions have different empirical implications.

These disputed cases can be identified by a simple cross-tabulation of the two definitions. This is illustrated in table 5.1 for two contending definitions of the working class.

TABLE 5.1
Categories in the adjudication of contending definitions of the working class

		Definition A	
		Working class	'Middle-class' wage-earners
Definition B	Working class	[1] agreed-upon working class	[2] disputed category 1
	'Middle-class' wage-earners	[3] disputed category 2	[4] agreed-upon 'middle' class

Cell 1 in this table consists of positions which both definitions define as working class. Cell 4, on the other hand, consists of wage-labour positions which both definitions see as 'middle' class. Cells 2 and 3 are the disputed categories. Definition A argues that cell 3 should be much more like cell 1 than it is like cell 4, and cell 2 should be much more like cell 4 than it is like cell 1, whereas definition B argues that cell 3 should be basically similar to cell 4 and cell 2 should be basically similar to cell 1. The empirical adjudication of these contending definitions of the working class consists of seeing whether the disputed categories are closer to the agreed-upon workers or to the agreed-upon 'middle' class in terms of criteria on which both definitions agree the working class and the 'middle' class should differ.

It should be noted that the logic of this strategy for adjudication does not imply that the disputed category should be indistinguishable from the class in which a definition claims it belongs. Take the problem of the identification of the working class with manual labour. Even if one rejects the claim that this is an appropriate way of defining the working class, one might still believe that for a variety of reasons the manual-non-manual distinction constitutes

an internal division within the working class. This could imply, for example, that white-collar workers would be less ideologically pro-working class than manual workers and yet would still be within the working class. The hypotheses, therefore, are not that the disputed category is indistinguishable from either of the agreed-upon categories, but that it is significantly closer to one or the other.

In the specific comparisons we will be making in this chapter, the precise formulation of these hypotheses differs somewhat from the simple model in Table 5.1. There are two modifications. First, the exploitation-centred class concept includes a specific acknowledgement of certain kinds of 'marginal' class locations, particularly wage-earners with marginal credential assets and wage-earners with marginal organization assets. Such positions should not be simply amalgamated with either workers or non-workers in the adjudications, since this could conceivably have significant effects on the interpretations of results. It is more appropriate, therefore, formally to include such marginal workers in the adjudication typology. This is illustrated in table 5.2. While the bulk of the adjudication analysis will focus on the corners of these tables,

TABLE 5.2
Categories in the adjudication of exploitation-centred class concept with manual-labour and unproductive-labour concepts

Exploitation-centred definition	Rival definitions	
	Working class	'Middle-class'
Working class	[1] agreed-upon working class	[2] disputed category 1
Marginal working class	[3] ambiguous	[4] ambiguous
'Middle-class'	[5] ^a disputed category 2	[6] agreed-upon 'middle-class'

^aCell [5] is empty in the comparison with Poulantzas's definition of the working class using unproductive labour.

explicitly including the marginal categories will enable us to pursue a more nuanced analysis where necessary.

A second modification of the simple adjudication table in table 5.1, is that in the case of the comparisons with Poulantzas's definition of the working class, there are no cases in the lower-left-hand corner of the table (cell 5): there are no positions which Poulantzas would consider working class but which would be considered unambiguously outside of the working class by an exploitation-centred concept. The debate with Poulantzas's definition, therefore, is strictly over his allocation of certain positions which are working class by the framework elaborated in this book to the 'new petty bourgeoisie', especially unproductive wage earners.

It is important to emphasize that even if one definition is unambiguously shown to be inferior to another in this procedure, this does not definitively prove that it is 'incorrect'. It is always possible that some independent mechanism is at work which confounds the results. Let us suppose, for example, that women are predominantly subordinate clerical employees, and we were to use income as the 'dependent' variable in our adjudication. And further suppose, as is the case, that there is systematic wage-discrimination against women in general. In this case, the relationship between gender and the contending class criteria could have the effect of depressing the overall average income of cell 2 in table 5.2 and thus making it much closer to cell 1, even if among men or women *taken separately* the manual-mental distinction was a sharp one and cell 2 was much closer to cell 6. The defender of the manual-labour definition would then be able to show that the adjudication was confounded by the effects of gender-mechanisms. The verdict of the initial adjudication, which ignored the effects of gender mechanisms, would therefore be overturned in this subsequent analysis. Empirical differences must therefore be viewed strictly as a provisional basis for choosing between the contending definitions.³

These adjudication hypotheses will form the basis for the empirical analysis in this chapter. It is of course not a trivial problem to specify precisely what is meant either theoretically or empirically by 'more like' in these hypotheses. To do this involves both defining the *content* of the object of explanation (eg. consciousness, forms of collective action, income, etc.) and the appropriate *standard* for defining similarity. Once these tasks have been accomplished, however, the empirical test is straightforward. It is to this

task of transforming these general propositions into more concrete 'testable' hypotheses that we now turn.

Operationalizing the Adjudications

It is one thing to map out the logic of an empirical adjudication of contending definitions, and quite another to generate the necessary kinds of data and statistical procedures to carry out the exercise convincingly. The difficulty is that most existing sociological data which would be relevant to the task were gathered within a non-Marxist conceptual framework for quite different purposes. There are very few social surveys which contain either the necessary information to operationalize the exploitation-centred concept of class or to address the pertinent kinds of issues which make use of the Marxist concept of class consciousness.

It was for this reason that in 1978 I embarked on what has become a large comparative survey research project on class structure and class consciousness. This involved first developing a survey questionnaire which adequately measured a variety of alternative Marxist and non-Marxist class concepts along with a range of other issues, and then administering it to national samples of adults in a number of countries.⁴ The data from the United States survey in this project will provide the basis for the empirical adjudication of the debates which we are considering.

We will first examine the 'dependent' variables in terms of which the comparisons of concepts will be assessed, before turning to the problems of specifying the various class structure categories in the two adjudications and the statistical procedures to be employed.⁵ While the details of these operationalizations may seem rather tedious, they are nevertheless important, for the cogency of the final comparisons depends largely on the persuasiveness of the operational choices made in setting up the analysis. I will therefore go through each of these steps quite carefully. Readers who are impatient to see the punchline of the story could skip the rest of this section and turn directly to the statistical results which follow.

DEPENDENT VARIABLES FOR THE ADJUDICATION

In many ways the most delicate part of a conceptual adjudication lies in the specification of the 'dependent variables' in the analysis.

The adjudication proposed here only makes sense because the rival definitions are meant to explain at least some of the same things. It is therefore crucial that appropriate variables for making the comparisons are selected.

This task poses a rather substantial problem for the definitional adjudication at hand. In Marxist theory class structure is above all meant to explain a range of macro-social processes: class formation, class alliances, social conflict, historical trajectories of social change and so forth. Of course, Marxists frequently make claims about the consequences of class location for individuals (eg. in explanations of individual consciousness), but such claims are typically undertheorized and in any event are not the core of the theory within which the concept of class structure figures. A defender of Poulantzas's general stance towards class structure could therefore argue, with some justification, that the micro-level variables which I will investigate are at best of secondary importance within Marxist theory, and therefore cannot constitute a decisive basis for comparing the definitions.

Nevertheless, I will propose a number of individual-level variables to be used in the adjudication of the conceptual debates we have been discussing. I do this for two reasons. First, even though Marxist class analysis is, above all, a macro-theory of social relations and social change, that theory must be linked to a micro-theory of outcomes for individuals if it is to be complete. For class structure to explain social change it must have systematic effects on individual action. This does not prejudice the question of the extent to which the practices of individuals are explainable by class relations or by other determinants, but it is hard to imagine how class structure could explain class struggle and social change if individual behaviours were random with respect to class. This suggests that individual-level variables are appropriate criteria for comparing class concepts, even if they are not a sufficient basis for a definitive judgement of their relative merits.⁶

Second, to engage properly in an adjudication of class structure concepts using macro-historical data requires a very broad comparative analysis of the relationship between class structure on the one hand and class formation and class struggle on the other. The logic of the adjudication using macro-structural data is that one way of specifying the variations in class structures, both across time and cases, will better explain the variations in class formation and struggle than the rival specification. This is clearly a much more arduous empirical enterprise than the more micro-centred

approach being used here. This is not to say that such a task is unimportant, but it is beyond my present research capabilities.

In the adjudication of contending class definitions, I will therefore focus primarily on dependent variables which are directly tied to individuals, in particular class-oriented attitudes and personal income. In what follows I will briefly justify the use of these specific variables and explain how they will be measured.

Attitudes: Justification

There are two critical objections which could be raised against the proposal to use attitudes as a criterion for adjudicating class definitions: first, that attitudes cannot be considered a valid indicator of class consciousness; and secondly, that even if attitudes perfectly reflected class consciousness, consciousness itself is only loosely related to class action, and this is the only appropriate criterion for assessing class concepts.

Attitude responses on a survey, however well designed the questionnaire, are at best loosely related to the Marxist concept of 'class consciousness'.⁷ As critics of surveys have often pointed out, the opinions individuals express are heavily context-dependent, and the peculiar context of a questionnaire interview—an isolated individual talking to a representative of a scientific/elite institution—undoubtedly shapes the pattern of responses. It could well happen, for example, that workers will express much more conservative views in response to the questions posed in such interviews than they would in a conversation with their work-mates.⁸

Nothing in the questions which we will use to construct attitude variables avoids these potential biases, and such biases might well influence the conclusions which we draw from the data. But it is important to remember that biases in data do not in and of themselves invalidate the use of such data to 'test' hypotheses, since biases may be neutral with respect to the expectations of a proposition or even make it more, rather than less, difficult to establish the plausibility of the hypothesis. In the case of our definitional adjudications, the critical empirical tests are always of the *differences* between various categories. Unless the biases differ across the class categories being compared in ways which influence the critical tests, then the adjudication comparisons can be perfectly sound even if the data is quite distorted. Thus, for example, we would indeed face problems if the biases in the responses operated

in the opposite direction for proletarianized clerical employees than they did for manual workers. This could have the effect of making it appear that the two categories had similar class consciousness (as measured by the attitude questions) when in fact their 'real' consciousness was quite different. In the absence of strong reasons for believing that such complex interactions of bias with class occur, I will assume that although there are certainly significant biases of various sorts in the responses to the attitude questions, these biases are random with respect to the comparisons we are making.

A more serious objection to using attitudes as a criterion for adjudicating contending class definitions is that class consciousness, at least if this is understood as designating stable forms of consciously understood beliefs by individuals, is only very weakly linked to actual class behavior. Thus quite apart from the problem of using attitudes to measure class consciousness, they are not appropriate as adjudication criteria, since the contending specifications of class structure are meant to explain class practices/struggles, and since consciousness is not a very important determinant of actual behaviour. This is not to suggest that class actors are automatons, unconsciously playing out scripts in a drama; it implies merely that class action is much more heavily determined by the concrete choices and pressures that people face in given circumstances than by any stable or enduring patterns of consciousness (beliefs, cognitive structures, values, etc.) which they bring to those choices. The only appropriate adjudication criterion, therefore, would be the actual choices made, that is, the patterns of class behaviour.

My assumption in adopting attitudes as a criterion is thus that they are not in fact 'epiphenomenal', that they have real consequences for class action, and that they are, to some extent at least, determined by class location. This implies that behind my use of attitudes is a causal argument about the relationship between forms of conscious subjectivity, class action and individual class location.

Class location is a basic determinant of the matrix of objective possibilities faced by individuals, the real alternatives people face in making decisions. At one level this concerns what Weber referred to as the individual's 'life chances', the overall trajectory of possibilities individuals face over the life cycle. In a more mundane way it concerns the daily choices people face about what to do and how to do it.

The objective alternatives faced by individuals, however, are not directly transformed into actual choices or practices. Those objective alternatives must be perceived, the consequences (both material and normative) of different choices assessed, and a specific alternative chosen in light of such assessments. This process is partially the result of conscious, active mental evaluations and calculations; it is partially the result of what Giddens refers to as 'practical consciousness', the routinized ways people negotiate and understand their social world; and it is partially structured by largely unconscious psychological determinants. In any case, this subjectivity *mediates* the ways in which the objective conditions of class locations are translated into the active choices of class actions. While the objective social context of choice is clearly important in this explanation, I would argue that the subjective mediation of choices—the actual process of choosing—is an essential part of the process as well.

For our present purposes, the critical link in the argument is between class location and forms of stable, class-relevant subjectivity. It could be the case, for example, that although forms of consciousness mattered a great deal for explanations of class struggle, the mechanisms which determined such consciousness were not located within class relations as such (or at least, not located there in important ways). Schools, churches, the family, the media and so on, could all be much more significant determinants of forms of consciousness than location within the class structure. If this were the case, then class consciousness—let alone attitudes which only indirectly derive from such consciousness—would not be a very effective criterion for adjudicating debates over definitions of class structures.

I am assuming, therefore, that one's location within the structure of class relations is an important mechanism determining forms of consciousness. This assumption is based, at least in part, on the view that class locations objectively structure the interests of actors and that people are sufficiently rational to come to know those interests. There should, therefore, be at least a tendency for those aspects of consciousness which revolve around class interests to be structured by class location.

If one accepts this kind of reasoning, then class consciousness can be treated as an appropriate criterion in the adjudication of contending class definitions and responses to a survey questionnaire can be viewed as an appropriate indicator of class consciousness. Again, as I have said previously, this is not to claim that class

is the sole determinant of consciousness, but simply that it generates sufficiently systematic effects that consciousness can be used as the basis for evaluating contending views of class.

Attitudes: Measurement

Most of the attitude questions used in this analysis are what are called 'Likert' items. Respondents are read a statement and then asked to indicate whether they strongly agree, somewhat agree, somewhat disagree or strongly disagree with the statement. The class structure survey contains a large number of such questions ranging over many different topics. For purposes of the adjudication of contending class definitions I will restrict the analysis to the survey items which have the clearest class content, since these should be the kinds of attitudes most systematically shaped by the individual's location within the class structure:

1. Corporations benefit owners at the expense of workers and consumers.
2. During a strike, management should be prohibited by law from hiring workers to take the place of strikers.
3. Striking workers are generally justified in physically preventing strike-breakers from entering the place of work.
4. Big corporations have far too much power in American society today.
5. One of the main reasons for poverty is that the economy is based on private property and profits.
6. If given the chance, non-management employees at the place where you work could run things effectively without bosses.
7. It is possible for a modern society to run effectively without the profit motive.

An eighth item was the following:

8. Imagine that workers in a major industry are out on strike over working conditions and wages. Which of the following outcomes would you like to see occur: (1). the workers win their most important demands; (2). the workers win some of their demands and make some concessions; (3). the workers win only a few of their demands and make major concessions; (4). the workers go back to work without winning any of their demands.

Each of these items was coded +1 if the respondent took the working class position, -1 if they took the pro-capitalist class position, and 0 if they said that they didn't know the answer or, in the case of item 8, if they gave response category (2).⁹ These eight responses were then added up, generating a scale ranging from -8 (maximally pro-capitalist) to +8 (maximally pro-worker) that measures the net pro-worker or pro-capitalist orientation on this set of questions: a negative value means that the respondent took the pro-capitalist position more frequently than the pro-worker position, a positive value indicates the opposite.¹⁰

In addition to using this constructed consciousness scale, we will also examine the relationship between class structure and a fairly conventional variable measuring class identification.¹¹ Respondents were first asked the following question: 'Do you think of yourself as belonging to a particular social class?' If they responded 'yes', they were then asked in an open-ended fashion 'which class is that?' If they said 'no' or 'don't know', they were asked a closed-category follow-up: 'Many people say that they belong to the working class, the middle class or the upper-middle class. If you had to make a choice, which would you say you belong to?' We are thus able with this set of questions to distinguish people with a strong class identification (those who answered yes to the initial question) and those with a weak class identification.¹² Since we will be using this variable to adjudicate contending structural definitions of the working class, we will code it simply as a 'working class identification variable'.

Income: Justification

In some ways income is a less satisfactory variable than attitudes for adjudicating contending class definitions within a Marxist framework, even given the problems of using attitudes and consciousness discussed above. While Marxist theory has systematic things to say about the distribution of income between capital and labour, in general the theory is much less elaborated in the analysis of income inequality among wage-earners. Since the disputes in question all concern definitional problems among categories of wage-earners, income could therefore be considered a fairly weak criterion for a definitional adjudication.

Nevertheless, I have chosen to adopt income as a secondary criterion. All of the class definitions we will be exploring typically characterize 'middle-class' wage-earners as a privileged social

category. Furthermore, since the adjudications being considered all involve comparisons with an exploitation-centred concept of class, and such a concept surely has systematic implications for income differences, it is appropriate to use income in the adjudications.

Income: Measurement

Respondents in the survey were asked what their total personal income before taxes was for the previous calendar year. This figure was meant to include income from all sources—wages and salaries, state transfers, interest on savings and investments, etc.

There are three sources of potential error in this variable which may conceivably influence our analysis. First, as in most surveys, there is a relatively high rate of refusals by respondents to the income question, about 15 per cent. Second, the income data is for the previous year, rather than for the respondent's current job, while our class-assignments are based on data for the respondent's present position. Third, the fact that the variable includes non-wage income means that it is not strictly a measure of the income attached to positions, but of income which goes to individuals, whereas the adjudication logic directly concerns the positions themselves. In the use of the income variable in the adjudication of contending class definitions we must assume that these possible measurement errors are random with respect to the critical categories used in the analysis. If it should happen, for example, that there was much greater income mobility in one of the class categories used in the adjudication than in the others, with the result that the income for that category was biased downward, this could conceivably affect the conclusions we might draw. I do not think that these biases are in fact a problem, but they should be kept in mind.

OPERATIONALIZING THE CLASS STRUCTURE VARIABLES

The Exploitation-Centred Concept of Class Structure

The conceptual map of class relations adopted in this book is fairly complex. It is based on three principal dimensions of exploitation relations—exploitation based on control of capital, organization and credentials/skills—combined in various ways. The essential

task of constructing a class typology consists in operationalizing each of these dimensions, and then combining them.

The strategy I have adopted is to classify the relation of each respondent to the relevant assets into three categories: (1) clearly an exploiter with respect to that asset; (2) clearly exploited with respect to that asset; and (3) ambiguous. The ambiguous category, in this context, is ambiguous for one of two reasons: either the respondent genuinely appears to occupy a marginal position within the relations of exploitation with respect to that asset, or we lack sufficiently precise data to clearly define the respondent's location. The ambiguous cases are thus a combination of 'intermediate' positions—positions which may be neither exploiters nor exploited with respect to the asset in question—and measurement error. Throughout most of the analysis, therefore, our attention will focus more on the polarized locations than the ambiguous ones.

The basic operational criteria used for each of the three dimensions of exploitation are presented in table 5.3. Without going into excessive detail, a few comments clarifying these operationalizations will be helpful.¹³

1. Assets in Means of Production. Differential ownership of assets in the means of production generates two principal classes in capitalism: workers, who by virtue of owning no means of production must sell their labour power on a labour market in order to work, and capitalists, who by virtue of owning substantial quantities of means of production are able to hire wage-earners to use those means of production and need not themselves work at all.¹⁴ These two categories constitute the traditional polarized classes of the capitalist mode of production.

These polarized classes, however, do not exhaust the class positions generated by unequal distribution of capitalist assets. Three other sorts of class positions are also potentially important. First of all, there are people who own just enough means of production to reproduce themselves, but not enough to hire anyone else. This is the traditional 'petty bourgeoisie'. Secondly, other persons own some means of production, enough to provide for some of their subsistence but not enough to reproduce themselves, thus forcing them to also sell their labour power on a labour market. This is the classic 'semi-proletarianized wage-earner' of early capitalism (and the part-time peasants of many third-world countries today). And

TABLE 5.3
Criteria for operationalization of exploitation-asset concept of class structure

I. Assets in the means of production		
	<i>Self employed</i>	<i>Number of employees</i>
1. Bourgeoisie	Yes	10 or more
2. Small employers	Yes	2-10
3. Petty bourgeoisie	Yes	0-1*
4. Wage-earner	No	

*Conceptually, the petty bourgeoisie should be restricted to owners of the means of production who have no employees. However, because of an unintended ambiguity in the questionnaire design, an unknown proportion of respondents who state that they have one employee really had none (i.e. they considered themselves an employee), and thus we have defined the petty bourgeoisie as having no more than one employee.

II. Assets in organization control		
	<i>Directly involved in making policy decisions for the organization</i>	<i>Supervisor with real authority over subordinates</i>
1. Managers	Yes	Yes
2. Supervisors	No	Yes
3. Non-management	No	No

Note: The actual criteria used were somewhat more complex than indicated here, since a variety of other criteria were used to deal with certain kinds of problematic cases (eg. a respondent who claims to directly make policy decisions and yet does not have real authority over subordinates). See Appendix II, Table II.3 for details.

III. Assets in scarce skills/talent			
	<i>Occupation</i>	<i>Education credential</i>	<i>Job autonomy</i>
1. Experts	Professionals		
	Professors		
	Managers	B.A. or more*	
2. Marginal	Technicians	B.A. or more	
	School teachers		
	Craftworkers		
	Managers	less than B.A.	
	Technicians	less than B.A.	
	Sales	B.A. or more	Autonomous
	Clerical	B.A. or more	Autonomous
3. Uncredentialed	Sales	less than B.A.	or Non-autonomous
	Clerical	less than B.A.	or Non-autonomous
	Manual non-crafts		

*In Sweden the criterion adopted here was a High School degree or more because of the differences in the timing of the expansion of university education in the two countries and the nature of the real training involved in a high school degree in Sweden.

finally there are people who own enough means of production to hire workers, but not enough that they really have the option of not working at all. This is the small employer—employer artisans, small farmers, shopkeepers, etc.—who work alongside their employees, frequently doing much the same kind of work as the people they hire.

In the data used in this study we cannot rigorously distinguish all of these categories. In particular, the only data available to distinguish small employers from proper capitalists is the number of employees of the respondent, and this is at best a weak indicator, since it does not really measure the amount of capital owned by the capitalist.¹⁵ For present purposes, therefore, I will adopt a rather arbitrary convention, and define all employers employing ten or more people as fully-fledged capitalists, and employers employing between two and nine employees as small employers. The petty bourgeoisie is defined as any self-employed person employing no more than one employee. We will not, in the present data analysis, attempt to distinguish fully proletarianized wage-earners from semi-proletarianized workers, although on the basis of data about second jobs and jobs of other members of the household we will be able to introduce this distinction in subsequent work.

2. *Assets in Organization.* Organization assets consist in the effective control over the coordination and integration of the division of labour. Typically, such assets are particularly salient in defining the exploitation relations of management, although not all jobs which are formally labelled 'manager' involve control over organization assets. Some 'manager' jobs may simply be technical experts who provide advice to the effective controllers of organizational planning and coordination. In the terms of the exploitation-centred concept of class, such 'managers' might be credential-exploiters, but not organization-exploiters.

With respect to organization assets, we will distinguish three basic positions:

(1) *Managers:* positions which are directly involved in making policy decisions within the workplace and which have effective authority over subordinates.

(2) *Supervisors:* positions which have effective authority over subordinates, but are not involved in organizational decision-

making. These positions I shall treat as having marginal organization assets.

(3) *Non-management*: positions without any organization assets within production.

3. *Assets in Credentials*. Assets in credentials are quite difficult to operationalize in a nuanced way. On the face of it, it might seem that simply using formal academic qualifications might be satisfactory. There are two basic problems with such a strategy: first, because of the rapid expansion of education over the past two generations and the changing formal education requirements for certain kinds of jobs, any formal credential variable would have to involve cohort specific credentials and some provision for historical devaluation of credentials over time. Second, a formal credential only becomes the basis for an exploitation relation when it is matched with a job that requires such credentials. A person with a doctorate in English who drives a taxicab is not a credential-exploiter. What this implies is that in order to specify properly the exploitation relations built upon credential assets we must include information on the actual job a person holds and not simply on that person's formal academic certificates.¹⁶

This immediately poses an additional problem: many job titles and occupational designations are extremely vague with respect to the credentials they demand. This is not particularly a problem for professional occupations, but it certainly is for the wide range of 'manager' jobs and even for 'sales' and 'clerical' jobs. Some sales jobs require engineering degrees and are, in practical terms, more like an engineering consultancy than a simple salesperson job; some manager jobs, on the other hand, require no particular credentials at all. They might still constitute exploiters with respect to organization assets, but not in relation to credentials or skills. Some jobs grouped as 'clerical' occupations involve high levels of training and experience, others require very little.¹⁷ Even the detailed occupational titles do not always distinguish these circumstances in a satisfactory way.

We will solve this complex of issues by using a combination of occupational titles, formal credentials and job traits as a basis for distinguishing people in jobs where certain credentials are mandatory—and thus positions involving credential asset exploitation—from those not in such jobs. As in the other assets, we will also define an intermediate situation in which it is ambiguous

exactly what credential assets the individual actually controls. This yields the following three categories:

(1) *Experts*: This includes (a) all professionals; (b) technicians and managers (by occupational title, not by the criteria used to define the organizational assets specified above) with college degrees.

(2) *Skilled employees*: (a) school teachers and craftworkers; (b) managers and technicians with less than college degrees; (c) salespersons or clericals with college degrees *and* whose jobs have real autonomy.¹⁸

(3) *Non-skilled*: (a) clerical and salespersons not satisfying the credential *or* autonomy criterion for skilled employees; (b) non-craft manual occupations and service occupations.

Taking these three sets of exploitation-asset criteria together generates the overall map of class locations displayed in table 3.3 in chapter three.

Our focus in this chapter is not on this entire matrix of class locations, but on the definition of boundary criteria distinguishing the working class from the 'middle class'.¹⁹ As mentioned earlier, this raises the question of how to treat these 'marginal' categories in the adjudications—particularly those cells in table 3.3 designated 'marginally credentialled workers' and 'uncredentialled supervisors'. The procedure I will adopt will be to include these two marginal categories as a distinct category in the analysis. If it turns out that for practical purposes these categories can be treated as basically similar to workers, then in subsequent analyses it could be justifiable to merge them with the more restrictively defined working class.

Manual Labour Definitions of the Working Class

Even though manual labour definitions of the working class are certainly the simplest, it is not trivial to define rigorously the appropriate criteria for distinguishing 'manual' from 'nonmanual' labour. The conventional approach is to equate this with the purely ideological distinction between 'blue-collar' and 'white-collar' occupations, as defined in popular discourse. But this has the effect of putting a variety of highly routinized clerical jobs—key-punch operators, typists in large semi-automated offices, etc.—which in real terms involve less 'mental labour' than

many skilled artisanal jobs, into the 'middle class'. It is precisely because of this kind of ambiguity that many theorists are hesitant to adopt a simple mental-manual distinction as the basis for defining the working class.

In spite of these reservations, I will adopt the conventional blue-collar criterion for defining 'manual labour', and thus the working class. Since this definition is the least self-consciously theorized of the ones we are considering and does, in fact, rely most heavily on categories given in everyday discourse, this operationalization is, I believe, faithful to usage.

Productive Labour Definitions of the Working Class

Poulantzas's discussions of class are complex and not always consistent. It is thus not a simple task to provide a fair operational specification of his class concept. The purpose of the present exercise, however, makes this task a bit easier. The point is not so much one of faithfully settling a dispute between two theorists, but rather assessing the adequacy of two contending types of class definitions. In these terms Poulantzas's efforts represent a particular example of a more general intuition among Marxists, namely that the working class consists of productive, subordinated manual wage-earners. One finds this definition in Adam Przeworski's empirical work, in some of Göran Therborn's writings and elsewhere, even if the conceptual details are not identical to those found in Poulantzas.

The task of operationalizing Poulantzas's definition, therefore, revolves around specifying four core criteria: productive-unproductive labour; mental-manual labour; supervisory-non-supervisory labour; decision-maker-non-decision-maker.

1. Productive—Unproductive Labour. Productive labour is defined as labour which produces surplus-value; unproductive labour is labour which is paid out of surplus-value. There is a general agreement among Marxists (at least among those who accept the framework of the labour theory of value) that employees in the sphere of circulation (finance, retail, insurance, etc.) and most state employees are unproductive, while production workers in manufacturing, mining and agriculture are productive. There is much less agreement over a wide range of other positions: administrative positions within production, service workers of var-

ious sorts (eg. health workers), technical and scientific positions within manufacturing, and so on.

Poulantzas takes a rather extreme position on these issues. He argues that only agents engaged in the production of physical commodities are productive. Service workers, he insists, are always unproductive. Productive workers do, however, include technical workers involved in the design and planning of production (engineers, draftsmen, etc.). In contrast, many Marxists argue that anyone engaged in the production of commodities, physical or non-physical, is a productive worker. Marx seems to endorse this view in his description of entertainers and school teachers as productive when they work for capital.

As it turns out, none of the empirical results in the comparison of alternative definitions of the working class are significantly affected by the choice of the criteria for productive/unproductive labour. For the purposes of the analysis in this chapter, therefore, I will only report the results using the broader definition of productive labour as anyone engaged in the production of commodities.

Constructing this variable involves reclassifying census industry and occupation categories into productive-unproductive occupations and productive-unproductive industries.²⁰ To be classified a productive labourer one has to be *both* in a productive occupation and employed in a productive sector of the economy.

2. Mental—Manual Labour. This is more straightforward than the productive-unproductive labour distinction. Poulantzas formally defines 'mental labour' as positions which have real possession of the 'secret knowledge of production', by which he means the intellectual control over the production process. He explicitly asserts that manual labour is not equivalent to 'hand work' and mental labour to 'brain work'. Rather, the distinction revolves around cognitive control over the labour process.

If this criterion were applied, however, it would mean that many clerical jobs would become non-mental, and this contradicts the general intuition held by many Marxists that clerical employees and other 'white-collar' occupations are not really proper 'manual' labourers. To avoid this possibility, Poulantzas makes a rather ad hoc argument that all clerical employees share the ideologically defined status of being 'mental labourers' regardless of their concrete situation, and by virtue of this ideological factor should be considered non-workers. In practice, therefore, Poulantzas adopts the simple criterion of the mental-manual ideological status of the

occupational category, rather than the real control over conceptual dimensions of the specific job. This means that his distinction can be effectively operationalized using the conventional sociological distinction between white-collar and blue-collar occupations.

3. *Supervision.* Poulantzas's concept of supervision is centred on control and surveillance. It therefore excludes what could be called nominal supervisors—people who are conduits for information but have no capacities to impose sanctions on subordinates. What is needed, therefore, is a criterion which identifies individuals with real control over their subordinates. In practical terms, this is virtually identical to the category 'marginal organization assets' adopted in the operationalization of the exploitation-centred concept of class.

4. *Decision-making.* Poulantzas's discussion of decision-making is less clear-cut than his discussion of supervision as such. He argues that managers who are engaged in basic decisions concerning budgets and investments—basic profit and accumulation decisions—should actually be considered part of the bourgeoisie proper, rather than even the new petty bourgeoisie. However, he never explicitly discusses the broad range of production, organizational and marketing decisions that are the preoccupation of most managers for a majority of the time. My guess is that he would basically treat such positions as mental labourers and therefore part of the new petty bourgeoisie, regardless of whether or not they were also directly engaged in the tasks of supervision and surveillance.

Strictly speaking, therefore, if we were to literally follow Poulantzas's theoretical specifications, we would distinguish among managerial wage-labourers between those that were part of the bourgeoisie and those that were in the new petty bourgeoisie. However, many Marxists who adopt a Poulantzas-type approach would exclude all but the top executives of large corporations from the bourgeoisie proper. Since these alternative ways of treating managers could conceivably generate different patterns of results, I explored both ways of categorizing managers in the data analysis. It turns out that there were no substantive differences in the results. To simplify the exposition, therefore, I will present only the data in which all managers are considered new petty bourgeois.

Taking these four criteria together we can construct the

operationalization of Poulantzas's definition of the working class, as presented in table 5.4.

TABLE 5.4
Operationalization of Poulantzas's definition of working class

<i>Input variables</i>					<i>Interpretation</i>
<i>Unproductive labour</i>	<i>Mental labour</i>	<i>Sanction supervision</i>	<i>Decision making</i>		
No	No	No	No	Worker using Poulantzas's definition	
Yes or	Yes or	Yes or	Yes	New petty bourgeoisie	

Reformulation of Hypotheses

So far we have been quite vague in specifying what 'more like' means in the formulation of the different predictions of the various definitions of the working class. In order actually to perform statistical tests on these hypotheses, we will have to formalize this notion.

To do this it is necessary first to note that in all of the definitions under consideration, there is not simply an assertion that systematic differences exist between the working class and the middle class in terms of income and class consciousness. All of these concepts also imply claims about the directionality of the differences in question. Concretely, we can formulate two empirical hypotheses that are common to all of the definitions under investigation (see table 5.5, part I). The analysis of the disputed categories in the adjudication of contending definitions, therefore, should be done with respect to this common set of expectations about the non-disputed categories.

In each of the adjudications there will be several sets of pairs of hypotheses. In each pair, the expectations of each definition are specified in Table 5.5. Our task, therefore, will always be one of comparing the relative support for a given hypothesis within each pair of hypotheses, rather than simply 'testing' a hypothesis 'against the data'.²¹ While this generates a rather lengthy list of formal hypotheses to be tested, it will help to put order into the empirical investigation to formalize them in this way. Since the

adjudications with Poulantzas's definition of the working class are somewhat simpler than with the manual labour definition (since in Poulantzas's definition there is only one category in dispute, while in the manual labour definition there are two) we will examine these first and then turn to the problem of the manual labour definition of the working class.

TABLE 5.5
Formal hypotheses for adjudication of contending definitions

I. *Common hypotheses:*

- I.1. Agreed-upon 'middle' class wage earners (cell 6)^a will have higher mean incomes than the agreed-upon working-class wage-earners (cell 1):
 $(\text{cell } 6) - (\text{cell } 1) > 0$.
- I.2. Agreed-upon 'middle' class wage earners will tend to be less pro-worker and more pro-capitalist than agreed-upon working-class wage-earners:
 $(\text{cell } 6) - (\text{cell } 1) > 0$

II. *Adjudication of productive-labour definition hypotheses*

- II.1A. The difference in incomes between the disputed category (cell 2) and agreed-upon workers will be significantly *less* than between them and the agreed-upon 'middle' class:
 $|\text{cell } 1 - \text{cell } 2| - |\text{cell } 2 - \text{cell } 6| < 0$
- II.1B. The difference in incomes between the disputed category and agreed-upon workers will be significantly *more* than between them and the agreed-upon 'middle' class:
 $|\text{cell } 1 - \text{cell } 2| - |\text{cell } 2 - \text{cell } 6| > 0$
- II.2A. The difference in class attitudes between the disputed category and agreed-upon workers will significantly be *less* than between them and the agreed-upon 'middle' class:
 $|\text{cell } 1 - \text{cell } 2| - |\text{cell } 2 - \text{cell } 6| < 0$
- II.2B. The difference in class attitudes between the disputed category and agreed-upon workers will be significantly *more* than between them and the agreed-upon 'middle-class':
 $|\text{cell } 1 - \text{cell } 2| - |\text{cell } 2 - \text{cell } 6| > 0$

III. *Adjudication of manual-labour definition hypotheses*

- III.1A. The difference in income between disputed category 1 (cell 2) and the agreed-upon workers will be significantly *less* than between them and the agreed-upon 'middle' class;
 $|\text{cell } 1 - \text{cell } 2| - |\text{cell } 2 - \text{cell } 6| < 0$
- III.1B. The difference in incomes between disputed category 1 and the agreed-upon workers will be significantly *more* than between them and the agreed-upon 'middle' class:
 $|\text{cell } 1 - \text{cell } 2| - |\text{cell } 2 - \text{cell } 6| > 0$

TABLE 5.5 (continued)

- III.2A. The difference in incomes between disputed category 2 (cell 5) and the agreed-upon workers will be significantly *more* than between them and the agreed-upon 'middle' class:
 $|\text{cell } 1 - \text{cell } 5| - |\text{cell } 5 - \text{cell } 6| > 0$
- III.2B. The difference in incomes between disputed category 2 and the agreed-upon workers will be considerably *less* than between them and the agreed-upon 'middle' class:
 $|\text{cell } 1 - \text{cell } 5| - |\text{cell } 5 - \text{cell } 6| < 0$
- III.3A. The difference in class attitudes between disputed category 1 and the agreed-upon workers will be significantly *less* than between them and the agreed-upon 'middle' class:
 $|\text{cell } 1 - \text{cell } 2| - |\text{cell } 2 - \text{cell } 6| < 0$
- III.3B. The difference in class attitudes between disputed category 1 and the agreed-upon workers will be significantly *more* than between them and agreed-upon 'middle' class:
 $|\text{cell } 1 - \text{cell } 2| - |\text{cell } 2 - \text{cell } 6| > 0$
- III.4A. The difference in class attitudes between disputed category 2 and the agreed-upon workers will be considerably *more* than between them and the agreed-upon 'middle' class:
 $|\text{cell } 1 - \text{cell } 5| - |\text{cell } 5 - \text{cell } 6| > 0$
- III.4B. The difference in class attitudes between disputed category 2 and the agreed-upon workers will be considerably *less* than between them and the agreed-upon 'middle' class:
 $|\text{cell } 1 - \text{cell } 5| - |\text{cell } 5 - \text{cell } 6| < 0$.

^aAll reference to 'cells' in these hypotheses refer to the adjudication typology in Table 5.2.

^bIn each of the pairs of formal hypotheses in table 5.5, the first hypothesis (designated *A*) represents the prediction from the exploitation-centred concept, while the second hypothesis (designated *B*), represents the prediction from the rival definition.

Note on Statistical Procedures

SAMPLE

The data for the United States was gathered in a national telephone survey conducted by the University of Michigan Survey Research Center in the summer of 1980. Respondents were sampled on the basis of a conventional two-stage systematic cluster sample of telephone numbers in the coterminus United States. The first stage consisted of sampling clusters of telephone numbers. In

the second stage telephone numbers within clusters were randomly selected. Finally, within households, eligible respondents were selected at random.²² The resulting sample consists of a total of 1499 adults over the age of sixteen working in the labour force, 92 unemployed in the labour force, and 170 housewives for a total of 1761 respondents. The response rate was about 78 per cent, a fairly typical rate for this kind of survey. Throughout this book we will only analyse the working labour force sample.

The Swedish sample (not used in this chapter) consists of 1145 adults between the ages of eighteen and sixty-five selected randomly from a national list of the population. Respondents were initially mailed a questionnaire, and then, if they did not send it back, were contacted by telephone.²³ The overall response rate was about 76 per cent.

A word needs to be said about telephone interviews, since people unfamiliar with survey research may be somewhat sceptical about the validity of such interviews. Research which has compared telephone and personal interviews has shown that there are no systematic differences in responses to questions using the two techniques.²⁴ There are, however, certain advantages and disadvantages to each. On the one hand, personal interviews allow for much more complicated questions, particularly questions that require visual aids of various sorts. Telephone interviews tend to restrict the questionnaire to fairly simple questions. On the other hand, personal interviews are vastly more expensive than telephone interviews, require much more clustering in the sample strategy, and in certain respects (at least in the United States) may generate a more biased sample, since many people will be willing to talk to a stranger on the telephone who would not be willing to let them into their house. In any event, for better or worse, the data for the United States in this study come entirely from telephone interviews.

WEIGHTS

For reasons which are not entirely clear to us, the education-by-occupation distribution of respondents in the United States sample is somewhat more biased towards higher status occupations and higher levels of education than one would expect from a survey of this type. Some of this is typical of telephone surveys, since only around 95 per cent of individuals in the United States live in dwellings with telephones and non-coverage is certainly not

equally distributed in socio-economic terms, but the over-representation of high status respondents was greater in our survey than in most others.²⁵ Since such biases could affect some of the cross-national comparisons we will be doing in chapters six and seven, and since they might also have effects on the data analysis in this chapter, I have applied a set of post-hoc weights to the data which have the consequence of reproducing the 1980 census education-by-occupation distributions in the data we will be using. The weights are designed in such a way that the total N in the sample is not affected by the weighting system. Throughout the analysis in this book we will use the weighted data.

STATISTICAL TESTS

Throughout this analysis I will rely on fairly simple statistical tests. We will primarily be examining the differences in means between groups, and therefore will use conventional 't-tests' to test the statistical significance of the differences observed. Since not all readers will be familiar with such tests, a brief word needs to be made about how they should be interpreted and how they are calculated.

Let us suppose we record information from a sample of workers and supervisors, and on the basis of this information, we estimate that workers have a mean income of \$13,000 and supervisors have one of \$16,000. What we want to test is whether the difference in these observed incomes—\$3,000—is 'significant'. Significance, in this context, is a statement about how confident we are that the observed difference is really different from zero. It is always possible, after all, that two groups being compared could in reality have identical incomes, but that because of random variations in gathering the data we might observe a difference. When we say that the observed difference is 'significant at the .01 level' what we mean is that based on certain statistical assumptions, our best guess is that in only one out of a hundred surveys could this large a difference be observed when the real difference was zero.

The technical procedure for performing this kind of test involves calculating what is called a 't statistic'. To calculate this we have to divide our estimate of the difference in means between the two groups by what is called the 'standard error' of this difference. The bigger the standard error relative to the difference in the means, the less likely we are to be very confident that the observed differ-

ence in means reflects a true difference. How is the standard error itself measured? It is based on two pieces of information: first, the sample size on which the observations have been made, and second, what is called the 'standard deviations' of each of the means. A 'standard deviation' is basically a measure of the dispersion of values around the mean. If everyone in a sample had identical incomes, for example, the standard deviation would be zero; where incomes are quite dispersed, the standard deviation will be large. The larger the sample size and/or the smaller the standard deviations (relative to the differences in means) the smaller will be the standard error.

In more technical terms, the *t* statistic used to test the significance of differences in means between two groups is calculated as follows:

$$t = \frac{(\text{Mean of group 1}) - (\text{Mean of group 2})}{\sqrt{\frac{(\text{Standard deviation of group 1})^2}{(\text{sample size in group 1})} + \frac{(\text{Standard deviation of group 2})^2}{(\text{sample size in group 2})}}$$

The larger the value of this *t* statistic, the more confident we can be that the observed differences between groups reflect true differences in the world rather than chance differences in our measurements. From the formula it is clear that there are two ways in which our confidence in an observed difference between means can be high: first, if the standard deviations of each group are small, and second, if the sample sizes are large for each group. With a very large sample, even if the values within each group are quite dispersed we may be quite confident that a relatively small difference in means is not just a random result of sampling.

T-tests can be used in what are called one-tailed and two-tailed tests. A two-tailed test is used when you simply want to see if a difference between two means exists, but you have no prior expectations about the direction of the difference. A one-tailed test, on the other hand, is designed to test whether the mean of one group is greater (or smaller) than another group. In general we will use one-tailed tests in our analyses since we have strong *a priori* expectations about the directionality of the differences in question.

Most of the hypotheses we are exploring are not simply about the differences in means between groups, but rather concern the differences in differences between groups (the hypotheses under II and III in table 5.5). In such cases the use of the *t*-test becomes somewhat more complicated. This is because the usual assumption

of a *t*-test is that the groups being compared are independent of each other. This assumption holds for the comparisons of the disputed category with workers and the disputed category with non-workers in our adjudication of the definition of the working class, but it does not hold for the comparison of the two differences, since the disputed category appears in both of these. What this means technically is that when we calculate the standard error for the difference in differences we have to include a term for the 'covariance' of the two differences. This is accomplished by the following formula (in which s.e. means standard error):²⁶

$$t = \frac{|(\text{Difference 1})| - |(\text{Difference 2})|}{\sqrt{(\text{s.e. of diff. 1})^2 + (\text{s.e. of diff. 2})^2 - 2(\text{Covariance of the differences})}}$$

Sociologists are often prone to fetishize significance tests, paying more attention to them than to the substantive meaning of statistical results. Significance tests are strictly measures of one's confidence that the observed results are not random, but it is still the results themselves that should be of theoretical interest. While I will rely fairly heavily in places on the statistical tests to add persuasiveness to particular arguments the real burden of the discussion will be on the substantive results themselves and not on significance levels as such.

Empirical Results

ADJUDICATION OF THE PRODUCTIVE LABOUR DEFINITION OF THE WORKING CLASS

The basic results comparing Poulantzas's definition of the working class and the exploitation-centred definition appear in tables 5.6, 5.7 and 5.8. We will begin by examining the two hypotheses held in common by both contending definitions of the working class and then turn to the substantive adjudication using the empirical predictions of each definition.

Common Hypotheses

A precondition for the adjudication strategy to work is that the agreed-upon workers and the agreed-upon 'middle' class differ in the expected ways on the dependent variables which are to be used

TABLE 5.6
Adjudication of productive-labour definition of the working class: income

Entries in cells of Table:
Means
(Standard deviations)
Number of cases (weighted)

Exploitation- centred definition ^a	Productive labour definition		Row Totals
	Working class	'Middle' class	
Working class	[1] \$13,027 (7952) 143	[2] \$10,241 (6921) 340	\$11,065 (7344) 483
Marginal working class	[3] \$19,285 (8441) 55	[4] \$13,822 (7757) 192	\$15,032 (1217) 247
'Middle' class	[5] [Empty cell]	[6] \$19,843 (12422) 335	\$19,843 (12422) 335
Column Totals	\$14,760 (8543) 198	\$14,744 (10476) 867	

^aWorking class = cell 12 in Table 3.3; Marginal working class = cells 9 and 11; 'Middle class' = cells 4-8 and 10.

in the adjudications. It obviously makes no sense to adjudicate the class location of disputed categories on the basis of a criterion that does not properly differentiate between the non-disputed categories.²⁷

The first two rows of table 5.8 indicate that the two principal dependent variables which we are using—income and class attitudes—do in fact behave in the expected manner. The agreed-upon working class, on the average, earns \$6815 less per year than the agreed-upon middle-class wage-earners, while their value on the working class attitude scale is 2.3 points higher (i.e. out of eight items combined in the scale, on average agreed-upon workers take a pro-working class stance on just over 2 more items than 'middle-class' wage-earners). The high 'significance level' for these results indicate that we can be quite confident that the

TABLE 5.7
Adjudication of productive-labour definition of the working class:
class-attitude scale^a

Entries in cells of Table:
Means
(Standard Deviations)
Number of cases (weighted)

Exploitation- centred Definitions ^b	Productive labour definition		Row Totals
	Working class	'Middle' class	
Working class	[1] 1.04 (3.18) 167	[2] 0.61 (3.39) 405	0.74 (3.33) 572
Marginal working class	[3] 1.02 (3.54) 62	[4] 0.36 (3.29) 211	0.51 (3.35) 271
'Middle' class	[5] [Empty cell]	[6] -1.27 (3.20) 218	-1.27 (3.20) 218
Column Totals	1.04 (3.27) 227	-0.15 (3.52) 994	

^aValues on the class attitude scale go from +8 (maximally pro-working class) to -8 (maximally pro-capitalist class).

^bWorking class = cell 12 in Table 3.3; Marginal working class = cells 9 and 11; 'Middle class' = cells 4-8 and 10.

observed differences are not due to chance. If, therefore, one agrees on theoretical grounds that these are indeed appropriate criteria for adjudicating the contending definitions, then we can assume that there is at least a presumptive empirical case that our concrete measures are appropriate as well.

Income Adjudication

The results of the adjudication using the income variable provide no support for Poulantzas's definition of the working class, while they are quite consistent with the definition I have been advancing. If the disputed category should in reality be classified with the agreed-upon 'middle' class then we would expect that, like other

TABLE 5.8

Test of adjudication hypotheses: productive-labour versus exploitation definitions

Hypotheses ^a	Empirical results	t	Significance level (one-tailed)	Conclusion
COMMON HYPOTHESES				
<i>Income</i>				
I.1 (6) ^b - (1) > 0	\$6815	7.2	.000	supported
<i>Pro-working-class attitudes</i>				
I.2 (6) - (1) < 0	-2.30	7.6	.000	supported
ADJUDICATION HYPOTHESES				
<i>Income</i>				
II.1A 1 - 2 - 2 - 6 < 0	-\$6815	7.0	.000	II.1A strongly supported over II.1B
II.1B - 2 - 2 - 6 > 0				
<i>Pro-working-class attitudes</i>				
II.2A 1 - - 2 - 6 < 0	-1.45	3.1	.001	II.2A strongly supported over II.2B
II.2B 1 - 2 - 2 - 6 > 0				

^aThe Hypothesis numbers correspond to the number in Table 5.5.

^bThe numbers in parentheses refer to the cells in Tables 5.6 and 5.7.

non-workers, their income should be higher than that of workers; on the other hand, if they are properly part of the working class, then we would expect their income to be lower than that of non-workers. As the data indicate, the average income for individuals in the disputed category is over \$9000 less than the average income for 'middle-class' wage earners. Furthermore, among those categories which would be classified as 'marginal working class' by the exploitation-centred definition (cells 3 and 4 of the table), those positions which Poulantzas would consider working class have an average income virtually indistinguishable from the agreed-upon non-workers, whereas those which Poulantzas would consider new petty bourgeoisie have incomes virtually identical to the agreed-upon workers. If one accepts income as an appropriate criterion in this adjudication, this strongly supports the exploitation-centred definition over the definition based on productive labour proposed by Poulantzas.

Class Attitudes Adjudication

The data on class attitudes also supports the exploitation-centred

definition of the working class over Poulantzas's definition. On the working class attitude scale, the agreed-upon workers have an average value of just over +1, the agreed-upon 'middle-class' wage-earners have a value of about -1.3, and the disputed category +0.6. While this value of +0.6 is less than the value for agreed-upon workers, it is decidedly closer to the agreed-upon workers than to the agreed-upon 'middle' class.²⁸ Even cell 4 in table 5.7—marginal workers by the exploitation concept and new petty bourgeois according to Poulantzas—are closer to the agreed-upon workers than the agreed-upon 'middle' class. Again, if one is willing to accept class attitudes as a legitimate basis for adjudicating contending definitions of the working class, then these results support the exploitation-centred concept over the productive labour concept quite strongly.

One objection to the results in table 5.8 might be that they revolve around an aggregate scale. It is always possible that such scales can distort real differences. For example, it could be the case that the differences between categories are in the opposite direction for most of the items, but that one or two of the items are so strongly in a particular direction that they have a disproportionate effect on the relevant means on the scale. It is therefore important to look at the values for individual questions to be sure that this is not the case. This is done in table 5.9. The results in this table are quite striking. On the class-identification question and on every item included in the scale except item number eight, the mean values of the disputed category are closer to those of the agreed-upon workers than to those of the agreed-upon 'middle' class. While of course one might question the validity of these items as measures of class consciousness or the very relevance of class consciousness for an adjudication of class definitions, the observed differences in the aggregated measures cannot be explained by peculiarities in the differences on the individual items.

The Effects of Gender and Union Membership

An obvious rejoinder to these results is that they are artifacts of some other determinant of income and attitudes which is correlated with the categories in the adjudication debate. Two candidates for generating such spurious results are gender and union membership. The disputed category in the comparison between Poulantzas's definition of the working class and the exploitation-

TABLE 5.9
Responses to individual items in attitude scale for adjudication of
unproductive labour definitions

	<i>Agreed-upon working class</i>	<i>Disputed category</i>	<i>Agreed-upon 'middle' class</i>
1. Corporations benefit owners at expense of others ^a	0.21 ^b	0.26	0.04
2. Employers should be prohibited from hiring scabs in a strike	0.35	0.12	-0.20
3. Strikers are justified in using force	-0.14	-0.27	-0.53
4. Big corporations have too much power today	0.59	0.58	0.51
5. A main reason for poverty is that the economy is based on private profits	0.22	0.18	-0.25
6. Non-management could run a place of work without bosses	-0.03	0.08	-0.33
7. A modern society can run effectively without the profit motive	-0.34	-0.37	-0.52
8. In a strike, it is generally desirable that the strikers win most of their demands ^c	0.17	0.04	0.01
9. Working Class self-identification (% who say that they are in the working class)	35.5	31.0	18.5

^aFor precise wording of items, see discussion in text.

^bEntries are means on the individual items as entered into the class attitude scale. (+1 = pro-worker; -1 = pro-bourgeois; 0 = don't know)

^cIt should be noted in this item that between 65 per cent and 82 per cent of the respondents in the various adjudication categories advocated the class compromise position on this variable and thus received a value of 0 on the item.

centred concept I have proposed is made up primarily of lower-level white collar employees and state workers. These are the kinds of positions which would be considered unproductive and/or mental labour in Poulantzas's analysis of class relations (and thus

part of the new petty bourgeoisie), but because they lack credential assets or organization assets would be considered workers in my analysis. Such positions are also, as we know, disproportionately female and much less unionized than the agreed-upon workers. 61 per cent of the agreed-upon workers and 68 per cent of the agreed-upon middle class are men, compared to only 30 per cent of the disputed category; 45 per cent of the agreed-upon workers are unionized compared to under 15 per cent of the disputed category and 11 per cent of the agreed upon middle class.²⁹ It could well be the case that the observed income differences and attitude differences are largely consequences of these factors, and are not class effects as such.

The data in table 5.10 indicate that results of the adjudication analyses cannot be attributed to the sex and union compositions of the various categories. The basic pattern observed in table 5.6 and 5.7 holds when we examine men and women taken separately, when we examine non-unionized employees separately, and when we examine unionized employees on the income variable. The one exception to the previous patterns is among unionized wage-earners for the adjudication involving class attitudes. Among these respondents, the disputed category scored significantly higher on pro-working class attitude scale than either the agreed-upon workers or the agreed-upon 'middle' class, while the two agreed-upon categories did not differ significantly.

How should this result be interpreted? The first thing to note is that union membership makes much less difference for attitudes among the agreed-upon workers than among the other categories under consideration: unionized and non-unionized agreed-upon workers differ by just 0.7 points on the pro-working class attitude scale, whereas within the disputed category and the agreed-upon 'middle-class' category, union membership increases the value on the scale by 2.7 and 2.9 points respectively.

This suggests several possible interpretations. One possibility is that there is some self-selection operating here: that among non-working class wage-earners it is precisely those who have particularly strong ideological dispositions against the bourgeoisie who are likely to become union members in the first place. Perhaps more plausibly, the results for 'middle-class' wage-earners suggest that when contradictory class locations become formed into unions—a typically working class form of organization—their consciousness begins to resemble that of workers to a much greater extent. This is precisely what the concept of contradictory loca-

TABLE 5.10
Adjudication comparisons for sex and union members categories taken separately: productive labour adjudications

	<i>Agreed-upon working class</i>	<i>Disputed Category</i>	<i>Agreed-upon 'middle' class</i>
SEX COMPARISONS			
<i>Income</i>			
Men	\$15,103	\$14,271	\$22,870
Women	\$9,742	\$8,429	\$13,551
<i>Pro-Working-class attitudes</i>			
Men	1.22	0.73	-1.43
Women	0.77	0.57	-0.92
<i>Sample Size^a</i>			
Men	102	122	255
Women	65	283	123
% Men	61%	30%	67%
UNION MEMBERSHIP COMPARISONS			
<i>Income</i>			
Union members	\$16,679	\$13,596	\$20,653
Non-union	\$9,545	\$9,567	\$19,739
<i>Pro-Working-class attitudes</i>			
Union members	1.43	2.88	1.30
Non-union	0.73	0.22	-1.57
<i>Sample size</i>			
Union members	75	60	40
Non-union	92	345	338
% Unionized	45%	15%	11%

^aAll Ns are weighted.

tions is meant to suggest: such positions have an internally contradictory character, being simultaneously exploiters and exploited, and are therefore likely to have their attitudes more strongly affected by organizational and political mediations, such as unionization. What unionization indicates is that such positions have in fact been 'formed' into the working class, and once so formed, have a consciousness profile that is much more like that of workers. This is a theme we will explore much more thoroughly in chapter six. A final interpretation of these results is that it is the more proletarianized locations within the 'agreed-upon middle-

class' category that become unionized, and that, therefore, the unionization variable is really just an indirect measure of the proletarian weight of the location. Only 10 per cent of the people in the agreed-upon 'middle-class' cell of the typology are unionized compared to 45 per cent of the agreed-upon workers, and it is entirely possible that this 10 per cent contains a disproportionate number of individuals who, save for measurement error, should have been placed in the working class to begin with. The same kind of argument could apply to the disputed category.

Regardless of which of these interpretations one adopts, in terms of the empirical task at hand, the results for union members in table 5.10 do not support Poulantzas's concept relative to the exploitation-centred concept. Indeed, the fact that among unionized employees the agreed-upon workers and agreed-upon 'middle' class do not differ significantly on the scale contradicts the common hypothesis I.1 of both definitions.

Taken together these results indicate that productive-unproductive labour is not a legitimate criterion for defining the boundary of the working class. At least, when class attitudes and income are used as criteria in the adjudication between Poulantzas's specification of the working class as productive, non-supervisory manual labour, and the rival definition of workers in terms of exploitation relations, the latter fares much better empirically.

A supporter of Poulantzas's general definition of the working class has one final line of defence. I have been treating unionization as an organizational mediation in the consciousness-producing process. But unionization can equally plausibly be regarded as a direct effect of class itself, and thus the rates of unionization for the different categories under discussion could be regarded as an appropriate adjudication criterion. If this stance is adopted, then the disputed category in our analysis looks much more like the agreed-upon non-workers (15 per cent and 10 per cent unionized respectively), whereas both are dramatically different from the agreed-upon workers (45 per cent unionized). Presumably other forms of economic class practices besides union membership—participation in strikes, trade union militancy, etc.—would probably follow a roughly similar pattern. The rates of unionization associated with the different categories in the adjudication analysis, therefore, lend support to Poulantzas's definition of workers over the one proposed in this book.

These results, of course, are not surprising. It is hardly neces-

sary to go to the trouble of a careful statistical study to show that white-collar and/or unproductive employees are less unionized than manual, non-supervisory industrial workers. This fact, however, does demonstrate the difficulty in performing this kind of definitional adjudication, since the conclusions may hinge on the adjudication criteria adopted. The issue then becomes whether or not rates of unionization are an appropriate criterion for adjudicating contending definitions of the working class.

The assumption underlying the use of unionization as an adjudication criterion is that two people within the same class—for example, two workers—will have a higher probability of sharing the same unionization status than two people in different classes. The overall unionization figures are certainly consistent with this. It could be the case, however, that the reason the disputed category looks so much like the agreed-upon non-workers on levels of unionization is not because of the class determinants of unionization, but because of some other determinant of unionization which is associated strongly with the disputed category, for example, gender.

If we look at unionization rates for the three categories of the adjudication typology by sex, we see that among agreed-upon 'middle' class there is relatively little difference between men (12.5 per cent unionized) and women (7.5 per cent unionized). Similarly, among agreed-upon workers there is only a modest difference between men (46.0 per cent) and women (41.5 per cent) who are unionized. The big difference comes precisely in the disputed category, where 20.2 per cent of men are unionized compared to only 12.4 per cent among women. The result of this is that among women, the disputed category and the agreed-upon 'middle' class have similar rates of unionization, whereas among men the disputed category falls about half way between the agreed-upon workers and the agreed-upon 'middle' class. That is, among men the unionization criterion supports neither definition of the working class (the adjudication is indeterminate in its conclusions), whereas among women it is formally more consistent with Poulantzas's definition.

What can we make of all of this? The results suggest, I think, that variations in levels of unionization of particular categories of subordinate wage-earners are to a significant extent shaped by the strategies of unions and various kinds of structural obstacles to organizing certain categories of labour. There are a variety of reasons why unions, at least in the United States, have concen-

trated on manual labour in manufacturing, over white collar employees (the heart of the disputed category): sexism, both in the unions themselves (preference for organizing men instead of women) and in the employment situation (greater vulnerability of female employees to various kinds of control by employers); the fragmentation and dispersion of white-collar employees in offices; legal constraints on organizing the state sector; and so on. Non-manual subordinate employees could be fully in the working class, and yet because of such factors, have dramatically different levels of unionization. The fact that in some countries, such as Sweden, the rate of unionization among white collar non-supervisory employees is virtually the same as it is for manual workers supports the view that variations in levels of unionization between non-supervisory manual and non-manual wage-earners is more the result of political and ideological determinants than of possible differences in their class location.

If this interpretation of the unionization results is correct, then the level of unionization is not a very satisfactory adjudication criterion. Accordingly, while the unionization results do introduce some ambiguity into the analysis, nevertheless the overall weight of the empirical findings lends little support to definitions of the working class built around the criterion of productive and unproductive labour.

ADJUDICATION OF MANUAL LABOUR DEFINITIONS

Let us now turn to the comparison of the definition of the working class as blue-collar-manual wage-earners with the exploitation-centred concept. While this definition is both conceptually and operationally very simple, the adjudication is more complex than in the case of Poulantzas's definition of the working class. In the analysis of Poulantzas's definition there was only one disputed category—positions which I claimed to be in the working class but Poulantzas claimed to be new petty bourgeois. In the case of the manual-labour definition there are two disputed categories: positions which I claim are working class but the rival definition claims to be 'middle' class (mainly proletarianized white collar jobs) and positions which I claim are 'middle' class but a simple manual labour definition would regard as in the working class (mainly blue collar wage-earners in supervisory and decision-making jobs). The former I will refer to as disputed category 1 and the latter as disputed category 2. Our task, then, as charted in table 5.5, is to

TABLE 5.11
Adjudication of manual labour definition of working class: income analysis

Entries in cells of table:
Means
(Standard Deviations)
Number of cases (weighted)

Exploitation-centred definition ^a	Manual-labour definition		Row Totals
	Working class	'Middle' class	
Working class	[1] Agreed-upon working class \$10,733 (7523) 290	[2] Disputed category no. 1. \$11,756 (7040) 209	\$11,161 (7335) 499
Marginal working class	[3] \$16,326 (8995) 138	[4] \$13,350 (7098) 118	\$14,953 (8293) 256
'Middle' class	[5] Disputed category no. 2. \$16,434 (7791) 103	[6] Agreed-upon 'middle' class \$21,238 (13,590) 243	\$19,812 (12,347) 346
Column Totals	\$13,287 (8446) 531	\$16,134 (11,264) 570	

^aWorking class = cell 12 in Table 3.3; Marginal working class = cells 9 and 11; 'Middle class' = cells 4-8 and 10.

explore the range of hypotheses for both of these adjudications.

The basic results are presented in tables 5.11 and 5.12, and the statistical tests for the various adjudication hypotheses appear in table 5.13.

Common Hypotheses

As in the adjudication of the Poulantzas definition, the agreed-upon workers and agreed-upon 'middle' class in the adjudication of the manual-labour definition differ in the appropriate ways: the

TABLE 5.12
Adjudication of manual-labour definition of working class: class attitude scale^a

Entries in cells of table:
Means
(Standard deviations)
Number of cases (weighted)

Exploitation-centred definition	Manual-labour definition		Row Totals
	Working class	'Middle' class	
Working class	Agreed-upon working class [1] 1.12 (3.17) 344	Disputed category no. 1. [2] 0.27 (3.42) 250	0.76 (3.30) 593
Marginal working class	[3] 1.44 (3.34) 154	[4] -0.50 (3.03) 130	0.55 (3.34) 284
Middle class	[5] Disputed category no. 2. -0.28 (3.13) 111	[6] Agreed-upon 'middle' class -1.62 (3.57) 280	-1.24 (3.19) 391
Column Totals	0.95 (3.26) 609	-0.68 (3.51) 660	

^aValues on the class attitude scale go from +8 (maximally pro-working class) to -8 (maximally pro-capitalist class).

^bWorking class = Cell 12 in Table 3.3; Marginal working class = cells 9 and 11; 'Middle class' = cells 4-8 and 10.

agreed upon 'middle' class earn on average over \$10,000 more per year and score, on average, 2.73 points lower on the pro-working-class attitude scale.

Income Adjudication

The results for the income adjudication are essentially the same for disputed category 1 as they were in the adjudication of the

TABLE 5.13

Test of adjudication hypotheses: manual-labour versus exploitation definitions

Hypotheses ^a	Empirical results	t	Significance level (One-tailed)	Conclusion
COMMON HYPOTHESES				
<i>Income</i>				
I.1 (6) ^b - (1) > 0	\$10,505	10.8	.000	supported
<i>Pro-working-class attitudes</i>				
I.2 (6) - (1) < 0	-2.73	10.0	.000	supported
ADJUDICATION HYPOTHESES				
<i>Income</i>				
III.1A 1 - 2 - 2 - 6 < 0	-\$8459	5.3	.000	II.1A strongly supported over II.1B
III.1B 1 - 2 - 2 - 6 > 0				
III.2A 1 - 5 - 5 - 6 > 0	\$896	0.4	n.s.	Neither hypothesis supported
III.2B 1 - 5 - 5 - 6 < 0				
<i>Pro-working-class attitudes</i>				
III.3A 1 - 2 - 2 - 6 < 0	-1.04	2.1	.020	II.2A strongly supported over II.2B
III.3B 1 - 2 - 2 - 6 > 0				
III.4A 1 - 5 - 5 - 6 > 0	0.06	0.1	n.s.	neither hypothesis supported
III.4B 1 - 5 - 5 - 6 < 0				

^aThe Hypothesis numbers correspond to the numbers in Table 5.6.

^bThe numbers in parentheses refer to the cells in Tables 5.10 and 5.11.

productive labour definition: this category is clearly much closer to the agreed-upon workers than to the agreed-upon non-workers. The results for disputed category 2, however, are inconsistent with both definitions under scrutiny: the average income of this category falls almost exactly half-way between the incomes of the agreed-upon workers and agreed-upon 'middle' class.

Attitude Adjudication

The attitude adjudication mirrors quite closely the income adjudication. There is substantial support for the hypothesis that disputed category 1 is significantly closer to agreed-upon workers than agreed-upon 'middle' class (hypothesis III.3A), and no support for either of the two hypotheses concerning the second disputed category. Again, the result falls almost exactly between the two agreed-upon categories. When we look at the item-by-item breakdown of the attitude scale in table 5.14 we see the same basic

TABLE 5.14

Responses to individual items in attitude scale for adjudication of manual-labour definitions

	Agreed-upon working class	Disputed category 1	Disputed category 2	Agreed-upon 'middle' class
1. Corporations benefit owners at expense of others ^a	0.26 ^b	0.20	0.06	0.03
2. Employers should be prohibited from hiring scabs in a strike	0.31	0.04	-0.02	-0.26
3. Strikers are justified in using force	-0.17	-0.29	-0.31	-0.60
4. Big corporations have too much power today	0.54	0.64	0.65	0.45
5. A main reason for poverty is that the economy is based on private profits	0.25	0.13	0.01	-0.33
6. Non-management could run place of work without bosses	0.08	-0.01	-0.23	-0.38
7. A modern society can run effectively without the profit motive	-0.30	-0.44	-0.49	-0.52
8. In a strike, it is generally desirable that the strikers win most of their demands ^c	0.15	0.02	0.05	-0.02
9. Working-class self-identification (% who say that they are in the working class)	36.7	25.9	29.5	14.8

^aFor precise wording of items, see discussion in text.

^bEntries are means on the individual items as entered into the class attitude scale. (+1 = pro-worker; -1 = pro-bourgeois; 0 = don't know).

^cIt should be noted in this item that between 65 per cent and 82 per cent of the respondents in the various adjudication categories advocated the class compromise position on this variable and thus received a value of 0 on the item.

pattern. The first disputed category is clearly much more like the agreed-upon workers than the agreed-upon non-workers on five of the items, it is closer to the agreed-upon non-workers on only one item (item number eight) and it falls fairly much in the middle on three of the items. The second disputed category, on the other hand, is closer to the agreed-upon workers on two items, closer to the agreed-upon non-workers on three items, and right in the middle on four.

The Effects of Gender and Union Membership

Table 5.15 presents the results for the adjudication of the manual-labour definition looking at men and women, and union and non-union members separately. These results are rather complex in certain respects. For the income adjudications, disputed category 1 is closer to the agreed-upon workers in each of these comparisons, except for men, for whom this category is at the mid-point between agreed-upon workers and 'middle' class. For disputed category 2, on the other hand, the results are quite inconsistent across comparisons: for men and especially for women taken separately, this category is closer to the agreed-upon workers; for union members, this category is identical to the agreed-upon 'middle' class; and for non-union members it falls in between the agreed-upon categories.

For the class-attitude adjudication, the results are perhaps even more indecisive. While among women, the pattern is pretty much as expected (disputed category 1 closer to agreed-upon workers and disputed category 2 closer to agreed-upon 'middle' class), among men both of the disputed categories fall in the middle, between the two agreed-upon categories. Among union members, as in the evaluation of Poulantzas's definition of class, there is no clear pattern—while disputed category 1 has the highest value on this variable, all of the other categories have roughly the same values. Among non-unionized employees, on the other hand, both of the disputed categories fall around the middle.

Overall Assessment of the Manual Labour Adjudication

What sense can we make of these seemingly inconsistent findings? Two things should be noted: first, the difficulty mainly involves disputed category 2. In general the results support the proposition that disputed category 1 is closer to the agreed-upon work-

TABLE 5.15
Adjudication comparisons for sex and union members categories taken separately: manual-labour adjudications

	<i>Agreed-upon working class</i>	<i>Disputed category 1</i>	<i>Disputed category 2</i>	<i>Agreed-upon middle class</i>
SEX COMPARISONS				
<i>Income</i>				
Men	\$13,306	\$19,413	\$18,120	\$25,453
Women	\$7,718	\$9,567	\$7,813	\$14,710
<i>Pro-working-class attitudes</i>				
Men	1.50	-0.83	-0.11	-2.15
Women	0.69	0.56	-1.23	-0.81
<i>Sample size^a</i>				
Men	183	51	94	170
Women	161	199	17	110
%Men	53%	20%	85%	61%
UNION MEMBERSHIP COMPARISONS				
<i>Income</i>				
Union members	\$16,043	\$13,540	\$20,807	\$20,500
Non-union	\$7,945	\$11,394	\$15,447	\$21,301
<i>Pro-working-class attitudes</i>				
Union members	1.95	2.65	1.48	1.13
Non-union	0.75	-0.15	-0.65	-1.85
<i>Sample size</i>				
Union	106	37	19	21
Non-union	237	212	92	259
%Unionized	31%	15%	17%	8%

^aAll Ns are weighted

ers than the agreed-upon 'middle' class. Although there are some instances in which this disputed category falls close to the mid-point between the agreed-upon categories—for example the consciousness results for men—there is no instance in which it is closer to the agreed-upon 'middle' class. With respect to proletarianized white collar employees, therefore, the data offer no support to the claim that they are 'middle class' and considerable support to the claim that they are part of the working class. Second, with respect to disputed category 2 in nearly every case the results are completely indecisive. In terms of the problem of adjudicating *between* contending definitions, therefore, they support none of the hypotheses we have been entertaining, and thus

do not allow us to distinguish between the two definitions under investigation.

My guess is that there are two principal explanations for the results involving disputed category 2: first, problems with the operational criteria adopted in constructing the exploitation-centred class variables, and second, the issue of class biography.

It is, of course, easy to blame contradictory results on problems of measurement and operationalization. The universality of measurement problems is one of the things about sociological research which encourages researchers to talk themselves out of difficulties. Nevertheless, I do think a reasonable case can be made that some of the anomalies we have observed are linked to measurement issues. Some indication of this can be seen by looking at the 'marginal working class' category, cells 3 and 4 in table 5.12. The manual-non-manual demarcation within this category shows a sharp difference in scores on the attitude scale: white-collar marginal workers (largely white-collar supervisors and semi-credentialled white collar employees) have a value of -0.50 on the scale while manual marginal workers (largely craft workers and manual supervisors) have a mean of 1.44 . This seems to indicate that many of the people in category three really belong in the agreed-upon worker category, and perhaps some of the people in category four belong in the agreed-upon 'middle' class.

Two measurement issues are implicated in these possible classification problems. First, there is the problem of distinguishing between supervision that is really part of the management apparatus and thus partakes in at least marginal levels of organization-exploitation, and supervision which is nominal, which is mainly a transmission belt for orders from above. We have relied on a series of questions about what supervisors can do to their subordinates in order to specify this marginal level of organization asset exploitation, arguing that the ability to impose sanctions on subordinates is the important line of differentiation. This may not, in fact, be a satisfactory way of specifying the problem (assuming, of course, that the basic conceptual status of organization assets and exploitation is accepted). Some kind of minimal participation in co-ordinative decision-making may also be necessary. With a more stringent criterion for organization asset exploitation, most of the blue collar supervisors that we have included in the 'marginal working class' category would no longer be treated as proper supervisors at all and would thus be placed in the agreed-upon worker category. This would also lead to a reclassification of a large part of disputed category 2 into cells 1 and 3 of the table.

A second problem of operationalization concerns the treatment of craft labour as having marginal levels of skill/credential assets, thus placing them outside of the pure working class. If they were also supervisors, they would be placed in one of the unambiguous non-working-class categories. If craft labour had not been treated in this way, then most of the individuals currently in cell 3 would have been in cell 1, and many of the people in disputed category 2 would have been in cell 3. This again would have substantially affected the values of the dependent variables in these cells and potentially affected the conclusions reached from the adjudication analysis.

It is unlikely that the results displayed in these tables are entirely the artifacts of errors in judgement on the operationalization of concepts. They probably also reflect salient properties of the real mechanisms at work in the relationship between class structure and class consciousness. In particular, I suspect that at least some of the results are significantly affected by the problem of class biographies. Most of the incumbents of positions in disputed category 2—blue-collar employees in managerial and supervisory positions—have biographies that are tightly bound up with the agreed-upon working class category. In many instances they are in careers which begin in cell 1 of the typology and move gradually through cell 3 to cell 5, and their social ties through family and friends are likely to be closely linked to the working class. Similarly, many of the people in disputed category 2—proletarianized white-collar employees—are likely to have biographies tied to the agreed-upon 'middle-class' locations. Indeed, this may be why their ideological stance is significantly *less* pro-working class than the agreed-upon workers even though they are much closer to agreed-upon workers than agreed-upon 'middle' class.³⁰ Class consciousness does not emanate from the relational properties of the positions people fill at one point in time. Rather, it is formed through the accumulation of class experiences that constitute a person's biography. To the extent that such biographical trajectories vary across the cells of adjudication typology they can confound the adjudications themselves.

Conclusion

The exercises in this chapter have been designed to provide a systematic empirical intervention into debates over the concept of

class structure. Two basic conclusions can be drawn from the investigation:

1) In the debate over Poulantzas's conceptualization of class structure, there is very little support for the view that productive labour is an appropriate criterion for distinguishing the working class from non-working-class wage-earners. Except for the rates of unionization of different categories in the adjudication, the disputed category was closer to the agreed-upon workers in every instance. At least as far as this specific adjudication is concerned, there is much more empirical support for the structural definition of the working class as uncredentialed non-managerial employees.

2) In the debate over the manual-labour definition of the working class, there is almost no support for treating this division as a class distinction. Proletarianized white collar workers are generally more like proletarianized manual workers (i.e. the agreed-upon workers in the analysis) than they are like non-proletarianized white-collar employees. It is less clear how non-proletarianized manual wage earners should be treated, but in any event the data do not support the thesis that they are part of the working class.

These debates will hardly be settled, needless to say, by the data and analyses we have explored. Defenders of the positions I have criticized have a variety of avenues open for reply. First, of course, they can reject the entire enterprise of the empirical adjudication of contending definitions, arguing that definitions are strictly conventions and that their adjudication is therefore strictly a matter of their logical coherence.

Second, the need for empirical adjudication can be accepted, but the micro-individual logic of the empirical investigations of this chapter can be viewed as inappropriate for adjudicating contending class concepts. If those concepts are meant to explain historical trajectories of struggle and change, then, it could be argued, the data explored in this chapter are radically unsuited to the present task. This is a serious criticism, and it cannot be dismissed out of hand. The rejoinder to such criticisms is that even if the concept of class structure is centrally preoccupied with such macro-historical and dynamic problems, there are, after all, real people in that class structure, real people who are systematically affected in various ways by virtue of being in one class rather than another. Unless one is prepared to argue that the effects of class on individuals are

completely contingent—that is, that there is nothing systematic about those effects that are rooted in the class structure itself—then the results reported in this chapter have to be explained, and those explanations have to be consistent with the structural map of class relations employed in the theory.

Third, the general logic of the strategy adopted in this chapter can be accepted, but the specific empirical indicators and criteria can be viewed as faulty. On the one hand, it could be claimed, that the operationalizations of the contending class definitions are flawed and thus do not provide the basis for appropriate tests; or, alternatively, the selection or measurement of the dependent variables could be unsatisfactory, and thus the conclusions based on those variables are unjustified.

We have already encountered this problem of the selection of the adjudication criterion variable in the discussion of union membership in the debate over unproductive labour, and in our consideration of the problem of supervision and craft labour in the operationalization of the exploitation-centred concept of class. These kinds of criticisms are important, and it is always possible that alternative operationalizations and variables could produce quite different results. The burden of proof in such accusations, however, falls on the critics: they must show that alternative measures of either the contending class concepts or the adjudication criteria do in fact produce different results. Furthermore, if alternative measures do produce different conclusions, the fact of the differences must itself be structurally explained: what is it about the mechanisms at work in the world that produces different adjudication outcomes depending upon the specific measures employed?³¹

Finally, the results of the empirical analysis could be accepted, but the conclusions drawn from them could be regarded as unwarranted. None of the results we have discussed are so completely unambiguous in their theoretical implications that plausible alternative interpretations could not be produced. For example in the various adjudications we have explored, there is clear evidence in the data that the people in disputed category in cell 2 of table 5.1.1 are ideologically different from the agreed-upon workers, even though they are more like workers than they are like the agreed-upon 'middle' class. A defender of Poulantzas's position could respond that the explanation for their relative closeness to workers is because workers as a whole in the United States are generally affected by petty-bourgeois ideology and thus tend to be

less sharply differentiated from non-workers in general. The disputed category, then, could be viewed as the part of the new petty bourgeoisie to which workers are most closely drawn. The historical context of the data could be taken as the basis for explaining how the results might be consistent with the class concept in question.

These kinds of alternative explanations suggest the need for historical and comparative research to deepen the conceptual adjudications we have explored. If the adjudication results were essentially the same in countries in which the working class is more class-conscious, more mobilized and organized than in the United States, for example, it would undermine the kind of critique suggested above. If, on the other hand, the adjudications look very different in societies with different historical contexts, then this would suggest that the conclusions I have drawn need to be modified.

AMBIGUITIES AND ISSUES FOR FUTURE WORK

As I have stressed throughout this analysis, there is no possibility of the absolute validation of a concept; adjudications are always among actively contending concepts, rivals which attempt to capture the same theoretical objects. The conclusions established in this chapter are therefore of necessity provisional, both because the defenders of the concepts I have criticized may effectively respond in subsequent research and argument, and because new alternatives to the conceptualizations I have proposed may be produced in the future. One final issue to be discussed, therefore, is whether the adjudication analyses we have explored suggest any directions for such future conceptual elaboration. What are the anomalies in the data? What results point to the need for further conceptual work? These ambiguities and loose ends fall under two categories. First, the question of specifying the criteria for the working class, and second the choice between concepts of class based on trajectory and concepts based on position.

Specifying the Working Class

While I feel that in the debates over the definition of the working class, the empirical evidence is most supportive of the exploitation-centred concept, a number of results in the analysis

suggest that some further refinement is needed. Above all, there is indication that the logic of the credential-exploitation criterion needs further work. This issue played a particularly important role in the ambiguities in the adjudication with the manual-nonmanual definition of class structure, especially around the treatment of craft labour as marginal credential exploiters.

At the heart of this problem of the status of skill/credential assets in the analysis of class structure is the lack of clear relational criteria linked to the ownership of credentials. The ownership of capital corresponds to a social relation between employers and employees; the ownership of labour-power assets in feudalism corresponds to the social relation between lords and serfs; the effective control of organization assets corresponds to the authority relations between managers and workers. There is no such relational correspondence to credential asset exploitation. This is one of the reasons why the precise allocation of people to class positions seems much more arbitrary with respect to this asset than the others, and why there are particularly sharp problems in the treatment of craft labour. In order to reduce this arbitrariness in the operational use of the concept of credential asset exploitation in class analysis, additional theoretical clarification is needed.

Class Trajectories

All of the adjudications we have explored in this chapter have been between positional definitions of class structure, that is, definitions which revolve around essentially static characterizations of the locations of people within class relations. Yet, as the results in the adjudication of the manual-labour definition show, the existence of class trajectories may significantly influence the observed results.

Ultimately, I believe that a trajectory concept of class is preferable to a positional one. The concept of interests always implies some sort of time horizon on the part of the actors who hold those interests. The exploitation-centred interests which constitute the basis for defining classes, therefore, must be treated as having a temporal dimension to them. The class position of an exploited apprentice is different if that apprentice knows that he or she will become a master artisan than if this is a rare event, because the real interests linked to that exploitation will be different. Proletarianized white-collar jobs that are really pre-managerial jobs should therefore not be considered in the same location within

class relations as proletarianized jobs which are not part of such career trajectories.

Such a trajectory notion of class structure implies that the class character of a given *position* must in a double sense be viewed in probabilistic terms. First, as I have already stressed in the discussion of class formation in chapter four, the relational properties of a position do not strictly determine class outcomes, but only the probabilistic tendencies for such outcomes. We can now add a second sense in which class is a probabilistic concept: the relational properties of a position determine only probabilistically the relational location of the incumbents over time. In some positions, the probability is extremely high that incumbents will stay in positions with the same relational characteristics. Where deviations occur it is due to factors which are contingent relative to the effects of the positions themselves.³² In other positions there is a high probability of movement with respect to relational properties. And in still other positions, the outcomes may be relatively indeterminate.³³

The importance of such trajectories does not imply that a positional account of class structure is unimportant. Indeed, in order even to begin to specify the temporal dimension of class relations, it is necessary to be able to characterize the destinations to which the probabilities will be linked. Unless managerial positions are understood to be structurally different from non-managerial positions in class terms, there would be no need to treat the movement into such positions as a problem of class trajectory. There is a sense, therefore, in which the kind of positional analysis conducted in this chapter is a logical pre-condition for the exploration of a trajectory approach to class. Nevertheless, a full account of 'class structure', where class structure is meant to designate the interest-generating process linked to exploitation, has to include some kind of recognition of these probabilistic trajectories.³⁴

While the adjudication of contending definitions of concepts is a crucial aspect of scientific work, such adjudication is not the final product of scientific investigation. Concepts are not simply produced, formed and transformed; they are also *used*. Ultimately, the point of worrying about the correctness of definitions is that, on the one hand, we want to use the concepts in building general theories of social processes, and on the other, we need them in order to pursue concrete empirical investigations of various sorts.

Exploring such uses of the exploitation-centred concept of class is the basic objective of the rest of this book.

Notes

1. For convenience I will use the expression 'middle class' interchangeably with the expression 'non-working class wage-earners' throughout this chapter, even though the term is not necessarily employed by the theorists we will discuss. Poulantzas, for example, uses the term 'new petty bourgeoisie' to label non-working class wage-earners, and I have preferred the expression 'contradictory locations.'

2. I explored the possibility of also adjudicating empirically between my earlier conceptualization of contradictory locations and the present framework. The problem in doing this is that the two definitions of the working class overlap so much that an empirical comparison is difficult to pursue and is quite vulnerable to the details of the empirical operationalizations adopted. On the basis of the operationalizations employed in this chapter, 93.5 per cent of the individuals classified as working class in the exploitation concept are also categorized as working class in my earlier conceptualization; and 96 per cent of those classified as workers in my earlier approach were classified as either workers or marginal workers in the exploitation concept. The exploitation conceptualization, therefore, is less of a decisive empirical break with the previous approach than a retheorization of the criteria previously employed. For the record, in an exploratory analysis which examined the empirical differences in predictions between these two concepts, the results were quite equivocal on their relative merits. Because of the small numbers involved in the disputed categories and the sensitivity of the results to small changes in the operational criteria employed, I have no confidence that these results reflect real differences in the empirical power of the two conceptualizations.

3. The provisional character of the conclusions reached through this kind of empirical adjudication is clearly not something distinctive to the problem of definitional disputes. All empirical 'tests' of propositions are provisional because of the possibilities of the existence of confounding mechanisms of the sort indicated above.

4. See chapter two, note 36.

5. I will see the term 'dependent variable' in the standard statistical sense throughout this discussion, even though the term usually implies a rather rigid distinction between 'causes' (independent variables) and 'effects' (dependent variables). This is at odds with the more 'dialectical' view of causation within Marxism within which reciprocal effects between structures and practices is of central concern.

6. In any event, Poulantzas and other theorists using his general approach to analysing class structures, together with theorists who adopt manual labour definitions, do not hesitate to use class in explanations of individual-level processes. Although Poulantzas avoids using the term 'class consciousness', he argues that the ideologies carried by agents are systematically shaped by their locations within the social relations of production. Even though this is not his central pre-occupation, there is the repeated suggestion that classes are consequential for individual subjec-

tivity and practices, and thus it is not 'unfair' to his explanatory objectives to pursue a comparison in these terms.

7. For a fuller substantive discussion of the problem of class consciousness, see chapter seven below.

8. Marxist critics of surveys typically make this kind of argument, on the ground that 'hegemonic' bourgeois ideology is likely to be more systematically expressed in atomized, authority-laden situations like interviews. It is not obvious, however, that the biases will work in this direction. It is not unthinkable that the pressures towards a bourgeois consensus could be greater within the collective context of working class associations, whereas individual workers might feel freer to express 'deviant' views in the anonymous and private setting of an interview. I suspect that the usual assumption is probably correct, but it needs to be verified, and to my knowledge it has not been.

9. Response (2) constitutes the pure 'class compromise' response, stating that neither workers nor capitalists should come out clearly ahead in a conflict. For this reason it was given a 0 in the scale.

10. This simple additive procedure assumes that all eight of the items should be given equal weighting in constructing the scale. There are, of course, fancier statistical strategies (eg. factor analysis) for assigning weights to variables within scales. I have opted for a more simple-minded approach in the present context so that the meaning of the scale's metric will be relatively transparent.

11. For much mainstream sociology, class identification *is* class consciousness. I am including it in the analysis here not so much because in and of itself it is such a salient dimension of consciousness within Marxist theory, but because it has been accorded so much attention in the sociological literature. For the best overview of the problem of class identification from a non-Marxist perspective, see Mary Jackman and Robert Jackman, *Class Awareness in the United States*, Berkeley 1983.

12. Jackman and Jackman *ibid*, argue that closed-category versions of class identification questions are superior to open-ended versions since the closed categories are essential to specifying the meaning of the term 'class' for respondents. The format we have adopted attempts to capture the virtues of each strategy, since respondents are initially allowed to say that they do not think of themselves as a member of any class, and only then are asked to state a class identification from a list of closed categories.

13. A more detailed discussion of the procedures for variable constructions used in these analyses can be found in appendix II.

14. The expression 'need not themselves work' is important conceptually in this specification. The point is that capitalists own sufficient capital that they are able to obtain at least the socially average standard of living without working at all—they are able to reproduce themselves and their families entirely on the labour of others. This does not imply that capitalists always refrain from work—that is, from engaging in socially productive labour—but simply that they need not work to obtain the socially average standard of living.

15. Depending upon the capital-intensity of production, a specific number of employees may indicate being a small employer—someone who has to work alongside the employees—or being a proper capitalist. It would have been desirable to obtain data on the division of labour within small businesses in order to see the extent to which a small employer indeed did engage in the productive work of the business, but we did not collect such information.

16. The use of occupational titles in specifying exploitation relations, and thus as criteria which enter into the specification of class locations, is a departure from my

earlier work in which I insisted that the concept of 'occupation' designated positions within the technical division of labour rather than the social division of labor. See especially, my paper, 'Class and Occupation', *Theory and Society*, vol. 9, no. 1, 1980. The conceptual shift is based on the claim that incumbency in a technically defined position implies, under conditions of 'private ownership of credentials', a specific kind of exploitation relation. It is still the case, of course, that occupational titles do not by themselves constitute specific 'classes', since credential exploitation is only one of several forms of exploitation relations in capitalist societies which are concretely combined in determining the class structure.

17. For example, in the official U.S. Census occupational codes, the person in charge of the admissions department of a hospital—the 'admissions officer'—is classified as a 'receptionist' in the three-digit occupation codes, a rubric that also includes people who greet clients in an office. We had one admissions officer in our sample (which is why this example came to our attention) who was a registered nurse with twenty-five years of experience in the hospital in question and for whom her position as 'receptionist' represented a substantial promotion. Initially we thought that her classification as a receptionist was a coding error, but when we investigated the matter further, we discovered that this is indeed the way the Dictionary of Occupational Titles classifies her job.

18. The 'autonomy' criterion is being used in this case not because autonomy as such is considered an exploitation-asset, but because it is considered an indicator that a sales and clerical job held by a person with a high academic credential is really a semi-professional credentialled position.

19. The entire structure is the object of investigation in subsequent chapters.

20. The precise coding for this variable is found in appendix II. It should be noted that it is not always unambiguous whether a particular occupational title is or is not involved in the production of commodities. A computer specialist, for example, may be involved in the financial affairs of a company or production itself (or both). I therefore initially coded occupations into three categories: productive, ambiguous, unproductive. This made it possible to construct operational variables for productive labour which are more or less restrictive. As it turned out, none of the statistical results depended at all on whether we used a restrictive or unrestrictive classification of occupations, and thus throughout this chapter I will rely on the more restrictive definition of unproductive labor (i.e. the ambiguous occupations will be considered productive).

21. This is in accord with the general methodological stance enunciated earlier that empirical adjudications are always between rival concepts or propositions, not directly between a proposition and the 'real world' as such.

22. A full description of this design can be found in Robert M. Groves, 'An Empirical Comparison of Two Telephone Sample Designs', *Journal of Marketing Research*, 15, 1979, pp. 622–31.

23. Of the Swedish respondents, 60 per cent responded to the initial mailed questionnaire, 27 per cent responded to a second mailed questionnaire after having been reminded via telephone, and 13 per cent were interviewed by telephone.

24. See Robert M. Groves and Robert L. Kahn, *Surveys by Telephone*, Orlando, Florida 1979.

25. My best guess is that much of this bias is due to refusals to participate in the survey. Among people who initially refused to participate, but after follow-up telephone calls agreed to participate (30 per cent of the initial refusers, or 9 per cent of the final sample), the education and occupation distributions are much closer to the Census figures. Assuming the 'converted refusers' are likely to have

demographic characteristics intermediate between initial participators and unconverted refusers, this suggests that among the people who refused to participate in the survey there was a lower proportion of high status individuals than among participants. I do not know why less educated people in lower status occupations were more likely to refuse to participate in this particular survey than in other telephone surveys fielded by the Survey Research Center.

26. Technically, the easiest way to obtain an estimate of the terms in this equation is to analyse the differences involved using dummy variable regression equations. If W is a dummy variable for the agreed-upon workers and M is a dummy variable for the agreed-upon 'middle' class (with the appropriate disputed category being the 'left out' category in the regression), then all we need to do is estimate the following regression equation:

$$Y = a + B_1(W + M) + B_2(W - M)$$

It can be shown from a simple rearrangement of terms that (a) if the disputed category falls *in between* the two agreed upon categories, then the coefficient B_1 is equal to twice the difference between the differences and (b) if the disputed category is not between the agreed-upon categories, then the coefficient B_2 is equal to twice the difference between the differences. (The reason for the shift in which coefficient tests the hypothesis is that we are interested in the differences between the absolute values of the original differences, and depending upon whether or not the disputed category falls in between the agreed upon categories, only one of B_1 or B_2 is the appropriate coefficient for testing this). The standard errors of these regression coefficients thus enable us to calculate the t -statistic above. I am grateful to Robert Hauser and Charles Halaby for showing me the simple way of performing these tests.

27. A failure of a given variable to differentiate between the working class and the agreed-upon non-workers could be due to several things: the operational variable could be a bad measure of the theoretical variable; the theoretical expectations that the agreed-upon categories should differ with respect to this theoretical variable could be incorrect; or the claim that the agreed-upon categories are in fact distinct classes could be false.

28. The t -statistic for the difference between workers and the disputed category is 1.44 which has a probability of .075 on a one-tailed test, while the t -statistic for the difference in the differences is 3.1, which has a probability of less than .001.

29. It is worth noting that the debate over the two definitions of the working class being considered here is particularly consequential for the evaluation of the class location of women. In Poulantzas's definition, only about 15 per cent of all women in the labor force are in the working class; in the exploitation-centred concept, the figure is over 60 per cent.

30. The fact that the distance between the agreed-upon workers and disputed category 1 is so much greater for men than for women (see table 5.15) supports this interpretation, since in various ways proletarianized white-collar women are less likely to be embedded in class trajectories that link them to the agreed-upon 'middle' class category.

31. Even if one rejects the survey methodology as a valid technique for obtaining information on class consciousness, it is still necessary to explain why the survey results turn out the way they do in an analysis of this sort. If survey results are literally 'meaningless', as some critics have implied, then there should not be systematic strong differences between the structural categories employed in an adjudication analysis.

At a minimum an alternative explanation of these results is needed, an explanation which demonstrates the falsity of the conclusions drawn from the data.

32. This implies being able to distinguish between mobility which is engendered by the nature of the positions themselves—e.g. they are embedded in career ladders—from mobility which is due to the operation of factors extrinsic to the positions. A war may generate considerable mobility, and thus affect the post-facto probabilities of individuals in working-class positions staying in the working class, but this is not due to structural properties of working-class positions per se. While theoretically one can make this distinction between endogenous and exogenous sources of mobility, in practice it is often empirically impossible to sort them out.

33. There is another complication which I will not explore here: the probabilities themselves may change over time as social structures change.

34. For an important exploration of this problem from a broadly Marxist orientation, see Daniel Bertaux, *Destins personnels et structure de classe*, Paris 1977; for a non-Marxist discussion of many of the same issues, see A. Stewart, K. Prandy and R. M. Blackburn, *Social Stratification and Occupation*, London 1980.